

New Developments in Print/TV/Film

A Bimonthly Report on Materials, Methods and Technology

Photography: The Future Is Here

By Harold Martin

The growing use of videotape recording, the mind-boggling increase in the price of silver some two years ago, and a feeling that the electronics revolution is upon us have placed the long-range future of conventional silver photography in doubt. These doubts were reinforced by the recent introduction of a new electronic still camera by Sony Corporation.

Christened MAVICA (possibly from *Magnetic Video Camera?*), the new Sony camera incorporates all of the latest advances in electronics—magnetic tape recording, charge-coupled (CCD) devices and integrated circuit (IC) semiconductors. Using a magnetic film disk, the MAVICA produces images which can be viewed on any television set. None of the chemical processes associated with conventional silver photography are required.

The MAVICA camera is just about the same size and shape as the conventional 35mm single-lens reflex, with, in fact, through-the-lens viewing. The image seen through the lens is converted into electrical signals by the charge-coupled device. These signals are, in turn, recorded on a very small magnetic disk, the MAVIPAK, which can store up to 50 separate still pictures.

The recorded pictures can be viewed immediately on a television set using a special playback unit, the MAVIPAK viewer. In this respect, the MAVICA system is identical to the currently popular videotape cameras and cassette recorders.

According to Sony, prints of the images can be produced by means of a color printer now under development. However, also according to Sony, the MAVICA system was designed for "instant" television playback rather than for the production of paper prints (or "hard copy" in computer-electronic jargon).

Further, Sony suggests that the MAVICA system will coexist with conventional photography. Initial marketing of the system is scheduled for Japan in about two years (late 1983 or 1984), with American marketing following about a year later. Indications are that the price of the MAVICA system will be about \$900.

The technical specifications of the MAVICA system are extremely interesting. The "film" is a flat, magnetic recording disk contained in a hard plastic case, about 2¼" by 2¼" by ⅛", and weighing slightly over ¼-ounce.

The MAVIPAK film disk can be removed from the camera at any time without loss of frames. If it is desired, the

"images" can be erased so that the film can be reused. (The philosophic implications of "randomly recorded history" are in themselves both interesting and frightening. It is not hard to imagine many of the most powerful and politically sensitive images being erased and consigned to non-existence).

The camera is a typical SLR with two

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fixed focal length lenses, a 25mm f/2 wide-angle and a 50mm f/1.4 "normal," plus a 16-64mm f/1.4 zoom lens. Power is supplied by two ni-cad rechargeable batteries good for 200 exposures per charge. There is center-weighted exposure metering plus exposure warning lamps visible in the viewfinder.

Other features of the camera include its ability to shoot up to 10 pictures per second, transmit image signals on the MAVIPAK via a telephone line, and dub still pictures onto videotape to produce a video picture album.

Price and philosophical considerations aside, the MAVICA is a remarkable achievement of the assembling of assorted technology into a new package to produce a whole new category of product. It is the feeling of this department that whatever limitations the present MAVICA system may exhibit, it does point the way to the future of still photography.

For many photographers, the question of print quality is a deterrent to the use of electronic recording. However, it is entirely possible that, in time, electronic recording may improve to the point where it can compare with silver recording in terms of tonal range and sharpness. It should also be kept in mind that, for millions of people, image quality is a fuzzy print from a badly exposed 110 negative. It is entirely conceivable that silver photography will remain the province of the photographic artist and that for the mass-market amateur, or for "quick and dirty" requirements such as news photography, an electronic image will be more than adequate.

Enter 3D Photography

In the meantime, a new system of conventional photography—this time in 3D—is in the wings ready to make its American debut. Called the Nimslo System (after its inventors, Jerry Nims and Allen Lo), it uses a compact, four-lens 35mm camera to produce four images per exposure on conventional color film. These negatives are then processed by Nimslo in special labs with the use of printers developed for the purpose to produce a remarkable three-dimensional color print, about 3½" by 4½".

The 3D effect is achieved by the use of a plastic screen over the print itself, which produces the optical separation of the images. In effect, instead of the viewer having to wear special glasses to "see" in three dimensions, the "glasses"

are permanently mounted over the print.

The most recent samples of the Nimslo prints are excellent as far as color and three-dimensional feeling are concerned. It is expected that 3D prints will sell for about 80 to 90 cents each. According to Nimslo, this price is roughly equivalent to instant color print prices.

The fascinating thing about the Nimslo System is that it seems to have succeeded in producing 3D prints which can be mass-produced and which do not require any special viewing aids, such as the polarizing spectacles that were worn during the 1950-era 3D movies. Whether or not the Nimslo System will be as successful commercially as is expected, the fact remains that it's a remarkable achievement.

More Joy From Kodak

One of the best books on general photography is Eastman Kodak's *Joy of Photography*, published last year. It is an unpretentious, remarkably complete, easy-to-understand introduction to the subject. This year, Kodak has come up with an encore, *More Joy of Photography*.

Actually, this book is even more valuable than the earlier edition because it provides simple, thorough explanations of how to achieve creative effects, including such unusual situations as abstracts, infra-red, fireworks, photography through glass, and mixed light. In fact, it is virtually a handbook of special effects and is strongly recommended by this department for anyone's basic photographic library.

The publisher is Addison-Wesley; the price is a reasonable \$12.95.

Electronics on the Printing Press

By Klaus F. Schmidt

The most spectacular impact of electronics and computer technology in the graphic arts field has undoubtedly been on the preparatory areas of word processing, phototypesetting and photoplating. The printing process itself, whether executed by the letterpress, offset lithography or rotogravure methods, has been considerably slower in embracing electronic technology.

But printing has not been a stepchild, either, as far as the utilization of electron beams or micro-processors is concerned. This development began more than a decade ago when computer-aided auxiliary and control devices on printing presses made their initial appearances. There were — and still are — web tension, ink