

plication in the examination of wood fibers in connection with paper manufacture, of surfaces undergoing ionic bombardment, and of corrosion. At the present time, one of the most pressing problems is to reduce its total cost.

TELEVISION

EVR—A new development in audio-visual aids, Anon, *Brit. Jour. Phot.*, 114: 836, Sept. 28, 1967.

The Electronic Video Recording and Reproduction system makes it possible for cartridges of prerecorded programs to be shown on conventional television sets at very low cost. Electronic processes transfer film or video-taped programs to a special unperforated thin film 8.75mm wide. The prepared programs are stored in a cartridge. A special player or "adaptor" is attached to the aerial circuit of the television receiver and the cartridge is inserted into this and "played" on the screen. The system is thought to have great possibilities in the fields of education and home entertainment.—B.A.J.

Television's role in tomorrow's world, George H. Brown, *IEEE Spectrum*, 4: 56-58, Oct. 1967.

Any prediction concerning the future of communications must recognize today's trend toward unification of the various electronic media—which suggests that we should revise our traditional idea of television as a broadcasting service.

The resolving-power functions and quantum processes of television cameras, Otto H. Schade, Sr., *RCA Rev.*, 28: 460-535, Sept. 1967.

The resolving power of an imaging system is a significant figure of merit when given as a function of object contrast and exposure. It is shown that the resolving-power

functions can be expressed in terms of the quantum densities and transfer functions of the imaging system without recourse to specific electronic or photographic units for which conversion factors or equations are given. The formulation is general, without restriction to specific systems. The quantum densities in the storage surfaces of television camera tubes and the mechanism of signal transfer by the electron reading beam are discussed in detail to determine the constants and parameters for the calculation of resolving-power functions for a variety of operating modes, including continuous and single-image readouts. It is shown that resolving powers exceeding 100 cycles/mm are obtainable with high-quality electron optics.

A line-scan image generator, Frank Scott, *Phot. Sci. and Eng.*, 11: 348-351, Sept.-Oct. 1967.

An instrument design especially for research dealing with line-scan (TV type) images is described. The line-scan image generator (LSIG) transforms a photographic transparency into a line-scan image by electronic, photooptical and mechanical means. Its principle of operation is similar to that of facsimile apparatus. The novel features of the instrument make possible the production of line-scan images which exhibit specific and precisely known image structure characteristics. The precise manipulation of the line-scan image characteristics made possible by the LSIG is very commodious in human performance and psychophysical studies, objective line-scan image evaluation and in exhibiting experimental results of graphical information computer processing techniques. Such research will enhance the design optimization of line-scan imaging systems which are becoming increasingly prominent in aerial reconnaissance and photointerpretation, graphical display and high-speed data recording.



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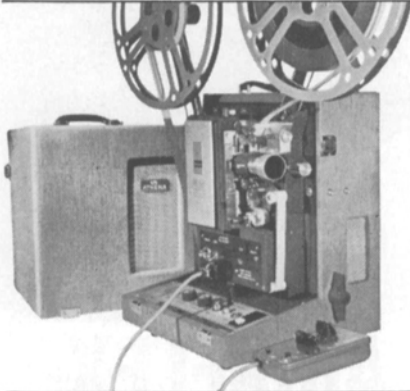


The Editors present for convenient reference a list of articles dealing with subjects cognate to motion-picture engineering published in a number of selected journals. Photostatic or microfilm copies of articles in magazines that are available may be obtained from The Library of Congress, Washington, D.C., or from the New York Public Library, New York, N.Y., at prevailing rates.

- American Cinematographer** vol. 48, no. 11, Nov. 1967
- The Challenges of Filming Commercials for Color TV (p. 792) *Gerald Hirschfeld*
- AV Communication Review** vol. 15, no. 3, Fall 1967
- Use of Videotaped Instructional Television for Teaching Study Skills in a University Setting (p. 269) *Charles O. Neidt*

- Teaching Machines and Programed Instruction (p. 285) *Gerald Newmark and Ray L. Sweigert, Jr.*
- vol. 15, no. 4, Winter 1967
- Multimedia Systems: A Review and Report of a Pilot Project (p. 345) *M. Daniel Smith, Morton Schagrin and L. Eugene Poorman*
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- A New Reversal Colour Print Film With a Silver Sound Track (p. 162) *E. J. Drew*
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- The Weakest Points of Modern Gramophone Pick-Ups (p. 198) *J. Walton*
- vol. 49, no. 10, Oct. 1967
- Colour Video Chains for Flying Spot Telecines (p. 222) *J. D. Milward*
- A New Film Viewing and Projection Apparatus (p. 226) *J. Johnson*
- Film User** Aug. 1967
- Two Types of Film For Tomorrow's Teacher (p. 18) *J. Newsome*
- I.A.T.S.E. Official Bulletin** no. 456, Autumn 1967
- Behind the Success of Expo '67 (p. 4)
- IEEE Spectrum** vol. 4, no. 8, Aug. 1967
- Thyristors and Rectifier Diodes—The Semiconductor Workhorses (p. 102) *F. W. Gutzwiller*

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On the Role of Formant Transitions in Vowel Recognition (p. 830) *B. E. F. Lindblom and M. Studdert-Kennedy*
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Influence of the Color Coupling Process on Granularity and Sharpness in Color Films (p. 379) *R. Verbrugghe, M. De Belder and G. Langner*
Relationships Between Information Capacity and Resolving Power (p. 415) *James Riesenfeld*

Point to Point Telecommunications
vol. 10, no. 4
Space Communications—a Pointer to the Future (p. 4) *J. M. Brown*
vol. 11, no. 2
Non-Reciprocal Ferrite Devices at Microwave Frequencies (p. 121) *J. A. Penney*
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Marconi Mark V Picture and Waveform Monitor (p. 16) *H. Mirzwiniski*
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A New Master Switching System for Television Wales and the West (p. 36) *E. D. Probert and R. H. Bradley*

vol. 7, no. 3
Printed Circuit Synchronizing Pulse Generator (p. 13) *G. D. Iles*
vol. 8, no. 1
The Marconi Mark VI Photoconductive Camera for Live and Telecine Use (p. 4) *J. D. Capers*
The Marconi Mark VII Colour Camera in Relation to the System (p. 22) *N. N. Parker-Smith*
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