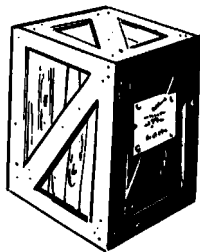


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 Industrial TV (p. 37) *W. H. Buchsbaum*  
 Width Troubles in TV Receivers (p. 56) *S. Heller*  
 Projection Color TV with a Color Wheel (p. 64) *J. Stanley*  
**Studio Review (Supplement to Kinematograph Weekly)** Sept. 29, 1955  
 A New Debrie Camera for CinemaScope Filming (p. ix) *R. H. Cricks*  
**Television Magazine** vol. 12, Aug. 1955  
 Definition of Coverage (p. 28)



## new products (and developments)

.....  
 Further information about these items can be obtained direct from the addresses given. As in the case of technical papers, the Society is not responsible for manufacturers' statements, and publication of these items does not constitute endorsement of the products or services.

To measure lenses objectively, an electronic instrument has been developed by the Radio Corp. of America, according to an announcement by M. C. Batsel, Chief Engineer of RCA Engineering Products Div., Camden, N.J. The lens-tester is described as a major advance in the optical sciences, in that it will introduce accuracy, speed and economy in pre-rating lenses of all types. It will enable the selection of lenses by specific grade, with the exact characteristics for given applications. The electronic lens-tester resulted from initial research conducted by Otto H. Schade, who has pioneered in the development of universal ratings and allied test equipment — see, for instance, Dr. Schade's article in this issue.

Heretofore, the quality of any lens, with

regard to sharpness, contrast and gradation, has been determined solely by visual tests. The lens-tester has been designed to enable lens manufacturers and users to determine quickly the lens' response characteristics and apply them against mathematical optimums. Many significant properties of an image depend upon the characteristics of its star image — the image of a point source of light. The star image of an optical "circuit" has been demonstrated to be the counterpart of the impulse response of an electrical circuit. Accordingly, the mathematical relationship of electrical impulse response, frequency responses and edge transitions can be applied to compute counterpart properties of optical star images.

Major components of the developmental RCA lens-tester include a special test drum, a microscope, a multiplier phototube and an oscilloscope. The test drum has nine groups of high contrast black and white lines of different widths, ranging from 3/in. for the coarse group to 200/in. for the finest group. The black lines correspond to 3 to 200 TV lines/mm in the image.

To obtain the square-wave flux response of a given lens, it is made to view the test drum, which is revolved by a synchronous motor. The lens is also rotated, about its transverse axis, to test its performance off axis. The lens image of the test drum is then scanned by the multiplier phototube through a narrow slit. For a theoretically perfect lens, the contrast between black and white lines, as measured by the phototube, would be modified only by diffraction effects. With a practical lens, the contrast deteriorates as the line width decreases due to the combined effects of diffraction and aberrations, or defects. The line at which

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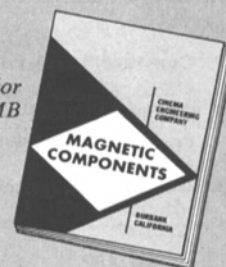
9205



8905

For clean erasure of magnetic tape and film. Bulk erasure of noise and program material in a matter of seconds. Accepted standard of industrial users.

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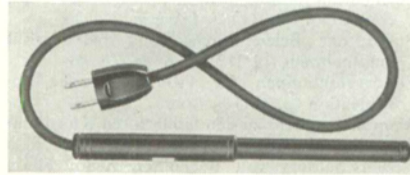


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the contrast disappears represents zero square-wave flux response for the given lens.

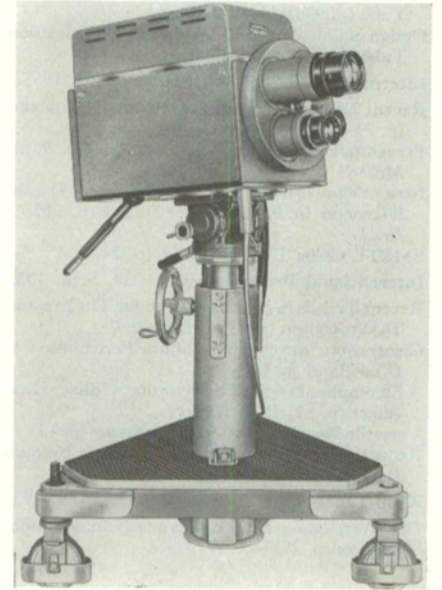
In a typical test operation, such as many in which RCA is now using the experimental equipment, the lens is fixed 26.4 focal lengths from the test drum. The lens image is 25.4 times smaller than the object and is tested from 3 to 200 TV lines/mm. The microscope enlarges the lens image so that the phototube slit may be several thousandths of an inch wide. A cathode follower mounted at the base of the multiplier phototube is activated by the phototube's reaction and produces a low impedance output signal which is fed to the amplifier and power supply chassis. After amplification, the phototube's square-wave signal is

rectified and its waveform presented on the oscilloscope. This waveform represents the average square-wave response vs. TV lines/mm for the lens and it can be used to determine mathematically the quality response or rating of the tested lens.



The Magnetic Erasing Pencil Type 8905 is an accessory developed by Cinema Engi-

neering Co., Burbank, Calif. Designed for erasing small areas, even such as a syllable or part of a word, it is the size of a large fountain pen. It operates on 115-v a-c, 60 cycles at 10 w. The Cinema Engineering Co. has a companion product in its Degausser Type 9205, a tank-type bulk eraser for tape and film. It is for bench use, has a shipping weight of 27 lb, and operates on 115-v a-c, 60 cycles, 2,000 w.



The Du Mont Vitascan Color Studio Scanner is a system for producing live color television pictures of high quality without the use of expensive color television cameras. The Vitascan is a modern version of the early forms of live television pickup which used the flying-spot scanning principle. The basic flying-spot scanner equipment is similar to that already incorporated in the Du Mont Multiscanner for scanning color slides and color film, which uses a 7-in. high-voltage cathode-ray tube with a nonbrowning, neutral density faceplate, operating at 40 kv.

The major differences between the flying-spot scanner operation for the transmission of transparencies and that for live pickup are: (a) the scanning light is reflected from the objects or persons to be televised rather than transmitted through the material as in the case of a transparency; (b) the scanned area is many thousand times larger for live pickup than for slide or film operation and; (c) additional illumination must be provided in the studio.

Equipment additional to the Du Mont Multiscanner package for adapting it for live color pickup includes a complement of clusters of multiplier photo cells, 5 in. in diameter covered with suitable color filters, and means for strobe-lighting the studio during the vertical blanking interval of the television system. A mobile scanner complete with lens turret and electronic viewfinder, similar in appearance to standard television studio cameras, operates as a scanner light source independent of the multiscanner package. This Vitascan "camera" utilizes a 5-in. cathode-ray tube operating at 35 kv.

Lighting effects similar to those presently obtained in present studio television lighting

# 4-Track Magnetic Test Films

Ten Different 35 mm Types  
Now Available For:

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Theaters and Theater  
Service Engineers

			Code
1. Level Balance Film	1000-cycle, 4-track	50 ft.	(SL-1)
2. Multifrequency Reel	40 to 12,000 cycles, 4-track	425 ft.*	(MF-1)
3. Loudspeaker Balance Reel	Identical speech and music on four tracks progressively in this order—2,1,3,4	300 ft.*	(LB-1)
4. Stereophonic Reel	Picture with stereo sound and 12,000-cycle control signal on track four	330 ft.*	(ST-1)
5. Flutter Film	3000-cycle, 4-track	50 ft.	(FL-1)
6. Loudspeaker Phasing Film	Signal of uniform level, 400-cycle or 500-cycle frequency-warbled simultaneously on tracks 1, 2, and 3, at a 5-cycle rate (specify crossover frequency desired)	50 ft.	(LP-1)
7. Constant Level Film	8000-cycle, 4-track to check azimuth	50 ft.	(AZ-1)
8. Channel-Four Film	12,000/1000 cycle	50 ft.	(CH-4)
9. Projector Alignment Chart	Picture Only	100 ft.	(PR-1)
10. Projector Alignment Chart—Optical Track	Picture only, standard sprocket holes (made by Motion Picture Research Council)	100 ft.	CSOS

\*These lengths approximate.

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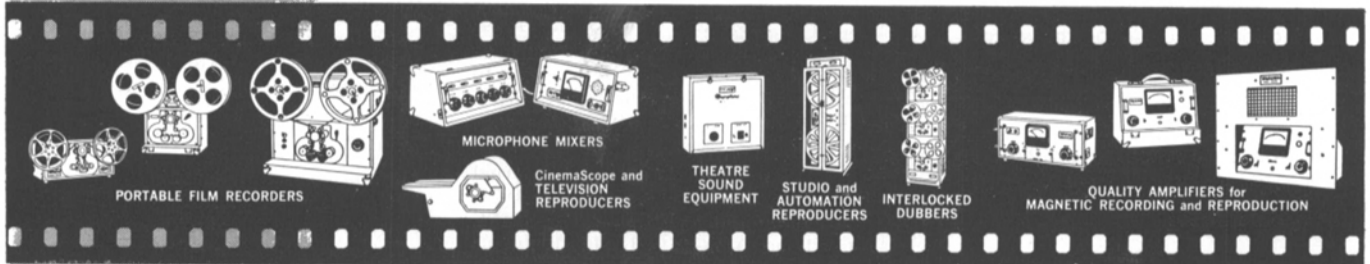
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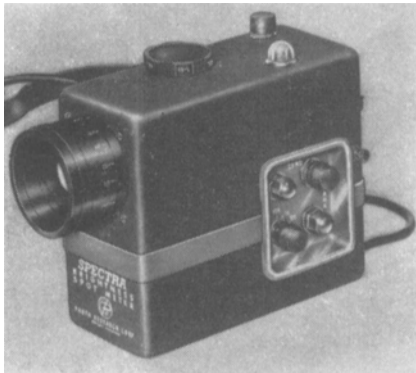
NEW YORK — Camera Equipment Co., 1600 Broadway, New York 19. JUdson 6-1420. Cable Address CINEQUIP.  
 CHICAGO — Zenith Cinema Service, Inc., 3252 Foster Ave., Chicago 25, Ill. IRving 8-2104.

SAN FRANCISCO — Brooks Camera Co., 45 Kearney St., San Francisco, Calif. EXbrook 2-7348.  
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## SPECTRA

### Brightness Spot Meter

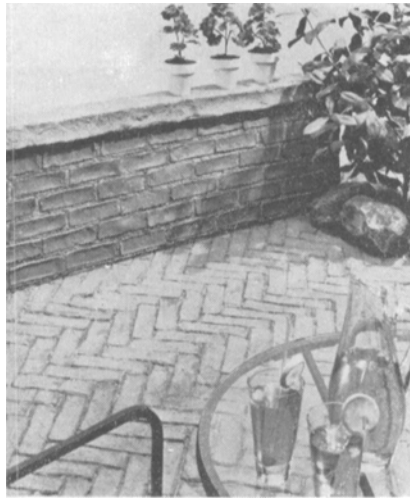


- Checks uniformity of blue backing for matte shots directly from camera position
- Checks brightness of selected areas on set to determine brightness range
- Checks color temperature of light sources to maintain uniform color quality
- Shows footcandle output of individual light units without interference from other sources
- Measures uniformity of illumination and discoloration of projection screens for any distance or angle
- Maintains standard brightness and COLOR TEMPERATURE of printer lights

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are achieved and controls are available for dissolves and fades from one "camera" to another. The Vitascan has no registration problems and is reported to afford excellent color reproduction because the transfer characteristic of the basic package is completely linear and devoid of matching problems.



**Texture-Flex** is a rubber-like material originally designed for use in Broadway and TV productions. Sheets are sized 4 ft X 8 ft. It is reported as made with life-like colors integrated in the material, but other colors may be achieved by painting. Besides the stone and brick textures, other backgrounds include weathered wood planking and shingles, tree bark, cut stone, tree stumps, hedges, leaves, rocks, sea shells and architectural elements such as scrolls, pilasters, balusters and fountain figures. A catalog is available from Texture Flex Div., Chester Rakeman Scenic Studios, Inc., 625 W. 43 St., New York 36.

## Journals Available and Wanted

These notices are published as a service to expedite disposal and acquisition of out-of-print Journals. Please write direct to the persons and addresses listed.

### Available

Sept., 1937; March, 1939; June, 1939; July-Dec. 1941; 1942 through 1953; 1954 complete, with exception of Dec.; 1955 to date. Available only as entire lot. Write E. J. Mauthner, 310 Riverside Drive, New York 25.

Jan. 1930 through Dec. 1937, Journal SMPE issues; Jan. 1930 through Dec. 1935, bound volumes of SMPE Journal; SMPE Transactions: Apr. 1919: 8; May 1920: 10; May 1922: 13; Oct. 1922: 15; May 1925: 21; Oct. 1925: 24; Apr. 1927: 30; Sept. 1927: 32; Apr. 1928: 33; Sept. 1928: 36. SMPE Membership Listings: 1928, 1930, 1938; SMPE Index and Authors: 1930-1935; SMPE Miscellaneous: ASA Z22-1930; Dim. Stab of M.P. Films 1934; ASA Z22-1935; High Intensity Lamps-1935; Program Spring Convention Apr. 26, 1939. Write John Faber, 5 Edgewater Drive,

**Ansochrome**, Ansco's new high-speed color film, is now available in 16mm daylight-type motion-picture film. It has an exposure index of 32 and is supplied in 50-ft magazines at \$6.95 each and 100-ft rolls at \$10.40 each. Ansochrome has been made to allow for better pictures in dimmer light and permit use of smaller lens openings for greater depth of field. The new high-speed film permits a greater number of subjects and types of action to be shot in slow motion at high frame speeds. Manufacturing innovations have been made in the film to reproduce red tones more accurately. Processing is included in the purchase price and may be done at the Ansco Color Laboratories listed in the film's instruction sheet.

**Cronar**, the polyester photographic film base developed by Du Pont, is expected to be in commercial production late this year or early in 1956. Du Pont has announced that a full-scale production plant is now in test operation at Parlin, N.J., after nearly two years of construction. This culminates eight years of research and development costing more than \$6 million.

The Du Pont Company has announced that it has licensed Eastman Kodak Co. to manufacture polyester photographic base and film under Du Pont patents. Eastman has been reported as indicating it has as yet no plans for using the polyester base.

The Du Pont production plant is reported uniquely designed for photographic film manufacturing, being a five-story open-air structure for the chemical-mixing and formulation phases. Much of the plant can be monitored from a single instrument and control board. Graphic arts photographic emulsions will be the first made, with motion-picture products next in priority.

Denville, N. J. Phone Rockaway 9-2623M.

June 1940 through Jan. 1950. Write Earle F. Orr, 345 Fellsway West, Medford, Mass.

Dec., 1936; Jan., Feb., Apr., May, July, Sept., Nov. 1937; 1938 complete; 1939 complete; 1940 complete; Jan.-Aug. 1941. Write Richard S. Norton, Warner News Inc., 625 Madison Ave., New York 22.

Collection of back issues available either singly or as a lot. Write F. H. Cole, 1258 So. Burnside Ave., Los Angeles 19.

### Wanted

All Journals published in 1938 or earlier. Write John P. Byrne, Motion Picture Sensitometrics, Signal Corps Pictorial Center, 41-15 48 St., Long Island City 4, N.Y. Thanks are due Major R. E. Herold, Glendale, Calif., who furnished those for 1954, and M. G. Sinkewitch, Hollywood, who donated a complete set for the years 1939 through 1953.

May, July 1944; Jan., Apr. 1945; Jan., Feb. 1946; Jan., Feb., Apr. 1947; Feb. 1950. Write Kraus Periodicals, Inc., 16 East 46th Street, New York 17.