

# 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.



At top, the TC300 video camera, transmitter and receiver come in an aluminum carry case. Above, the camera mounted temporarily in the bed of an R/C truck, focused on the truck in the foreground, and projected on the monitor in the rear. Reproduction on the TV screen is very good; resolution is high.

## NUMBER-CRUNCHER

The benchmark for comparing electronic imaging with film technology is the mythical 'salon quality' print. Although enlargements from the smaller subminiatures aren't salon quality. We assume that film is naturally better, and we'll have to see some comparison prints to be won over.

You won't have to wait any longer if you have a calculator handy.

"There are about 18 million grains of silver halide in a 35mm color image; each one is the equivalent of a pixel.."

Barry Tanenbaum  
"SHUTTERBUG" 9/92

This works out to 20,833 grains per mm<sup>2</sup>, or 1,833,33 grains in a Minox frame, 2,916,667 in 10mm x 14mm, and 4,2500,000 in the 12mm x 17mm format.

The SuperFun TC300 video camera (above) resolves 200,000 pixels. The Supercircuits PC-3-4-5 cameras resolve 80,000, 252,000 (color), and 201,600 pixels respectively.

The FUJIX DS-100 has a f/2.0 3x power zoom lens with wide macro and tele macro modes, plus a day-date-time recorder. 390,000 pixels.



In the cards from Ricoh is the DC-10 digital camera. Compact, silver camera records and plays back images stored on digital memory card.

The Ricoh DC-10 has a self-timer, with 10 second delay, microphone, and auto calendar. 410,000 pixels.

The new Canon RC-570 (A.K.A. Xapshot) logs in at 410,000 pixels. (See Sub' Times #32.)

The no-frills Cohu 8400 trades features for miniscule size to deliver 551,124 pixel resolution in low light levels.

The FUJI HC-1000 uses three CCDs to produce 2,700,000 pixel resolution.



## CANON RC-250

At \$799, the RC-250—formerly known as the Xap Shot—is one of the least expensive still-video color cameras on the market. It's a fixed-focus, nonadjustable, low-resolution device that can save 50 images to a two-inch floppy and connect directly to a TV monitor for instant viewing. It features the lowest quality picture of any of the devices we tested, producing a fuzzy, slightly darkened image with a severe case of the jaggies. While designed primarily for amateurs, it's typically used for photo ID badges or newsletters where image quality is less important.



## CANON L-1 VIDEO

We thought we would try a moderate-quality \$2,400 camcorder with a \$1,400 frame-grabber board, a fairly typical combination for users who require a relatively inexpensive way to scan in medium- or large-scale three-dimensional objects such as portraits, landscapes, and product shots. This camcorder/frame-grabber combination produces images that are marginally sharper than the RC-250, but the fine, yet very noticeable dark vertical lines characteristic of a captured TV signal make it unsuitable for quality reproduction.



## SONY MAVICA MVC-2000

At \$2,800, this is the lowest priced professional-quality still-video camera. Unlike the RC-250, the Sony features manual f-stop and shutter-speed capability, a zoom lens, and a much denser CCD. It captures and saves 25 images in the high-resolution mode or 50 in the medium-resolution mode. Even when set at medium resolution, the images produced are significantly sharper and brighter than the RC-250's. But at high resolution, it still lacks professional-quality definition and clarity. The MVC-2000 is suitable for low-resolution applications.



## SONY MAVICA MVC-5000

The MVC-5000, at \$10,000, is an all-professional device featuring two high-quality CCDs for greater resolution and dynamic range. It accepts interchangeable lenses, has TTL (through the lens) flash capability, and other features usually found on 35mm pro models. It's the still-video camera of choice by many news organizations because of its extensive support system in capturing, processing, and transmitting images on the spot. Resolution and dynamic range are virtually indistinguishable from film when the image is small.



## NIKON/KODAK DCS

The \$25,000 DCS is the first no-nonsense professional still-video camera. It combines an off-the-shelf Nikon F3 body and motor drive with Kodak's CCD back and a ten-pound pack containing a 200-megabyte hard-disk drive and digitizer to instantly process and save the images. The DCS is capable of capturing high-resolution images that approach the quality of film—it could reproduce the print on the robot's buttons—but the colors it renders are the most unrealistic of all the devices we tested. Also, the robot's hat and ball suffer from the jaggies.

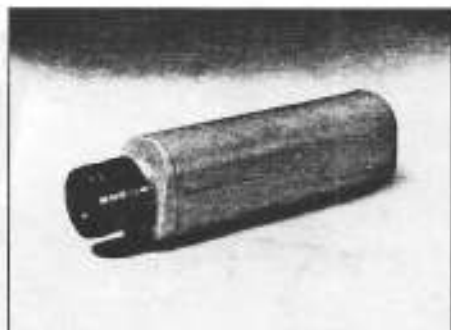


## ROLLEI SCANBACK

Not strictly a camera, the Scanback is a miniature scanner that fits onto the back of a Rollei 6006. It produces magazine-quality images of great resolution and color fidelity, although the tiny scan lines mar an otherwise stellar performance. The Scanback, however, has two major limitations: One is that it cannot function in real-time because each scan takes approximately two minutes, limiting its usefulness to still-life photography and static three-dimensional scanning. The other encumbrance is price: It's \$32,000, and that doesn't include camera or lens.



## NUMBER-CRUNCHER



Cohu 8400

Other technologies in the pipeline are mind boggling. Canon's new A2E single lens reflex will determine where your eye is looking as you push the shutter button. The lens will then focus on that part of the scene. Inside the viewfinder, two infrared diodes bounce light off the photographer's eye. By measuring how the light is reflected, a photo-detector chip determines the position of the pupil and tells the camera where to focus.

**SUPERCIRCUITS**, 13015 Debarr Dr. Austin, TX. 78729. (512) 335-9777.

**COHU ELECTRONICS**, P.O. Box 85623, San Diego, CA. 92186-5623.

**FUJI**, 555 Taxter Rd., Elmsford, NY. 10523. (914) 789-8100.

### WATCH FOR..

An instant miniature camera from the Polaroid Corp. is currently code-named Joshua. The 2-1/8 x 2-7/8" prints roll into a storage compartment where they can be viewed through a plastic window. First shipments are headed to Europe. U.S. debut slated for May-June 1993.

### FREE CLASSIFIED



**FOR SALE** 1912 Ertee button metal tintype camera for 100 button tints 25mm dia, developing tank, air release bulb, rubber hose. Processing tank hangs below camera and the exposed plate drops through chute. Laack 60/f4.5 lens. Single shutter speed,

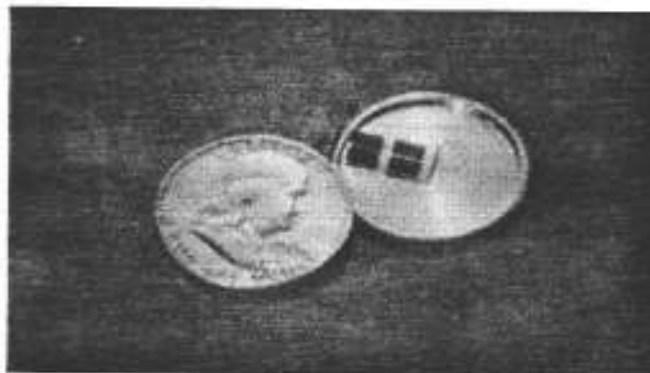
\$1200. Arrow \$20, Crystar \$20, Minetta \$30, Satellite \$30, Mycro \$50, Mykro-Fine \$65, Vesta \$125, Minox B \$175, Minox IIIS \$175, Linex 16mm stereo outfit in original box \$145. John Craig, P.O. Box 1637, Torrington, CT. 06790 (203) 496-9791.

## THE GREAT SPY CAMERA FAN CLUB

After starving us for several months, the local cable stations aired "The FBI Story" and "Spies" back-to-back.

The film version of the capture of 'A' spy Colonel Rudolf Ivanovitch Abel differs a bit from the newspaper reports.

Hollywood says the landlady sent his pants out to be pressed, and the tailor discovered the coin which split in half. The NY Daily News reported that Abel mistakenly gave the coin in change to a newsboy who dropped it in the stairway. We see the half dollar and the micro-film, but no cameras.



**The FBI Story** ('59) Crime drama. An agent (James Stewart) with a worried wife (Vera Miles) stays 25 years fighting the Ku Klux Klan, gangsters, Nazi spies. Directed by Mervyn LeRoy. With Murray Hamilton. ★★★ (2.29)

A&E'S telling of the John Walker case was quite detailed, including an interview with Walker, and a demonstration of one of his Soviet supplied cameras (with a measuring chain).

Unanswered was the one question every Minox buff would like to ask.

Walker is reputed to have worn out a box full of Minoxes. Some hard shooting folks have used one Minox for decades.



How do you wear out a box full?

**Spies** John Walker recruits family and friends to sell Naval information.



Electronics buffs can photograph an electronic circuit and use the circuit an hour later. The process is described in "The Modern Electronics Manual" from WEKA Publishing, 97 Indian Field Rd., Greenwich, CT. 06830.

Minox users who enlarge onto slow copper plates should put a flash gun into the enlarger head to prevent overheating the negative, or blowing bulbs.

It's a one hour project. You can do it.

Submitted by  
P.C. Jefferson  
Lexington, KY.



1. Select the board layout you want.
2. Place it on top of a photosensitive copper baseboard and expose to sunlight, spotlight or incandescent bulb.
3. Etch away unwanted material in bath solution to create your printed circuit.
4. Attach components and solder to board.
5. Plug it in and use it.

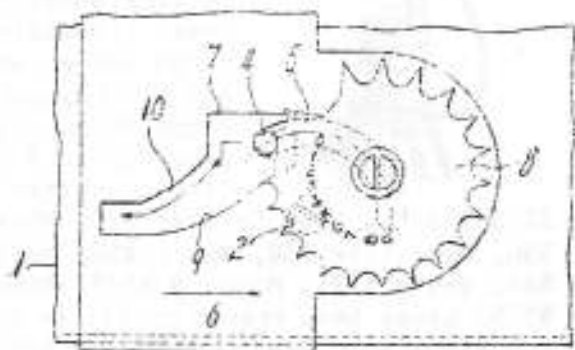
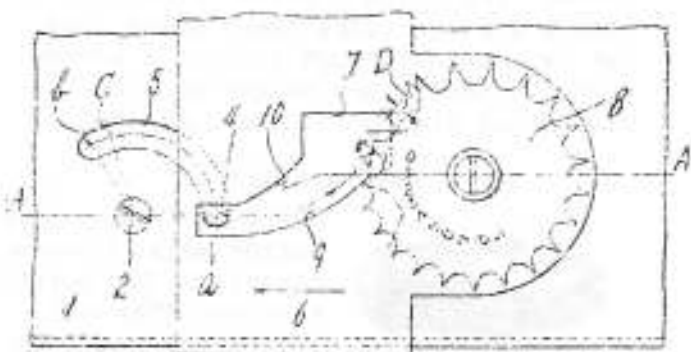


#### HERE'S HOW

The push-pull mechanism in a subminiature camera is called on to perform several tasks. The film is advanced, the shutter is set, and the exposure counter is moved to the next frame number.

The patent application for the Minolta-16 shows how small brass pin (4) sliding in grooves (5) and (7) advances the exposure counter (8) each time plate (A) is pushed under plate (b).

Submitted by  
Morris G. Moses  
Albany, NY.





### CHADT NO MORE

You had to like the story behind the Chadt camera. A family owned tool and die company gives a son carte blanche to produce a product. He comes up with a little camera. Cute as a button. Minox film compatible. Wear it like a watch. The family business would continue for another generation.

Enter reality. The global recession shrank the market for subminiatures which are a second (or third) camera for most photographers.

Then, word began circulating that the 3-element plastic lens was "soft".

Compounding the problems, a U.S. distributor strongly encouraged the Chadts to produce 800,000 cameras.

Financing this much production without real sales dollars coming in pushed the Chadt family into bankruptcy.

There are plenty of charges to be settled by the courts. In the interim the tooling has been bought by Nikko Pro, a recycler of disposable cameras.

Look for the Cam-2 an all metal version of the little camera with a new 4 element Zeiss lens in mid '93.

### LETTERS

Dear Al,

You recommend a lot of surplus film. Is this for practice only? Do you use it for important work?

Marigold Yuen  
NYC, NY

Dear Marigold,

Some of the bargains are hard to pass up. Once I've tested a film I assume that I can use it on anything. Really old bulk rolls may be splotted on the first few feet. After that they're a gift.

The MD-3 on page 6 was found at a camera show. I bought two 100' rolls for \$2 each. I had to throw away the first five feet on each roll, the rest is in excellent condition. The expiration date is April '76, and I'm still using it.

AL



### GOT ANY PICTURES OF THE KIDS?

Let's immortalize one of your subminiature snapshots. Please include the name of your camera and film, along with anything else you think may be of interest.

The photo above is from the central portion of the Minolta-16 QT photo in the "1992 Guide to Popular Subminiature Cameras". This portion measures 1.2mm x 2.5mm on the negative (62,500 pixels).

### FREE CLASSIFIED

**FOR SALE** Compass (le Coultre & CIE), excellent \$1750, Expo Police special edition focal plane shutter & rotating viewfinder, excellent \$1750, Mec-16 SB chrome/black body, case, excellent+ \$180. Petal (Occupied Japan), film spool, excellent+ \$645. Ricoh Golden, case, film spool, excellent+ \$360. Rubina-16 Model II, occupied Japan, case, factory inspection label, boxed, excellent+ \$360. Tessina Outfit: Tessina Automatic chrome body, IB, case, boxed, daylight loader, IB, case, 4 reloadable cassettes, mint \$790. Wristamatic Magna-cam IB pack of film, mint, \$120. Ron Lavy, Box 618, 3600 Chestnut St., Phila, PA 19104. (215) 573-4104 eves.

### SECRET COIN

If you remember the U2 Affair that pitted off Eisenhower and Khrushchev in the 1950s, then you already know that Francis Gary Powers made this coin famous by hiding a small needle tipped pin inside a hollowed-out silver dollar which held a fatal dose of the deadly poison Curium. What appears to be an ordinary Eisenhower dollar is actually a cleverly designed hollow container. Pinholes machined from real "H.C." dollars, the "Secret Coin" pops open instantly when pressed in the "hidden" location.



### LIMITED PRODUCTION

Next delivery date 1/15/93  
\$25 ea. INCO (818) 842-4094



One man's castle. The famous Pig House, Houston, TX. Camera: Minolta-16 QT. Film: Bell & Howell MD-3 (ISO 6) Developer: Agfa Rodinal 1:200, 16 mins. @ 75°F.

#### THE SUBMINIATURE TIMES QUICKFINDER 11/92

Minicord	\$399	W	Minolta-110 Z	\$75	W	Minox C Black	\$475	W
Minolta-16	49	M	110 Z	69	W	C w/case	179	W
16	33	M	110 Z MKII 259	W	LX	479	W	
16P	69	W	Minox Riga	1000	W	Mycro IIIa	159	W
16P	39	W	1st B	169	W	Narciss	499	W
16 PS	39	M	1st B	149	W	Tasco bino/cam	199	W
16 QT	38	M	1st B	139	W	Tone	325	W
16 II	89	W	B	129	M	Vestkam	179	W
16 II	38	M	2nd B	199	W	Yashica Atoron	79	W
16 EE	19	M	2nd B	179	W			
16 EEII	15	M	2nd B	169	W			
16 MGs	38	M	C Black	549	W			

M Midwest Photo Exchange, 200 Crestview, Columbus, OH. 43202 (614) 261-1264  
 W Woodmere Camera, 337 Merrick Rd., Lynbrook, NY. 11563 (516) 599-6013

With deep regret we note the passing of William White, Ph.D., author of "Subminiature Photography" 9/27/92.