

THE SUBMINIATURE TIMES

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Supporting 110, 17.5mm, 16mm, 9.5mm, 8mm, 4mm, 1mm, Microdot, and Electronic Still Photography.



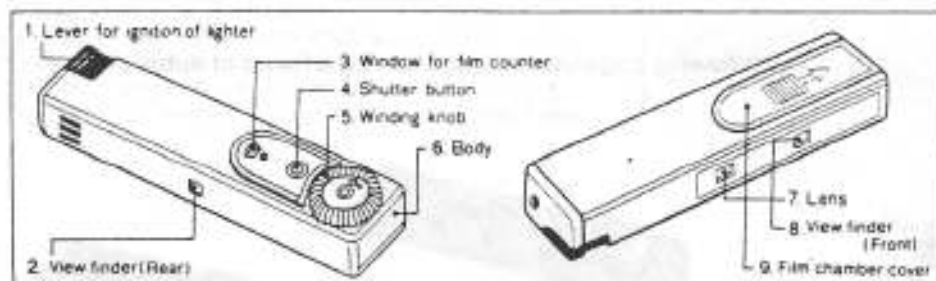
JVC Introduces World's Smallest and Lightest Digital Camcorder

JVC has announced the release of the GR-DV1, a digital camcorder based on the new DV format and tailored for multimedia applications. By shrinking the mechanical and electronic components, the camcorder has been reduced in weight and size to make it similar to that of a 35mm compact camera.

Its radically downsized high-performance lens with optical 10x zoom weighs just over one ounce (35g) and is less than two inches (50mm) long. The 570,000 pixel 1/3" CCD ensures high-quality recordings with enhanced detail and clarity. A stabilizer eliminates camera shake without affecting picture quality or image size.

In addition to the high-speed 10x optical zoom, there are several enhanced features, including a 20x digital zoom for close-up shots, a 100x Super Digital Zoom, 12 digital effects and 18 scene transitions.

JVC (201) 794-3900



SPECIFICATIONS

- Film Size: Universal 8x11mm format (Cartridge film utilized by Minix type cameras)
- Lens: 15 mm f/5.6 (Fixed)
- Adjustment of Focus: Fixed Focus (From 1m to infinity)
- Viewfinder: Reversed Galilean type with 0.45X magnification. Picture area 85%
- Shutter Speed: 1/150 sec. set speed
- Film advance: A simple dial thumb control by a 120° stroke. Shutter automatically set as film is wound into the next succeeding frame
- Film counter: Automatic, normal counting/reset, with visible indicators S and I through 36
- Dimensions: 113(w)x27(d)x21(h)
- Weight: 64g

SLIMAX-LITE GETS FLIP FLASH



The Flip

Flashlights don't seem to have been improved in many years. Enter a new line of lights from Duracell U.S.A. (Berkshire Industrial Park, Bethel, CT 06801). Called The Flip, these lights feature "pivoting heads and a 'no-roll' design that allows the user to direct a light beam without having to hold the light itself." Each Flip light has a flat base for maximum stability and a pivoting head. The Pocket Light model and the Handy Light "shine automatically when the head is flipped open." The Flip Work Light combines a powerful beam lantern with a convenient area light, which can be used in tandem or separately. Each light is sold "with the appropriate Duracell batteries included." The trio of Flip lights are sold with a "lifetime product guarantee." Price: \$2.74-\$14.49.

Digital Camera

captures sharp color images

With 1 million pixels of image data/shot, pictures look sharp and vibrant even when enlarged to 8 x 10 in. Model PDC-2000 stores 40 or 60 images; direct connect version uses computer. Captured images can be transferred to any computer with up to 1,600 x 1,200 resolution.

Polaroid Corp.
Cambridge, MA
(800) 816-2611
Fax: (617) 386-3584
Tech Contact: M. DeHaan



Q: I have a small problem I hope you can help me with. Kodak Australia have informed me that the lab they used to process old Kodachrome II Super 8 movie film has closed down. I now have an old cartridge of film I cannot get processed. Your magazine has its finger on the pulse with most things photographic, and therefore, I thought you might know of a lab that could process the film for me.

The film is about 10-12 years old, and was found in my parents' collection of old family films and memorabilia that we would dearly like to preserve. Hoping to hear from you soon.—Grant Van Wunnik, Melbourne, Australia

A: Rocky Mountain Film Laboratory, 145 Madison St., Denver, CO 80206; (303) 399-6444 can process your old Kodachrome movie film. They can run K-11, K-12, and K-40 processes. These films are processed via a modified black-and-white negative, and the price of \$17 per roll includes transfer to video and shipping charges. Your shipping charges (in Australia) may be more. It will take six to eight weeks in-house to process.

The following pages were submitted by a friend of subminiature.



Mundus Color



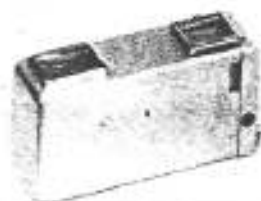
Stylophot Luxe



Minolta 16 CdS



Stylophot Standard



Minolta-16



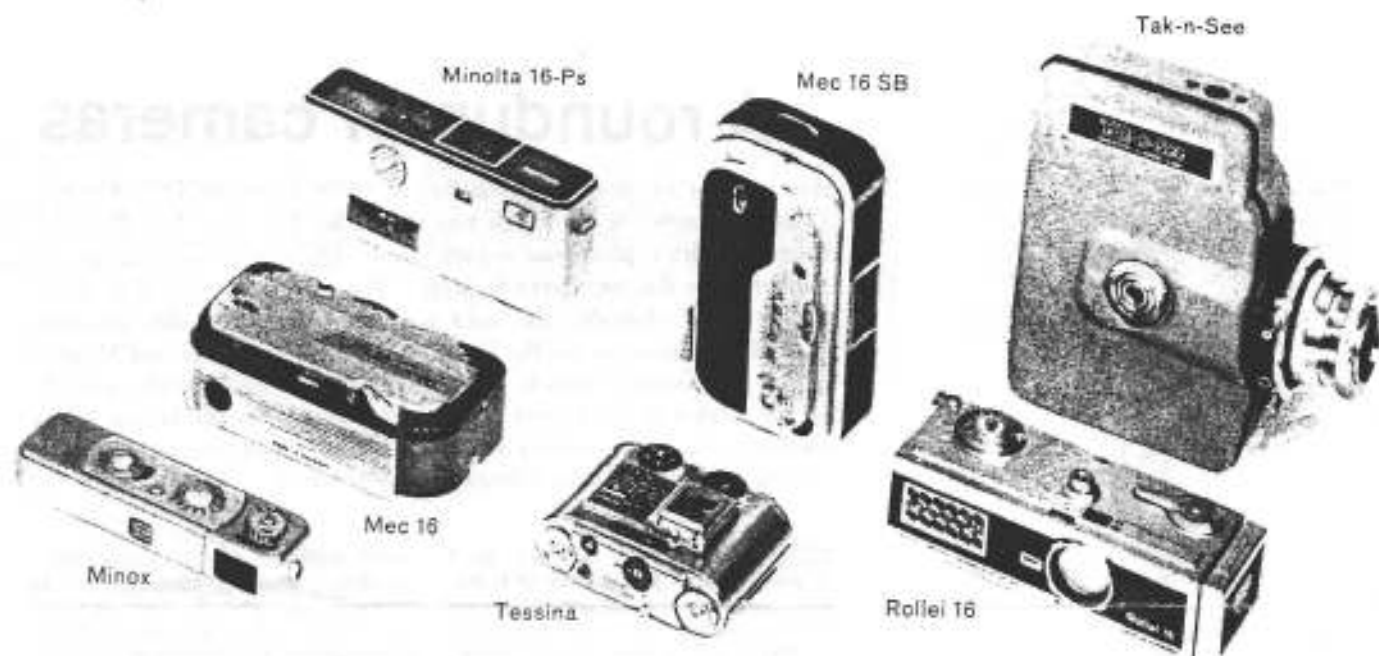
Yashica Atonon



Edixa 16

SUBMINIATURES—

By MICHAEL V. KORDA



THE GIANT-KILLERS?

And this is just the beginning. I have no doubt of that. As progress is made toward standardization of film size and format, as films grow faster and grain size smaller, and as more and more subminiature projectors come on the market, the subminiature revolution is going to spark new cameras and new ideas. Developments such as the forthcoming Ektachrome EF, a 16-mm color film that can be speed rated at 1280, is bound to have considerable impact. Typically, this new emulsion at its normal "slow" rating of 160 beats the present Ektachrome FR in resolution, acutance, and grain. Clearly, we can't judge subminiatures by the past. It's time to take a fresh look at these systems.

'BUT HOW GOOD ARE THE PICTURES?'

For years this was my question. And it's a legitimate one. The makers of 35-mm cameras advertise their products with perfect 16x20 prints of great photographs. By contrast, and for reasons which escape me, the manufacturers of subminiature cameras promote with fuzzy and dismal snapshots, and the only camera stores I have seen (in New York) that show subminiature prints in their windows, display (with a pride that is difficult to share) the store owners' handiwork—blurred family album pictures taken in the glaring sunlight. Partly as a result of this, I have been dubious about these cameras, though attracted to them by their size.

I suspect that part of the trouble is that the cameras are so small, owners tend to be pleased, at first, when *anything* comes out. It seems such a miracle for so small a camera to produce *any* picture, that it's enough for it to come out recognizably to satisfy most owners. As a result, one sees a great many really terrible subminiature pictures. The

photographer, who wouldn't dream of taking so casual an approach to a 35-mm camera, shoots without carefully focusing ("Depth of field will take care of it."), photographs people from too far and scarcely bothers to frame his subject. He gets bad results because he is treating a precision instrument as if it were a toy, when, in fact, it needs to be treated even more carefully than a 35-mm camera. Given that care, it will deliver truly remarkable results. Treated as a "snapshot" camera, it will give predictably boring snapshots.

'ARE THERE ANY TRICKS TO IT?'

Every rule of good photography must be observed with a subminiature camera, with, in my experience, a few additional ones thrown in.

Get close to the subject, then get closer still: most subminiature photographs, particularly portraits, suffer from not being tightly framed.

Don't worry about grain. If you want grainless pictures, use an 816 camera. True, with a subminiature you can copy documents, etc. (the Minox has special accessories to make this more convenient), but the true fun of subminiature photography lies, I think, in its freedom and spontaneity. Aim for the quick impression, the suddenly caught, imposed photograph (but remember, *move in close*), the moment of tension or relaxation that suddenly reveals character. The subminiature camera is not for posing, though it will do perfectly well for this kind of picture.

Don't make a big production of taking photographs. Learn to produce the camera instantly, focus quickly, and fire away. The portability of the camera should pay dividends in spontaneous photography—

A roundup of cameras

Here's a list of subminiature cameras available in the United States. (Two new ones, the Edixa 16 and the Rollei 16, covered in *Portrait Photography's photokina* report, June, 1963, were not yet on the market when this issue went to press.) The cameras are listed in alphabetical order. Actually, the most popular and most readily available through camera stores are the Minox, GaMi-16, Mamiya-16, and Minolta-16—in their various models. The Minolta-16 has three models currently on the market in the United States, and is said to be the largest selling subminiature in the country today. Source of supply is given for those cameras not easily obtained through camera stores.



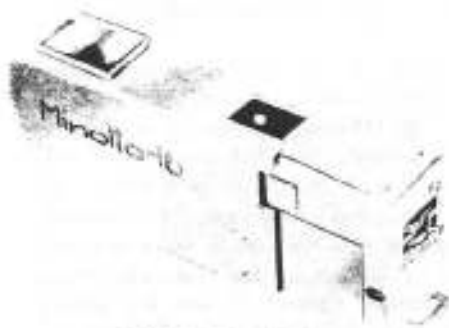
MINOX B



MINOLTA-16 EE



MINOLTA-16 P



MINOLTA-16 II

ECHO 8 (Camera Lighter): Built into a windproof-type lighter of standard appearance; uses 8-mm film for 20 exposures, frame size: 6x6-mm; 15-mm $f/3.5$ three-element coated lens with fixed focus, stops down to $f/11$; self-cocking shutter; one speed: 1/50 sec plus T and B, optical reflex viewer; automatic film stop; self-enclosing. Price, \$29.95. Accessories include screw-in filters for black-and-white and color film and infrared and UV filter. From: Silver Bells Ltd., P.O. Box 982, Carmel, Calif.

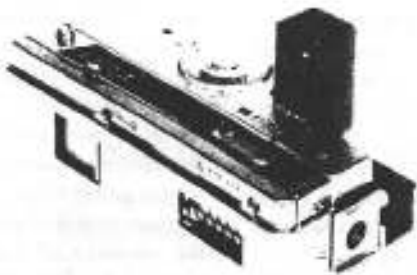
EDIXA 16: (Cuming) Uses new standard film load, 21 exposures, 12x17-mm. Lens, 25-mm $f/2.8$ Schacht Travegar. Shutter automatically programmed 1/30 to 1/150 sec, light values 8 to 15. Rapid-wind lever and rewind. Size, 1x1½x3¾-in. Weight, 6 oz. Coupled exposure meter fits on end. Filters, accessories.

GAMI-16: Uses 16-mm GaMi 30-exposure cartridge film, 12.17-mm frame size; 25-mm Gaileo Esamitar Anastigmat $f/1.9$ lens, stops down to $f/11$, minimum focusing distance: 20 in.; eye-level combined viewfinder-rangefinder with automatic parallax correction; built-in exposure meter with ASA film speeds 12 to 200 for black-and-white and 20 to 150 for

color; exposure control inside finder window; shutter speeds: ½ to 1/1,000 sec and B, EVS settings, combined film/shutter wind, X synchronization; film transport and shutter cocking automatic with camera handle-cover operation; single shots or sequence burst exposures. Price, including leather case, neck chain, and reusable film cartridge, \$299.50. Accessories include 4X and 8X telephoto lenses, copy lens, filters, copy stand, microscope adapter, film loader, film splitter, developing tank, viewer, enlarger.

MAMIYA DELUXE 16: Uses 16-mm film for 20 exposures, 10x14-mm frame size; 25-mm $f/2.8$ coated lens, minimum focusing distance: 1 ft; shutter speeds, ½ to 1/200 sec and B, X synchronization, automatic wind; built-in optical auto-finder with parallax correction; sliding lens cover prevents accidental exposure; built-in interchangeable yellow filter. Price, with case and strap, \$39.95. Accessories available: filters; choice of ten types of film.

MAMIYA ELECTRIC 16: Same features as Deluxe 16 model except with automatic-coupled, built-in exposure meter. Price, including case and wrist strap, \$69.95.



MAMIYA-16 ELECTRIC



GAMI-16

and accessories

MEC 16-SB: Uses 16-mm film; 20-mm $f/2.8$ lens, minimum focusing distance: 1 ft, automatic three-way snapshot settings; shutter speeds, 1/30 to 1/1,000 sec and B, X synchronization; automatic vertical and horizontal parallax correction; lever wind; automatic exposure counter; built-in filter channel. Price, \$84.50; with $f/2$ lens, \$99.50. Accessories include set of seven filters.

MIKROMA II: Uses 16-mm film; 20-mm Mirar $f/3.5$ lens, minimum focusing distance: 18 in., scale focusing; shutter speeds, 1/5 to 1/400 sec, M synchronization; eye-level viewfinder; combined single-stroke film/shutter wind; double-exposure prevention. Price, with case, \$39.50. Accessories include pouch case, developing tank, projector, film cutter, filters, copying system, viewer, enlarger, slide binders. From: Warren Processing Labs, 1924 Ave. U, Brooklyn 29, N. Y.

MINOLTA-16 II: Uses 16-mm film for 20 exposures, 10x14-mm frame size; fixed-focus 22-mm $f/2.8$ coated lens with two close-up lenses; speeds: 1/30 to 1/500 sec, X synchronization; push-pull body cover advances film, winds shutter, protects lens when closed for carrying; retracting film-pressure plate. Price, with case and UV filter, \$39.95. Accessories available include filter kit; filter file; accessory and tripod bracket; B-C 111 folding-type flashgun; enlarger; projector; two close-up sets: (1) with No. 1 and 2 lens, No. 0 distance lens, yellow filter; (2) lenses and 1A filter, 80A and 81B color conversion filter.

MINOLTA-16 E: Uses 16-mm film, 10x14-mm frame size; fixed-focus 25-mm $f/2.8$ lens, minimum focusing distance: 6 ft; shutter speeds: 1/30 to 1/500 sec, X synchronization;

fully automatic exposure control; single-stroke film transport; double-exposure prevention; automatic exposure counter. Price, with case, \$79.50. Accessories include close-up lenses; enlarger; filters for color and black-and-white film.

MINOLTA-16 P: Uses 16-mm film, 10x14-mm frame size; fixed-focus 25-mm $f/3.5$ lens (accessory lenses permit close-ups); shutter speed: 1/50 sec, X synchronization; thumb-knob single-stroke rapid film wind; double-exposure prevention; automatic exposure counter. Price, \$26.90. Accessories include flashgun; lenses; filters for color and black-and-white film; projector; enlarger.

MINOX B and PRIVATE EYE: Uses 9.5-mm film; 50 exposures on black-and-white film, 36 exposures on color; 8x11-mm frame size; 15-mm $f/3.5$ coated lens, fixed aperture, minimum focusing distance: 8 in.; shutter speeds, 1/2 to 1/1,000 sec and T, B, X synchronization; built-in exposure meter coupled to shutter; push-pull body cover advances film, winds shutter, protects lens and finder when closed for carrying; retracting film pressure plate; bright frame finder with automatic parallax correction; built-in 2X green, 10X neutral density filters; distance measuring chain for close-ups; satin chrome finish. Price, Minox, \$149; Private Eye, with black finish, \$174. Accessories include Model B B-C flash for AG-1 bulbs with retractable reflector, \$14.95; tripod; telephoto-binocular clamps; copying stand; reflex and right-angle finders; enlarger; developing kit and tank; film viewer-magnifier; transparency viewer-cutter; automatic projector; slide-binding kit; slide file.

continued on next page



STYLOPHOT



ROLLEI 16 (coming)



EDIXA 16 (coming)



MIKROMA II



ECHO-B



VISCAWIDE-16



MUNDUS

HOW THEY PERFORM

MINOLTA 16 II (22-mm Rokkor $f/2.8$ lens). The baby of the Minolta family, the II model is one of the smallest and lightest cameras available. It has fixed focus, but manually adjustable shutter speeds to 1/500 sec and apertures with click-stop openings down to $f/16$. The result is a very useful and flexible camera, especially for the advanced amateur who likes to be able to set his own camera and select his own speed/aperture combination for the circumstances. This is an ideal camera for the man who carries a 35-mm with black-and-white. He can keep color in the Minolta 16 II, and rely on the exposure meter he'd be carrying anyway with, in, or on his 35-mm camera. Price, \$37.50; supplier, Minolta Corp., 200 Park Ave. S., New York, N.Y. 10003.

MINOX B (15-mm Compur $f/3.5$ lens). Basically, the original subminiature, and still, in many ways, the most interesting and the most unusual. It is very, very small, takes up to 50 pictures on a special cartridge, has built-in filters, speeds to 1/1,000 sec and focusing from 8 in. to infinity. A built-in light meter gives you accurate exposures quite simply, since it is coupled to the shutter speed dial. The aperture is fixed at $f/3.5$, but that doesn't prevent the Minox from being a remarkably flexible and precise instrument, with a host of accessories and a ready supply of film available. Price, \$169.95; supplier, Minox Corp., 257 Park Ave. S., New York, N.Y. 10003.

MUNDUS COLOR (20-mm Som Berthiot $f/2.8$ lens). A real maverick. It has a single-stroke film-and-shutter wind (on same side as the release), and looks like an 8-mm movie camera, is fitted with a behind-lens still-camera shutter, giving you speeds from 8 to 1/300 sec. It accepts standard 16-mm C-mount lenses, and can be equipped with close-up rings. It comes in two models: TB-8/20, which takes 350 10x16-mm pictures on a regular roll of 25-ft double-run 8-mm, and the Econo, which has a 12x15-mm frame format. The latter takes 25-ft loads of single-perforated 16-mm film. If 8-mm rolls are used, the sprocket holes will intrude on one edge of the frames, because of their additional width. Compared to the TB-8/20, spacing between frames is reduced, and the Econo takes 500 pictures per 25-ft roll. The Mundus is an interesting design, takes first-class stills, with an obvious appeal for

those who shoot a lot of color and would like to do it more cheaply. Special film is made for the camera, but, in fact, any 16-mm or 8-mm motion picture film will do just as well, provided that you can make sure the processor won't cut your 8-mm film down the middle (an agonizing thought—500 color transparencies ruined in one shot!). Price, TB-8/20, \$119.50; Econo, \$125; supplier, Mundus Color Co., P.O. Box 156, Riverdale, Md. 20840.

ROLLEI 16 (25-mm Zeiss Tessar $f/2.8$ lens). A beautifully designed and very well-made camera, from one of the most famous manufacturers in the world. The Rollei 16 uses the "standard" 16-mm German film cartridge (like the Edixa 16), has a built-in light meter which controls apertures and shutter speeds automatically, a warning light to tell you when there is not enough light, focusing from 1.3 ft to infinity, and that intangible aura of Rollei quality and solidity. The lens is superb, and the camera gives results that are quite as sharp as 35-mm. Two Mutar accessory lenses are available, one a wide-angle, the other a telephoto. Both are bulky and a little complex to use, but give excellent results and offer a choice of focal length that is so far rare in subminiature cameras. Bayonet filters are like miniatures of the big Rollei filters. A little on the heavy side, but quite a camera for its size. Price, \$179.50; supplier, Honeywell Photographic, 4800 E. Dry Creek Rd., Denver, Colo. 80217.

STYLOPHOT LUXE (27-mm Roussel $f/3.5$ lens). The Stylophot is another maverick—a camera designed to look like a fountain pen and to clip into the pocket like one. It looks very odd, but its elongated shape makes it easy to hold. The camera has a fixed shutter speed of 1/75 sec, variable apertures, and manual focusing. Price, \$32.95; supplier, The Kimac Co., Old Greenwich, Conn.

STYLOPHOT (double-element $f/6.3$ lens). A simpler version of the above, this model has a fixed shutter speed of 1/50 sec, fixed-focus lens, and two apertures, one for black-and-white film, the other for color. Price, \$9.95; supplier, The Kimac Co., Old Greenwich, Conn.

TAK-N-SEE (20-mm Som Berthiot $f/2.8$ lens). Basically similar to the Econo version of the Mundus Color, but shutter-release lever is located on side opposite the wind-lever control. Camera can therefore be operated quickly by holding it upright with the wind-lever on the left side, release on the right—though this places

the finder below the lens. Price, \$125; Baptista Films, 434 Sunnyside Ave., Wheaton, Ill.

TESSINA (25-mm Tessinon $f/2.8$ lens). The most complex and fascinating of the subminiatures, the Tessina makes no concessions to size. It has everything a large camera has—focusing, groundglass, pentaprism, sportsfinder, synchronization dial, speeds to 1/500. It also has a spring-wound motor. As described in the text, it takes 35-mm film, on which it produces a 14x21-mm picture.

Because the light is passed from the lens to the film by reflecting from a mirror, the film must be reversed in making prints or enlargements.

The groundglass focusing is not very useful, since the area is so small and the depth of field so great that it's difficult to perceive any changes in focus and almost impossible to make fine adjustments.

Other than that, the Tessina is a fascinating compromise between subminiature design and standard 35-mm film, and certainly makes the film supply problem easy. Quality is very high. Price, \$149.50; supplier, Karl Heitz, Inc., 979 Third Ave., New York, N.Y. 10022.

YASHICA ATORON (18-mm Yashinon $f/2.8$ lens). A very small, neat and handsome camera, using the standard Minox cartridge. The Atoron has a built-in light meter linked to an EVS scale. You just turn the scale until it matches the needle, then shoot. Fixed focus, which is a pity, but otherwise a very handy camera with an excellent flash unit. Built-in yellow filter snaps into place with the flick of the thumb and automatically adjusts the exposure meter for filter factor. Price, \$110; supplier, Yashica, Inc., 50-17 Queens Blvd., Woodside, N.Y. 11377.

Well, there you are. There's plenty to choose from, and the best way, I think, is to decide what you want the camera to begin with. A fixed-focus camera may make a relatively inexpensive vacation camera; an automatic one may appeal to you, and may encourage your wife to take pictures; one of the more complex and expensive machines, such as the Tessina and the Minox, may make a perfect "second camera" or even an only camera.

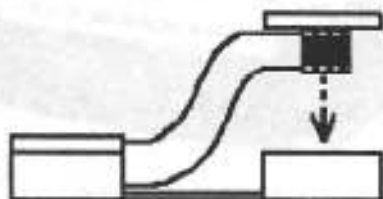
One word of caution. Try the camera that interests you. There is a vast differentiation in shapes, and some may find that one camera is easy to hold and another almost impossible.

My advice is to get in on the ground floor of a revolution.

TIPS FROM THE '50S

Novice 9.5mm respoolers often destroy their reloadable plastic cassettes by repeatedly force-fitting the receptacle cap over the takeup spool. Once the case is deformed it is no longer light tight.

Rather than put the spool into the cassette and fish around to fit the cap, put the spool on the cap first. Then put spool and cap together into the cassette case.



MINOX

HELPLINE

Need Minolta-16 processing in Chicago? Try these.

Water Tower Place	280-1220
OSCO Drugs (seven days)	783-8943
Parkway Drugs (seven days)	549-2720
Walgreens Pharmacy (seven days, 24 hours)	664-8686