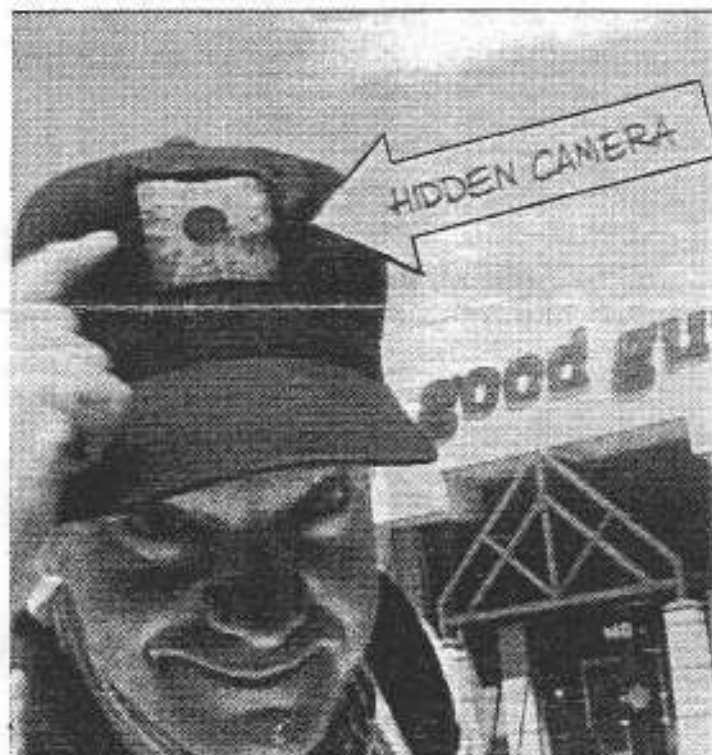


THE SUBMINIATURE TIMES

The Subminiature Times is published monthly by Doylejet, P.O. Box 60311, Houston, TX. 77205 (713) 443-3409

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



Goody, Silverstein

A hidden camera catches perky staff

A hidden camera is a time-tested advertising tactic that achieved immortality in a long-running series of commercials.

Ayer Inc. concealed cameras to record the reactions of diners when told they were sipping Folgers Instant instead of freshly brewed ground coffee.

A campaign by Goodby, Silverstein & Partners for Good Guys Inc., a chain of consumer electronics stores in California and Nevada, has updated the device by adding humor and a heightened level of reality. It centers on a comedian named Geoff Bolt who visited 40 of the 51 Good Guys stores unannounced and made outlandish requests of the sales staffs. Among them were to deliver a television set inside the gorilla cage of a zoo, repair a videocassette recorder stuffed with waffles, and advise a shopper with noisy neighbors which stereo speakers would "penetrate concrete".

The stunts which were known in advance only to senior executives, yielded 14 hours of videotape that will be edited into at least nine spots.

The employees emerged good-natured, unflappable, and patient. A salesman agreed, after being told there was 'no way to move the gorilla,' to deliver the television. A saleswoman, bemusedly ejecting the waffles, said the VCR doubled as a toaster "only in power surges."



\$13

Sale!
Reg. \$15.99

Star 110 Camera Outfit

Compact size camera with film and batteries.

COLLECTORS ARE NOTING that the 'Regular Price' of the Kodak Star 110 is now \$15.99, making the current \$13 "SALE!" a bargain. Except that we've all been watching the fluctuations up and down from the old 'Regular Price' of \$12.99 (ST #55). My, my.

Five back issues of "The Subminiature Times" are available again:

#6 Mec-16, the 4-wheel drive of subminiatures. Minox depth of field tables.

#7 Earn money with your submini. "Small Cameras" by Morris G. Moses. Jack Naylor has the largest collection. Update: Short focal length enlarging lenses.

#8 Think 8mm when you absolutely positively have to come back with a picture: cameras, film, processing. Make a 2-minute film splitter. How to print Super 8.

#9 The Minolta 110 SLR cameras. Solve 7 basic Rollei-16 problems: Cassettes, film, viewfinder, low light indication, etc.

#10 Harvey Libowitz makes subminiature studio cameras (and their tripods.) Working late? Build this easy Infrared exposure meter. Minox accessories jackpot.

the camera collector

by Jason Schneider

Disc cameras that never made it, including a 1940's version that's conceptually close to Kodak's!



After last month's lengthy discourse on Disciana, perhaps you were hoping for a respite from the round-filmed beasts. Instead I've decided to keep my word for a change and regale you with just a few

"never-were" pre-Kodak disc cameras as promised. Typically for this breed, it seems, all three display flashes of inspiration and a degree of mechanical ingenuity too seldom found in their more conventional counterparts. In the interest of maintaining a mild degree of suspense I'll save the most strikingly Kodak-disc-ish creations for last, thereby destroying all semblance of chronological order.

Let's begin with the cute, amiable, and unpretentious little Fotodisc produced under the auspices (if not in the factory) of the American Safety Razor Co. As you can see by ogling at the photo on page 31, the Fotodisc was a tiny, pocketable camera designed to clamp onto a much larger (4-in.-diameter) Fotodisc magazine. Indeed, you were supposed to grab the knurled outer edge of the camera and twist it onto its circular film supply thereby opening the magazine's blind and enabling you to shoot

eight round, 1-in.-diameter negs per disc of what was called "fast, fine grain, panchromatic safety film."

The camera itself features a tiny optical finder above the 32mm Rapodis lens, and while its aperture isn't specified, you could set it for "B" (bright) or "C" (cloudy) conditions with a small, clearly marked lever near the bottom. The shutter was presumably a simple everset type providing a single "instantaneous" speed, and you took the picture by pressing a small tab (alas, it's virtually invisible in the photo) downward in a little groove on the right side of the camera (in shooting position). You advanced the film to the next frame in classic disc camera fashion, by turning the outer edge of the film magazine to successive indentations.



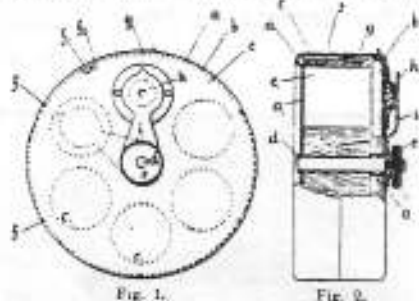
Mounted on the film mag, Fotodisc camera looks unusual, but system was simple, workable, and clever.

Although the Fotodisc has all the earmarks of a "production" camera, including A.S.R. (American Safety Razor) logos on both camera and film mag, reasonably good finish and "styling," and a nicely designed presentation box, it apparently never got off the ground. It was announced (fittingly enough for a simple if innovative "box" camera) in *Drug Trade News* of July 10, 1950 at a retail price of \$8.95 for the camera plus a buck for the film disc. Regrettably, it was never seen or heard of again; indeed, the only known example of this *rara avis* presently resides in the George Eastman House museum in Rochester, New York as part of their current disc camera exhibit.



Spliffy packaging: Fotodisc's presentation box featured neat logo.

Another clever "no-show" was unveiled in the Patent News section of the *British Journal of Photography* for Sept. 8, 1911 in the form of a description and illustrations for the design of a Circular Pocket Camera (British Patent #18,466, Aug. 3, 1910).



Circular Pocket Camera of 1910 was never produced, but featured elegantly simple "one bolt in center" design.

designed by John Arnold, South Hornsey, London. To quote the time-honored patent lingo: "The improvement consists in arranging the parts of cameras of this type in such a manner so as to be all held together by one central bolt and a bush. Moreover, each separate part while in this position to be able to perform its own function when revolving the parts round the central bolt." Is that perfectly clear? Well, Mr. Arnold's disc camera consists of an upper half containing the lens, which revolves on the lower half, which holds the film, and it's interesting that he implies that disc cameras were already thought of as a distinct "type." In the bottom section, "preferably of metal," resides a "flat circular sensitive film" which is held in place by a disc of "wood or other substance" containing holes to determine the dimensions of the individual frames. The lens (unspecified) is fixed into the revolving lid which can be turned to the next "indentation or mark" only after slackening off the nut holding the central main bolt—a cumbersome-sounding procedure.

The shutters—the inventor detailed two alternatives—both appear to be spring-loaded guillotine types which were affixed inside the revolving lid and held in place with the all-purpose central screw. Frankly, I doubt whether any manufacturer ever produced a disc camera of this precise design, although its general features bear more than a passing resemblance to a few of the disc cameras we examined last month. Verdict: I'd award Mr. Arnold high marks for his simple, well executed, integrated design and 30 lashes with a wet cable release to the British Patent Office for granting a patent to so derivative a design concept (had they never seen the Stirn's and the Photoret? I seriously doubt it!).

Without a doubt, the most complete and systematic elaboration of disc photography to antedate Kodak's present system was the "Roto-Photo" system developed by James J. Dilks, a mechanical engineer, then of Haddon Heights, New Jersey. Though he worked on many sound-motion-picture in-



Tiny camera, big film. Fotodisc camera (lower right) of 1950 was pocketable "no show" that clamped onto 4-in. diameter round "cartridge".

ventions and has numerous non-disc patents to his credit, the late Mr. Dilks' abiding passion was evidently disc photography, for he devoted considerable time to developing disc-based still and movie cameras, and projection, and enlarging systems all through the 30s and 40s. He even tried to sell his disc camera ideas to Eastman Kodak Co. on at least two separate occasions (the latest during the late 50's), but he was turned down both times—a fact which understandably rankles his heirs. Indeed, while Dilks could hardly claim to have invented disc photography, he did obtain U.S. patents for disc cameras and related equipment, indicating quite clearly that he had taken disc photography a few steps farther than the disc cameras detailed last month. Regrettably, James J. Dilks never saw any of his clever—even brilliant—disc equipment even reach the marketplace, much less be successful therein. As you will soon see, it deserved a better fate.

Unlike most inventors—who display a curious monomania in concentrating their efforts on one element in a system such as a camera—Dilks made his Rotary System of Photography indeed that, with at least four different, beautifully hand-crafted examples of his disc cameras, a couple of additional camera concepts, an enlarger, two still projectors, reproduction camera, document-recording camera, movie projector and sound recorder, and various photographic toys. All were firmly based on disc-film concepts, and the inventor produced actual working models of most of them. Although technical details are sparse (lacking details of the patents, that is) the basic snapshot disc camera of 1940 was a 5-in. square metal camera, only $\frac{1}{4}$ in. thick, with a pop-up frame-type finder atop it. It made 20 exposures measuring $\frac{1}{2} \times \frac{3}{4}$ in. on a $4\frac{1}{2}$ -in.-diameter film disc which was contained in a light-tight square film magazine. The shutter is described as a "single-speed focal plane" and the lens was a "universal focus f/3.5 anastigmat of short focal length" providing a selection of three f/stops by means of a conventional iris diaphragm. In the immortal words of *Popular Photography's* C.M. Gilbert, writing in the April 1940 issue, "Each exposure is numbered both on the film and on the face of the camera. When ready to load, a lever is moved to release the back lock, the back is opened and the light-proof film envelope inserted. It will fit properly in only one position and there is no danger of wrong loading. The back is closed and the lever shifted. This locks the back and opens the exposure aperture making ready for the first exposure. After each exposure a tiny lever is shifted to the next number without any winding being necessary." In short, eliminate its fancy electronics, auto flash and motor and you have something pretty close to Kodak's basic disc camera. True, Dilks' $4\frac{1}{2}$ -in. film disc was much larger, with individual frames closer in size to 110 than to the 8 x 10mm of Kodak Disc Film, but then contemporary reports speak of detailed

(though probably monumentally grainy) enlargements of 8 x 10 ft. (!) made with the snapshot version. Imagine what the scale-focusing or two-lens reflex version (see photo at bottom) could have done!

Despite his singular lack of recognition in his lifetime, I doubt whether James J. Dilks would have been displeased to see Kodak's Disc camera system blossom, ironically, after all his relevant disc patents had expired. When interviewed back in the 40s he spoke of the enjoyment he derived from perfecting his inventions thusly: "I have no other hobbies . . . even fishing sets me off to wondering if there aren't better ways of catching fish than anybody else has thought about. I'm called a consulting mechanical engineer, and I'll admit that

Continued on page 40

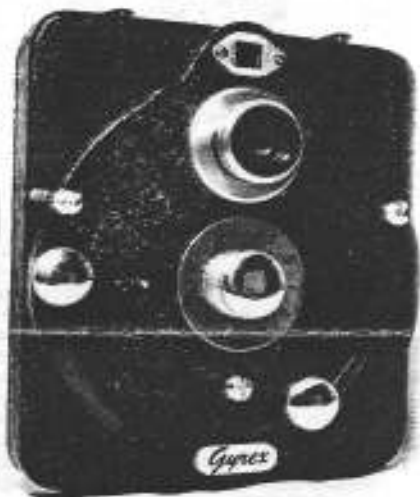


Another basic Gyrex disc camera, the 4 F took round disc cartridges.



Disc film TLR? That's right! Dilks' most deluxe model was a true twin-lens reflex with waist-level finder, focusing knob running in arc-shaped slot, f/stop knob.

I've earned a good living at it. But I just think of myself as a fellow who likes to tinker." Another point worth pondering in 1982, the "Year Of The Handicapped"—this modest gentleman, whose accomplishments seemed to include all but market-place success, was disabled in a childhood accident and had to walk with a cane for most of his life.



Gyrex Model 4 B? That's what Dilks called this basic model with optical finder atop lens. It took square disc cartridge, had "semi-circular" shutter.



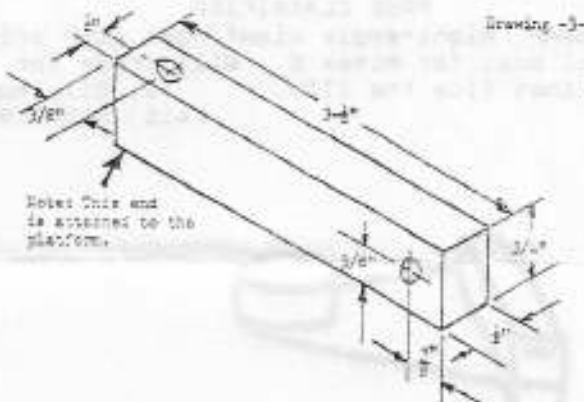
Here's the 12-shot version of Dilks' film disc as used in all four of his disc cameras appearing on this page and on page 34.

Given these heart-rending facts it is tempting to regard James J. Dilks and his unsung system of Roto-Photography as victims of a corporate snafu or worse. However, he may have been undone by something far more insidious. Like many first rate inventors his mechanical creativity and far-sightedness so far outpaced the technology of his day that they probably couldn't have combined to produce a mass-marketable product at the time. It is doubtful that even the engineering prowess of an Eastman Kodak Co. could have pulled it off back in 1940—it took today's micro-electronics, lithium batteries, and production-line aspherics (among other things) to put a disc camera in everybody's pocket. —THE END

Section III - Please try these instructions for constructing the FOX CHIMP using the check off list step as completed.

9.5 THE MINOX CLUB

1. Obtain necessary wood and other parts from your local supplier. Refer Part 1 is made from 1/2" plywood. All wood should be rough cut for easier handling. Use the Materials List in Section II.
2. Follow the Materials List and cut all eighteen pieces to dimension. Allow a little over on each dimension for final finishing.
3. Sand Part 1 to 1/2" from 1/2" thickness down to 1/4". Be sure to sand on a flat surface so that the final part has a uniform thickness.
4. Sand all wood parts to final size following the measurements in the Materials List.
5. Using a hack or coping saw, cut the 7" x 12" dowel two inches from one end. See drawing 1.
6. Using drawings 1 through 7 included on the following pages, layout in pencil all holes for drilling. Be sure to check all measurements twice to insure accuracy.
7. Using a large nail or punch and hammer, make an indentation on the center where each hole is to be drilled. This will keep your drill from wandering when you start to drill.
8. Using an electric or hand drill, drill each hole carefully. Make sure you use the right size drill bit for each hole.
9. With a piece of sandpaper, remove all rough areas from around the drilled holes.
10. Check all measurements for accuracy.
11. Assemble part 2 following drawing 2. When handling the cut dowel, be careful not to splinter or excessively twisting. The dowel pieces should go in each hole from one side. Glue before inserting. (Use Weldwood Plastic Resin Glue or similar glue)
12. Be sure to countersink the hole on Part 2 deep enough so that the bolt head lies below the surface of the wood. Take the 3/4" x 1/4" stove bolt and place some glue (Weldwood Plastic Resin) on one surface of the bolt from the head 1" down on the shaft. Use glue sparingly. Now insert the bolt and check again to make sure the head is below the surface. Follow the drawing of Part 2. Leave to dry over-night.
13. Remove the razor backs following drawing 10. Be careful not to twist when doing this operation as the razors are brittle and can snap easily. Use two pairs of pliers. Care should be exercised not to damage the cutting edges or your fingers.
14. Using weldwood glue (or something similar), glue the halves piece in place following drawing 4. Now place a piece of felt material over the halves wood. Be careful that the felt material does not ride over the edges of the halves wood. Leave to dry over night. Use glue sparingly.
15. Take part 3 (2 pcs) and attach with screws and glue to the underside of Part 1. Refer to drawings 1, 3, 13, and 14. You will note that the dotted line shown in drawing 1 means that part 3 is on the other side. There must be 1/8" space between the two winding arms and they should not extend more than 1" under the platform. Make sure these parts are at least 1/8" apart at all points. Allow to dry over night.



Drawing -3-

NOTE: All holes are 1/8"

Part 3—Winding Arm
2 required

(Continued next issue.)

Dear Al,

I am extremely eager to collect any factual anecdotes regarding Minox 9.5mm usage that your readers may know of, and would not mind having published in my book. Specifically, I am interested in any manner in which a Minox 9.5mm has been employed other than as a standard family picture shooter, such as military, industrial engineering, medical, scientific, commercial, or other applications where the Minox turned out to be uniquely suited for the work.

In answer to your request in last month's newsletter regarding quality of image from the Model B vs the EC, it's my humble opinion (and I am certainly not an expert!) that quality of film being the same (I tend to favour Kodak Ektar 25 for the best quality and highest resolution in colour films) the B produces marginally higher quality than the EC. But this presupposes that the print size is the standard 3-1/2 by 5 inches, and that the negatives from the B were printed in the Minox enlarger with curved focal plane negative carriers to compensate for the curved pressure plate in the camera itself; otherwise, the EC would seem to have the edge.

There's my "two cents" for what it's worth...How do other people feel about this?

Thank you for your interest and assistance. I truly enjoy your newsletter.

Sincerely,

SFC D. Scott Young
40th Eng. Bn., HHC
Unit #23807,
APO AE 09034

Dear Scott:

Most people use commercial processing, and give the EC a slight edge.

Al D.

(25) Fortune Hunter (Series Premiere) Suave ex-spy Carlton Dial (Mark Frankel) works for a high-tech global recovery organization. Tonight: Dial travels to

Morocco in search of a stolen prototype weapons system. Guest stars: Kim Faze, Chris Sarandon, Dana Wheeler-Nicholson. **66**

THE GREAT SPY MOVIE FAN CLUB
"Fortune Hunter" is the FOX cable network's newest techno spy, cast more in the Matt Helm mold than 007. Bunky has subminiature cameras mounted in his contact lenses!

LOW-COST VIDEO CAMERA

Works up to 15 hours on a 9-V transistor battery



The Optical Systems Division of Marshall Electronics Inc. has introduced a camera I.C. which measures 0.55" x 0.43", but produces a usable B&W picture for all types of uses. Packaged in a heavy-duty aluminum case with a 4-mm lens, the model V-007 is only 1.37" square. The camera is

integrated into a single 32-pin VLSI CMOS VLSI and consists of a 1/2" format 312 x 287 pixel image sensor array and all necessary circuits to drive and sense the array. The unit operates on 7-12 Vdc. Current requirement with a standard 9-V transistor battery is 30 mA. Light sensitivity is 2 lux. The complete V-007 in enclosure with a 4-mm lens is priced at \$249 each in single quantities. The camera chip by itself (V007IC), or on a small PCB without the lens (V007PC), is also available for manufacturers wanting to build the camera into their own product. Contact Marshall Electronics Inc., Optical Systems Division, P.O. Box 2027 Culver City, CA 90230. (310) 390-6608.

EDITOR'S JOURNAL:

LESS INTO THE NIGHT

In classic 'I can't believe I did that' fashion, I recently left my Minox EC in the extended position, drawing battery current for 10 hours. By the time I got home, the battery was dead. I opened the battery chamber, and staring me in the face was the same 5.6V PX 27 mercury battery I'd been warning everyone to buy before October 30. The ban on their interstate shipment begins October 31!

The camera was useless for the available light shots I wanted to take that night in an amateur Comedy Club. Unseasoned performers can get unnerved by distractions. It would have been inconsiderate to use a camera that could be easily seen or heard. The EC had proven itself so well suited to such situations, nothing else seemed small enough to park behind a glass of refreshment, and produce printable negatives. I decided to strip a 16mm camera.

My immediate choices were the Sanwa Mycro, and the Steky I. I might have preferred the Mycro because of the large 14 x 14mm format, but I've learned from experience that the frame numbers on paper-backed roll film are impossible (for me) to see in low light. A Steky can be operated in total darkness.

The Steky Model 1 makes a good candidate for strip down because the viewfinder can be removed by taking out only two screws. The viewfinder on later models is welded to the film chamber cover.

The modification took 3 minutes (inset) and I was at my table by showtime. I had the rest of the evening to reflect on what it would be like not to use a Minox again. The prospect was enough to send me scurrying around next day, until I found 4 more batteries.

Some of our readers have extensive subminiature systems built entirely around electronic Minox cameras. If you allow the deadline to pass without a single spare battery in your refrigerator, your entire system becomes a box of 'collectibles' at the end of this month. In future issues we'll consider options.

QUICKFINDER 10/94

Mamiya-16 Automatic.....	\$40	C
Mec-16 SE.....	149	B
Minicord.....	329	C
Minolta-16 MGS black kit.....	70	E
" -16 QT chrome.....	89	B
Minox binocular clamp.....	35	A
" binocular clamp.....	18	X
" EC with flash.....	209	T
" LX black, mint.....	484	K
" LX black, mint.....	400	L
" 35GL, mint.....	150	L
Nikon binocular/camera.....	899	W
Pentax lens 70/2.8.....	279	E
Stereoc Mikroma kit.....	1250	B
Teleca binocular/camera.....	899	W
Tynar with 3 cassettes.....	99	B
Webster's dictionary (110), mint....	49	C

A Alan McFall	(713) 251-9426
B Brooklyn Camera	(718) 462-2892
C Camera One	1 800 949-1302
E Ed McCullough	(713) 783-2554
K KEH	(404) 892-5522
L Le Camera Zone	1 800 786-3686
T Camera Traders	(212) 463-0097
W Woodmere	(516) 599-6013

FREE CLASSIFIED

TO SWAP Right-angle viewfinder with original box, for Minox B. Will trade for one that fits the IIIIS. G. Billings
(415) 593-4792

