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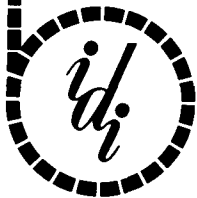


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Born on 1 December 1928, Town lived most of his early years in Plymouth, Mich. He was educated at Cass Technical Institute and Electronics Institute of Technology, both of Detroit. Virtually his entire career was spent in broadcasting, except for two years in the U.S. Navy near the end of World War II. He worked as a radio engineer at WJR, Detroit and at NBC, New York. He assisted in the construction of television station WJRT in Flint, Michigan and spent many years as a Broadcast Field Service Engineer with the RCA Service Co. He assisted in the installation of RCA color television studio and transmitting equipment at many stations, during the period of the late 1950s when local origination of color programs was just beginning.

Early in 1959 he was appointed the first engineering manager for National Educational Television, Inc., Ann Arbor, Mich. He served NET for 10 years and was eventually appointed Vice-President. During this decade he was instrumental in shaping the role of videotape recording as a primary method of television program distribution. From the onset of the extensive NET videotape program duplicating service, a definite commitment was made to endorse and utilize SMPTE-standardized recording techniques. The impact of his decision in support of standardization, made in 1960, has had great significance to the industry and was especially important to the development of videotape re-

coding in non-commercial television stations affiliated with NET and, later, PBS.

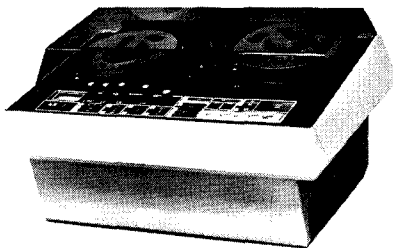
Following the ten-year association with NET, Town moved in 1969 to Ampex Corp., Redwood City, Calif. There, in the position of Product Planner, he was responsible for the planning which resulted in the development of the Ampex ACR-25 quadruplex cassette video recorder, a device which has had significant impact on the broadcasting industry. Town was also Product Planner for the Ampex high-speed contact videotape duplicating system.

From April, 1972 to May 1974, Town served as Manager of Engineering for WTTW, Chicago. During this time he was responsible for major reconstruction of the WTTW studio facilities as well as the planning, purchase and installation of new WTTW transmitter facilities atop the Sears Tower, Chicago.

Having successfully completed the WTTW projects, Town again joined Ampex Corp. as Manager of the Audio Engineering Section. Beginning in May, 1974, he led the engineering efforts which resulted in the Ampex MM-1200 multi-track recorder and the ATR-100 professional studio audio recorder.

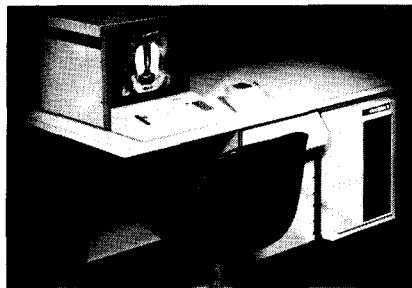
This listing of the impressive professional accomplishments of Howard Town cannot adequately explain the sense of acute loss felt by the hundreds of broadcasters who knew and respected him, both as an engineer of quality and as a fine and honest person. — *Frederick J. Remley, Jr.*

New Products & Developments



The new IVC-1070 ChromaCon series of videotape recorders has been announced by International Video Corp., 990 Alamanor Ave., Sunnyvale, CA 94086. The new recorders incorporate the basic recording format used in all IVC 1-in videotape recorders since 1966 but they have a totally new video and audio signal system. SNR has been increased to 47 dB. Visible moiré has been eliminated and differential phase and gain errors have been substantially reduced. Both audio channels deliver 50 dB. Multi-generation dubs of up to five generations are possible without significant degradation of picture quality or color accuracy, the announcement stated. Applications for the new recorders include broadcast; electronic field production; off-line editing and studio mastering; and industrial, educational, and government. Special attention has been given to the audio system. One channel has been designed for audio-only edits and two line and two microphone inputs can be mixed

simultaneously in both audio channels. Price of the IVC-1070 ChromaCon ranges from \$10,000 to \$12,000 depending on options. Also available is the ChromaCon kit providing video-only improvements. Its priced at about \$1500.



Vision One, a stand-alone video image processing system, has been announced by Comtal Corp., 169 North Halstead St., Pasadena, CA 91107. Designed to give users a total system from front-end processor to applications software, Vision One combines in one package an LSI-11, the image processor, the refresh memory with optional CCD (Charge Coupled Device) or 16K RAM (Random Access Memory), and Comtal-developed applications software. The unit can be hooked up directly to any big computer such as an IBM 370 or it can stand alone. The system provides high fidelity, high-spatial res-

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The third edition of *Principles of Color Sensitometry* outlines the fundamental concepts of this discipline and describes some of the methods and instruments employed in order to give a comprehensive view of the present state of the science. The treatment is not complex, and in some places instead of mathematical discussion there is simple, verbal description for better understanding; but the coverage is comprehensive. The authors have presented and discussed, on a step-by-step basis, the routines common to nearly all of the diverse applications of color sensitometry.

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- 1 Introduction
- 2 Fundamentals of Sensitometry
- 3 Sensitometric Exposures
- 4 The Processing of Sensitometric Tests
- 5 Quantitative Evaluation of Image Density
- 6 Densitometer Design Principles
- 7 Interpretation of Sensitometric Results
- 8 Statistical Aspects of Color Sensitometry

Appendix: Transformations Between Spectral and Analytical Densities

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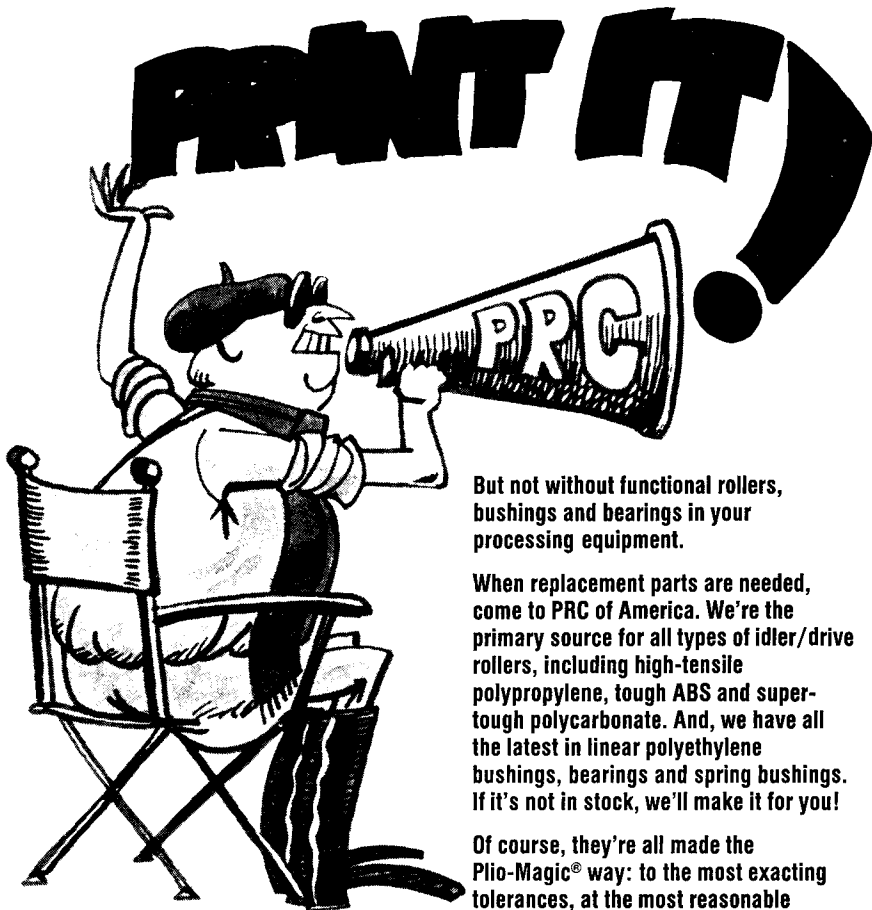
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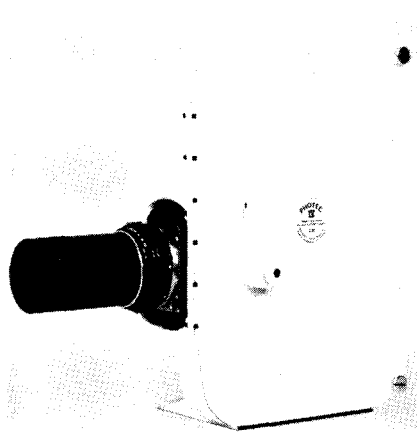
An important feature of Vision One is the software which provides flexibility. It provides more than 20 major functions including the ability to read and display selected images from source data; to search mag tape for the selected image; to select display options, such as gray scale display; function processor operation; pseudocolor processing, true color display, or false color display; and to compute histograms of a selected image and display the results on a graphic overlay. Software also enables the system to create the "zoom" feature to enlarge or reduce a selected area of an image. Price range for Vision One ranges from \$25,000 to \$80,000.

A new high-speed color film for television news recording and an improved filmstock for printing from reversal originals have been announced by Eastman Kodak Co. The Eastman Ektachrome video newsfilm high-speed 7250 (tungsten) is designed to allow filming under extremely low light levels. The new film is rated at EI 400 under tungsten illumination and has an EI of 250 when exposed under daylight conditions with a filter such as a Kodak Wratten 85B filter. The film can be processed by the VNF-1 process and can be exposed at EI 800 or higher with extended processing. It is reported to have excellent forced-processing characteristics and, at these higher speeds, to maintain its neutral color balance.

The Eastman Ektachrome VN print film 7399 is said to produce excellent duplication prints when printed from camera originals. The print film also uses process VNF-1 with a reduced first development time.

A new film, Eastman Color Intermediate II Film 5243/7243 has been announced by Eastman Kodak Co. The film is supplied in the same 16mm and 35mm formats and at the same price as the Color Intermediate Film 5253/7253 which it replaces. Like its predecessor, the 5243/7243 film is intended for making color master positives from originals on Eastman Color Negative Film and color duplicate negatives from the master positives. The Intermediate II film is processed in ECN-2. It incorporates a mask similar to that used in Eastman Color Negative Film 5247 (Mod.), also Process ECN-2.

Photec IV, a 16mm high-speed camera with a frame rate from 100 to 10,000 frames/s has been announced by Infrared Industries, Inc., P.O. Box 989, Santa Barbara, CA 93102. The camera has a film capacity of 400 ft, using standard thickness of film; 100- and 200-ft spools can also be used. Features include a built-in speed control employing digital logic with a soft start device to prevent film breakage during high-speed acceleration. A shutter-pulse-sync is built in to trigger an electronic flash or to monitor frame



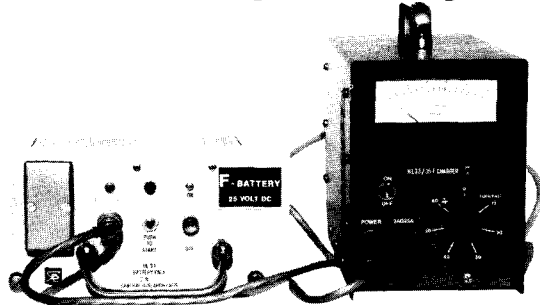
rate with an electronic counter. A mechanical self-energizing brake prevents overshoot and allows multiple runs of up to 3000 pictures/s.

A simplified optical system eliminates the need for a relay lens while using a single shaft for sprocket/prism synchronization. A color-corrected system produces pictures said to be comparable to those produced by intermittent cameras but without the problems caused by rapid stop/start techniques. Price of the Photec IV is \$5900. The price includes a viewfinder, the 50mm *f*/2.8 Zenzanon Bronica lens, built-in LED timing light generator, shutter pulse sync, event sync, all power cords, a tool kit and a carrying case.



The Auto-Spot II and the Auto-Spot II Digital silicon cell 1° spot-reading exposure meters have been announced by Minolta Corp., 101 Williams Dr., Ramsey, NJ 07446. Designed as specialized instruments for critical photographic use, the meters offer pushbutton operation and instant readout by self-setting motorized scales or by LED/digital display. The focusing single lens reflex viewfinders provide a clear, bright magnified circular view covering 9° with a clearly marked 1° center spot. A sensitive silicon photo-cell receptor and IC-transistor circuits provide accuracy over a wide range with both models. With the Auto-Spot II motorized scales around the viewing field revolve to continuously indicate precise aperture, exposure time, cine, EV and over-/under-range values. The Auto-Spot II Digital (shown above) provides direct LED/digital readouts of EV numbers through the finder and of *f*/numbers on the side of the unit, plus 1/2- and 2/3-stop over- and under-range indications. Both meters measure 2.4 × 6.4 × 4.7 in and weigh less than 20 oz. The Auto-Spot II is priced at about \$500. The Auto-Spot II Digital is priced at about \$750.

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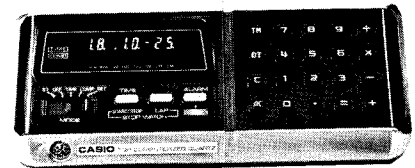
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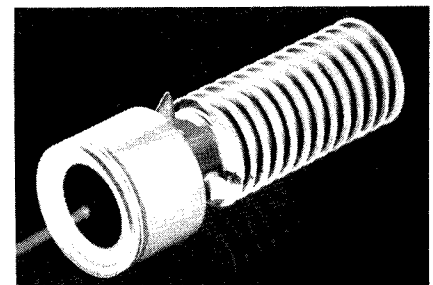
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The Auto Meter II silicon-cell exposure meter has been announced by Minolta Corp., 101 Williams Dr., Ramsey, NJ 07446. The meter provides one-hand operation by simply pushing a lockable button to actuate motorized moving scales that give instant direct readings automatically of incident or reflected light. No manual dial alignment or needle reading is necessary. The meter's light receptor is a high-sensitivity silicon photo cell. This coupled with the special transistor circuit and extended-range motor unit yields easy-to-read indications. Cine frame rates range from 8 to 128 frames/s (with 180° sector opening). The measuring range at ASA 100 goes from EV -4 to +17 in the incident mode and from EV -1 to +20 in the reflected mode. Film speeds range from ASA 6 to 25,000 (DIN 9 to 45). No high/low changeover is required. Aperture, exposure time, cine, EV and reference-number readings are given as well as automatic over- or under-range warning. The Auto Meter II is priced at \$150. The price includes spherical diffuser, neck strap, case and 6-V battery.



CQ-1 Computerized Quartz, described as "calculator, clock, stopwatch and alarm" has been announced by Casio, Inc., 15 Gardner Rd., Fairfield, NJ 07006. As a calculator, the device provides the four basic math functions of addition, subtraction, multiplication and division, including constants. It computes time calculations up to 9 h, 59 min, 59 s. The CQ-1 can calculate dates from 1 January 1901 to 31 December 2099. As a timepiece, it shows the hour, minute and second and tells whether it is AM or PM. It also indicates the date and the day of the week. The alarm can be set to sound four times a day. As a stopwatch, the CQ-1 records hour, minute, second and lapsed time up to 9 h, 59 min, 59.9 s. The price is \$49.95.

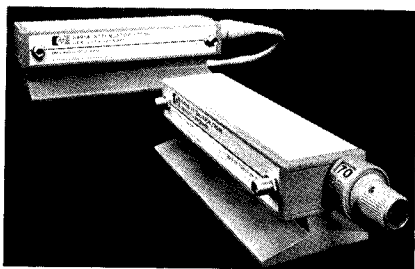


A new solid state photomultiplier tube called the VPM-192M has been announced by Varian Associates, 601 California Ave., Palo Alto, CA 94304. It is said to have triple the luminous sensitivity and more than twice the peak quan-

tum efficiency of earlier tubes for similar applications. The VPM-192M is intended to replace existing glass photomultiplier tubes in analytical instruments and such applications as fiber optic diagnostics, photon counting, and Raman spectrophotometry. Ruggedly constructed, the new end-window tube features ceramic-to-metal construction. It has an 18mm diameter semitransparent II-V gallium arsenide photocathode, is anti-reflective coated, and is bonded to a Corning 7056 glass window. Price of the VPM-192M is \$1500.



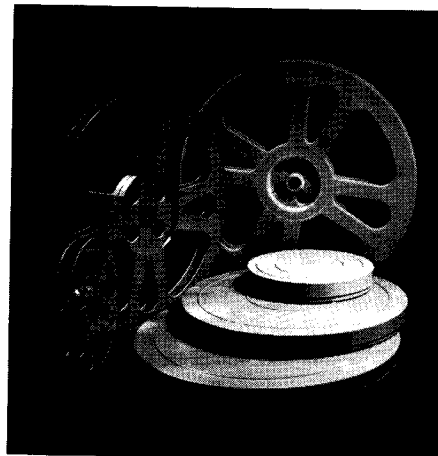
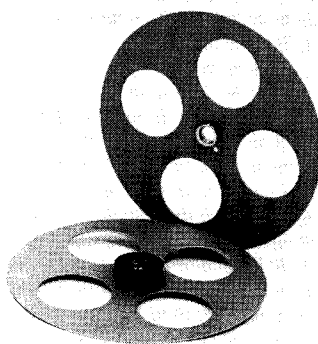
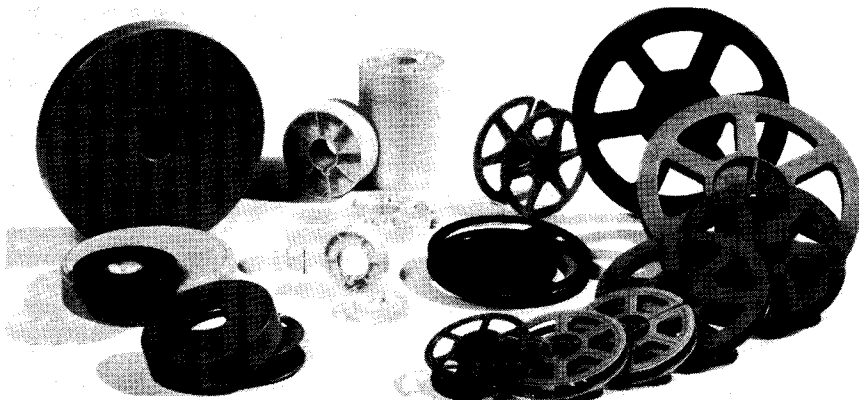
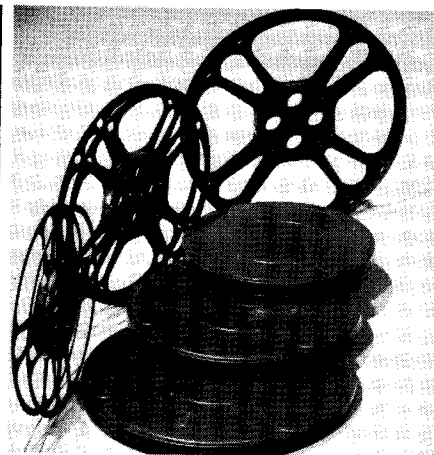
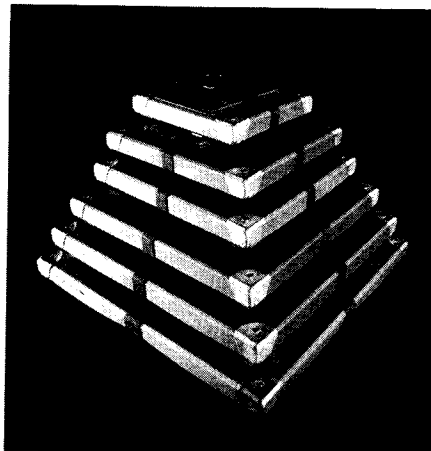
The Time Machine, a sexagesimal calculator designed to automatically add, subtract, multiply and divide hours, minutes, seconds and tenths of seconds without the usual conversions has been announced by Chafitz, 1055 First St., Rockville, MD 20850. The instrument has both manual and automatic modes. Results of tests in the field indicate the calculator reduced most calculating times by 50% and in some cases up to 70%. It also converts hours, minutes and seconds to decimal form and vice versa. The price is \$49.95.



New coaxial step attenuators designed to provide accurate, highly-repeatable attenuation from dc to 26.5 GHz have been announced by Hewlett-Packard, 1501 Page Mill Rd., Palo Alto, CA 94304. Models are offered in programmable (8495K) or manual (8495D) form, sharing the same performance specifications. The range is 70 dB in 10-dB steps. Typical applications are expected to be in new microwave activities, where coaxial designs are increasingly in use above 18 GHz, in such diverse areas as satellite communications and electronic warfare. More and more, these uses need coaxial measurement components operating to and beyond 26.5 GHz, the announcement noted. Price of the HP 8495D manual step attenuator is \$700. The 8495K programmable step attenuator (solenoids operate from 20 to 30 V at 110 mA) is priced at \$1060.

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