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THE SUBMINIATURE TIMES

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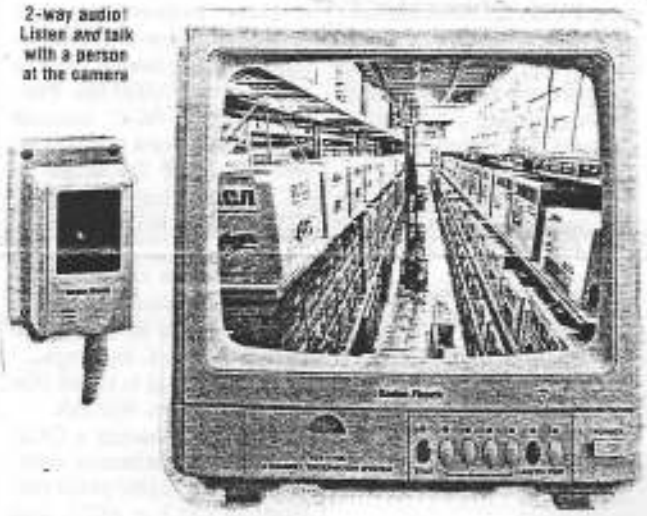
Supporting 110, 17.5mm, 16mm, 9.5mm, 8mm, 4mm, 1mm, Microdot, and Electronic Still Photography.



See *and* hear what's going on in another room

RADIO SHACK has a complete audio/video observation system for less than the price of many miniature video cameras. Built-in microphones on camera AND monitor let you talk with a person at the camera. Add up to 3 more cameras to monitor a total of 4 areas. $399 includes camera, monitor, cables, & installation hardware. Camera alone $199. #49-2501.

RESPOOLERS watch for Kodak Emulsion 3461 as you make the rounds of the holiday camera shows. Rolls 16mm x 215' are on surplus tables for about $6 per box. We tried a roll dated 1/88, and like it at E.I. 10 for landscapes, 25 for copying. Very smooth, long on tonality. The 2.5 mil base is easy on splitter blades.

The list below is from Columbus Camera Group (614) 267-0686.

SUPER 8 & 16MM MOVIE FILM	
16mm 7240 Video News 100'	15.50
7291 color neg. film 400'	49.98
7361 Reversal B&W 2000' (cat.1905587)	199.98
7292 color hi speed neg 400'	59.98
7276 Plus X reversal 400'	39.98
7278 Tri X reversal 400'	39.98
7250 Ektachrome high speed Tung. 400'	49.98
7240 Ektachrome Video News 100'	15.50

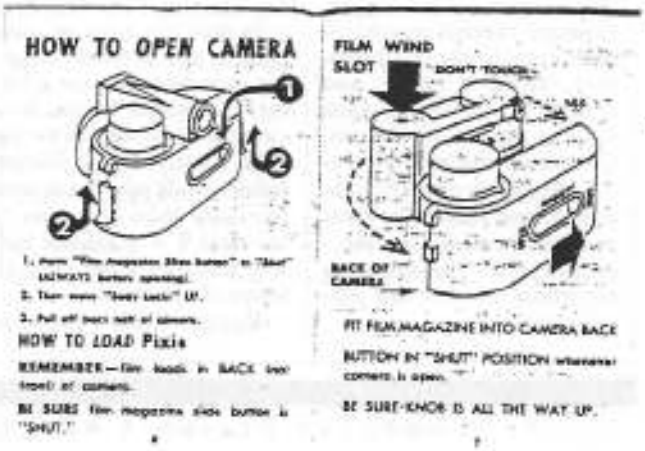
USA Last call for mercury batteries! Contact Cole's Cameras (218) 736-5828.

INTERNATIONAL There's usually a rush when we find new sources of b&w 8mm film (for Echo-8, Bolsey-8, Camera lighter, Camera A, etc.) Supplies of Svema-8 in 8mm x 50' rolls are currently unavailable to amateurs. E. Caswell has located Standard-8 b&w in ISO 25 and 160 speeds. We'll show test print as soon as samples arrive. Contact Eric Caswell, E & S Camera Sales, 28 Rose Ave., Rushden, Northants, NN10 9ND UK FAX 0933 315003.

COLLECTORS The staggering $1,395 price tag of the Minox Model AX will be a bargain if this is the last Minox model. Any users care to comment on how the meterless AX stacks up in the field versus the venerable B?

A pristine WHITTAKER MICRO-16 PIXIE vintage 1950 surfaced in Houston recently. Seldom seen, the all plastic submini loads cassettes into interchangeable backs with dark slides. Change emulsions mid-roll without losing a frame! The variable aperture 6.3/25mm Microtar lens is fixed focus, with a between the lens shutter. Original film was rated Weston 2 or GE 50. If you remember them Lincoln signed your driver's license.

The cassettes look reloadable. See also Item #155 in your '92 Christie's Catalog. Houston Camera Exchange, 4014 Richmond Avenue, Houston, TX 77027 (713) 621-6901.



Tiny CCD cameras hasten portable video

MOS charge coupled device (CCD) image sensors are revolutionizing video. Most noticeably, the consumer camcorder is a lot smaller and more rugged. Not eye-catching, but still highly consequential, is the excellent range CCD image devices provide over bulky, power-hungry vidicon-based cameras.

As portable video-conferencing, video e-mail, distributed video imaging, and multimedia video presentations lurk just around the corner, OEMs are taking a fresh look at CCD front-ends for applications other than camcorder. A round of inexpensive, high performance camera products have been announced from three firms: the Optical Division of Marshall Electronics (Culver City, CA), Sharp Microelectronics (Camas, WA) and Chinon America Electronic Imaging (Mountainside, NJ).

Marshall's camera is very small. Based on a 321 × 287 pixel chip designed in Scotland, it uses multiphase clocking to transfer generated charge packets from pixel photo-diode sensors to separate amplifiers. Automatic exposure control accommodates signals over a 40,000-to-1 intensity range, and adjusts sensitivity to track varying picture conditions. Control is achieved by varying integration times from as long as one field to as short as three cycles of the chip's pixel clock. Thresholding algorithm choices are pin-selectable.

A lens-equipped, aluminum-packaged camera based on the Marshall chip carries a James Bond moniker—it's dubbed the V-007—and is only 1.37 in. square. The chip and a bare-bones PC board without a lens, are also OEM items, priced at about $70 and $100 each, respectively. Offering 10 dB of automatic gain control (AGC), the camera exhibits light sensitivity as low as 0.2 ft candles (2 lux). The output is standard National Television System Committee (NTSC) video.

Board-level CCDs from Sharp Electronics could provide a portable, battery-operated system with either NTSC 525-line video interlaced at 30 frames/s with 270,000 pixels, or European PAL 625-line scans at 25 frames/s with 320,000 pixels. Complete cameras are also available as lightweight, turnkey portable assemblies.

Since the camera is more sensitive to IR than visible light, it may find favor in industrial and military imaging first.

Only 30 mA

Significantly, the Marshall chip operates from dc supplies as low as 6.5 V, ensuring operation even as a battery's voltage drops. In a camera typically drawing only 30 mA, a 9 V lithium battery could power a system for more than 30 hours (a standard 9 V transistor battery provides more than 15 hours of operation).

Recent R&D efforts at Sharp are also yielding CCDs with higher resolution and better sensitivity than predecessors. Sharp's working at reducing die, package sizes and price as they ready these CCDs for nontraditional applications. The firm now offers CCDs as OEM components, assemblies and subassemblies. Sharp also supports OEMs with applications assistance.

Some of Sharp's products are packaged as turnkey assemblies, including diminutive tilt/swivel mounts and sleek enclosures designed to be perched atop a monitor or cabinet. Other CCD products are available as board-level functional modules, ready to be embedded into portable packages.

Plug-and-see

Sharp's CCD cameras provide NTSC-525 line video interlaced at 30 frames/s with 270,000 pixels (or they can be supplied with elements and support circuits for European PAL 625-line scans at 25 frames/s with 320,000 pixels). In either case composite television-quality video output, or standard S-video signals for higher resolution applications are available. Sharp also offers a choice of either electronic exposure subsystems or traditional mechanical iris optics.

Sharp's latest 1/3 in. interline transfer CCD cameras (1/4-in. models based on 0.5-micron processing are expected follow-ons) handle light levels as low as 7 lux to as bright as 20,000 lux. Features include AGC, internal sync and gamma correction, and 5.6 mm F-2.4 lenses. A CCD board measures only 1.7 in. × 1 in. × 2 in.; a companion signal board measures 3.5 in. × 1.7 in. × 0.63 in. Like Marshall's camera, operation can be from 6 V power sources, but typical current demand is about 10× higher, at about 400 mA.

Chinon America's CCD CX-060 monochrome cameras offer 250,000 pixel resolution (512 × 492), and come equipped with either 4 mm lenses for 86 degree fields of view, or 3 mm lenses for 120 degrees. Operation is from 9 V supplies. The firm's newly introduced CX-062 adds color. Packaged with a processor board, the CX-062 system provides composite video output and is intended for CCTV applications. Operation is from 12 V.

With prices for cameras in the $250 to $350 range, these products promise a rosey and more widespread future for new applications. Videophone, anyone?

Chinon America
Mountainside, NJ 07092
(800) 880-4164
Circle 420

Marshall Electronics
Culver City, CA 90270
(310) 390-6608
Circle 421

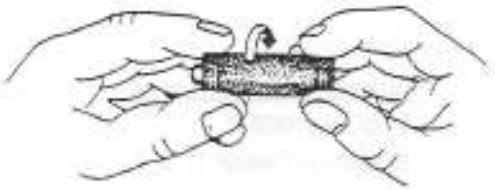
Sharp Microelectronics
Camas, WA 98607
(200) 834-2300
Circle 422

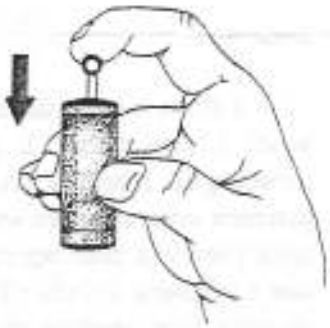
THESE TWO PUBLICATIONS have stirred lots of conversation recently because of all the unique subminiature cameras. The last known source for the older "OSS Special Weapons" was: Harriet Carter, Dept 32, North Wales, PA 19455.

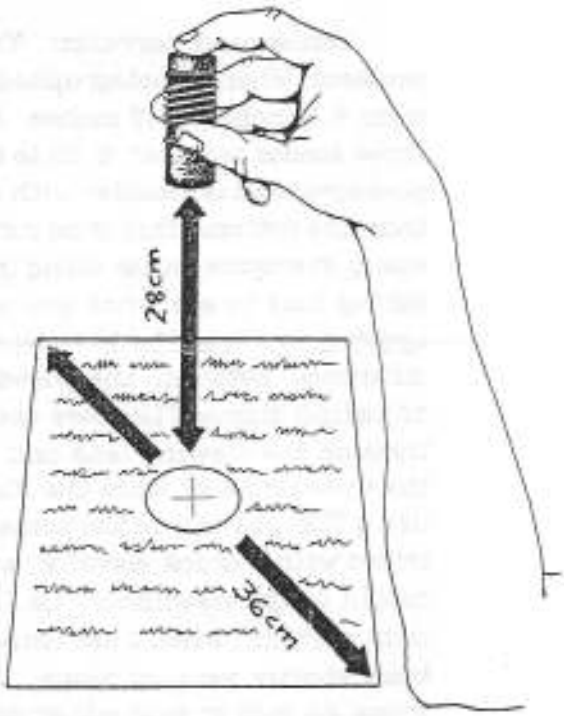
OSS WEAPONS & EQUIPMENT BOOK reveals the ingenious devices and tools-of-the trade used by the U.S. intelligence service in World War II. This is a faithful reproduction of the catalog of specialized devices and weaponry used by secret agents 50 years ago. Discover butler firing cigarettes, hidden cameras, and explosive gadgets that would make James Bond jealous. Illustrated with forward by ex-CIA Director Colby.
B6084 OSS Book **$10.95**

STERLING PUBLISHING

With a foreword by former CIA Director Richard Helms, **CIA Special Weapons and Equipment: Spy Devices of the Cold War** exhibits some of the most intriguing espionage devices used by CIA agents during the 1960s. The successful application of U.S. technology to the world of clandestine warfare played a significant role in "winning" the cold War against the Soviets. Read descriptions of the incredible spy devices available—everything from simple audio monitoring devices to the highly advanced one-man submarine. Each weapon or special accessory is accompanied by a detailed outline







DESCRIPTION: The Agent Camera is a specially constructed photographic device in a cylindrical, black case only slightly larger than a standard 35-mm film cassette. The film is advanced manually by a counter-clockwise rotation of the body. The shutter is cocked by a clockwise rotation of the shutter release knob, and is released by depressing the same knob.

PURPOSE: The Agent Camera is a highly miniaturized photographic instrument designed to copy documents, drawings, and photographs with a maximum diagonal measurement of 36 cm. The camera is prefocused at 28 cm; a small measuring chain is provided to quickly gauge the correct distance. The exposure setting is preset and fixed for indoor photography using available light. The camera uses a special black-and-white film with sufficient exposure latitude to compensate for a wide variety of lighting conditions. The camera is dependable to use, simple to operate, and produces high-quality document copies.

Camera	special
Lens	preset
Shutter	preset
Official name	Camera, Document Copy; Special

Submitted by S. Kessler

Jerry Friedman
305 North Summit
Bowling Green
Ohio 43402
phone/fax 419-353-0025

Al Doyle
Subminiature Times
P. O. Box 60311
Houston Texas 77205

Dear Al;

I have been running some tests on closeup lenses on a Minox B and this is what I have done. If you use a Minox binocular attachment to hold the lenses directly in front of the camera, (note: Must be series 5 or smaller because the pincers only open so wide) I have found that if you set the focus at 8", a #3 closeup lens permits photographing objects 5 inches in front of the camera lens. If you use numbers 1+2+3= +7 power, again with the lens set at 8", you can photograph objects four inches in front of the lens. I am not indicating fuzzy photos but absolutely clear, sharp bango closeups as good as those with the original lens.

Concerning parralax: You can't adjust for closer that 8" but it is not a problem. When I photographed a ruler at 8", with no lenses, my field of view was from 4. 5 inches to 10 inches. Using the +3 lens, it was 5. 5 to 9 inches. Using all three lenses together, 6. 25 to 6. 75 inches. In other words, the entire area being photographed is smaller with a slight bias favoring the top which decreases less than the bottom. This is no surprise, since the lens is below the viewfinder, but is easily overcome. After doing initial focus through the viewfinder, if you want the taking lens to see what you see in the view finder, just turn the lens slightly upward, or raise the lens (entire camera) about an inch, which is the spatial difference between the viewfinder and the lens. Remember those height adjusting gizmos TLR users used to use when doing closeups? First view and focus through the viewing lens and then raise the height of the taking lens to that of the viewing lens? Since the Minox viewing frame and lens are on the same axis, like a TLR, you can do the same thing here. It works well. ... Which is why I use a tripod with a crank elevator; so that I can raise the lower taking lens to the same height as the viewfinder. No, I do not want to hear about lateral parralax (rather than vertical) when I am using the long horizontal plane of the negative rather than shorter vertical plane. In this situation, I would have to move the entire tripod an inch or so in either direction. Not much of a problem, however.

Concerning cameras for closeups: A Minox C is better than a B or a IIIs for a very simple reason. With the latter two you have to measure the light manually, adjust the lens and then set up for distance etc. The Minox C has an automatic lens and exposure setup which means that whatever the lighting, the shutter

will adjust for it after you set the ASA. If you are using a tripod, which I am assuming, you can let the shutter stay open all week and it won't make any difference. Get the lighting that looks good in the view finder and let the camera take care of the rest.

Mostly I do not like the Minox C because it is too big. But for closeups it is fine becase it still uses the same binocular attachment as the B series and has some advantages.

I have modified your advice a little concerning dillutions of Ethol Tec part A and B for Tech Pan. For single rolls of film, I use 3 ml. of part A and 1 ml of part B with about 50ml. of water. Using no part B is too weak but just 1 ml of part B keeps a nice amount of contrast. Also, the time is good, about 5 minutes if Tech Pan is exposed at ISO 32. I find developing times more than about 8 minutes too long for taste.

There is another good point about using a Minox B rather than an EC. Flash is much easier. Not only can you use any type flash unit, (because the B has a normal synch connection, where the EC does not,) but you can also use the B's neutral density filters with flash to keep the subject from being wiped out by overexposure at close distances. If the ND filter is too strong, (it cuts light down by two stops,) you can use the built in green filter which is one stop. With the EC, you got flash for about 5-8 feet. Period. No closeups, no nothing. Why balance a +3 closeup lens in front of an EC, to bring you to what?-- 14 inches?-- when a B will take you all the way to 8" just like that?

All of which is why I do not bother with 16mm film. I have used the Filmdex stuff (the slower of EL or SL); you get a bigger negative but the film is much grainier than Tach Pan. It has nice sharp grain, to be sure, but grainier. Also, with almost all 16mm cameras you lose some flexibility. The Minox is a terrific machine and it is so small you could wear it on your nose. (Maybe my nose is bigger than yours).

Take care. They got rag weed out there? You could die in Ohio.

Take care,

Jay.

FOLLOW A SUBMINIATURE PHOTOGRAPHER? "On Location With Art Wolfe" is a different kind of photo series, letting you look over Wolfe's shoulder as he captures Alaskan wilderness, while talking out his choices of lens, aperture, and shutter speed using miniature cameras. Currently on TDC The Discovery Channel.

"BARGAIN BULLETIN' is a listing of new, used, and collectible cameras and accessories at bargain prices. For updated bi-monthly mailings, send $1 to Pentagon Camera, 161 Hillwood Av. Falls Church, VA 22046.

HELPLINE

TERRY in Schiller Park, IL (age 14) needs a darkroom scale, any condition. HART in Houston seeking a Falcon Midget (713) 868-9606.

HELPLINE A recent caller was searching for miniature self-adhesive tilt indicators and circular levels to do panoramas with a Minox. We found them! Contact Edmund Scientific, Barrington , NJ

FREE CLASSIFIED

FOR SALE Minox enlarger w/instructions $275, Minox developing tank w/instructions $45, includes shipping. Larry Rees (916) 989-3919

EYE COM 2100 BRIEFCASE PORTABLE. Lightweight and durable, the 2100 is ideal for on-the-road meetings, presentations or service calls. Convenient, side storage area for paperwork and fiche — removable storage panels hold up to 80 fiche. Locking case assures security. Available in hard case for service technicians and brown leather for salespersons. Designed for viewing Source Document at 100% and COM microfiche at 75%. **Please allow 5 working days for delivery.**

EYE 2100BR Brown Case ..... NEW . . 379.00 ea.
EYE 2100BL Black Case ..... NEW . . 379.00 ea.

EYE COM MICROFICHE READER APPLICATION CHART

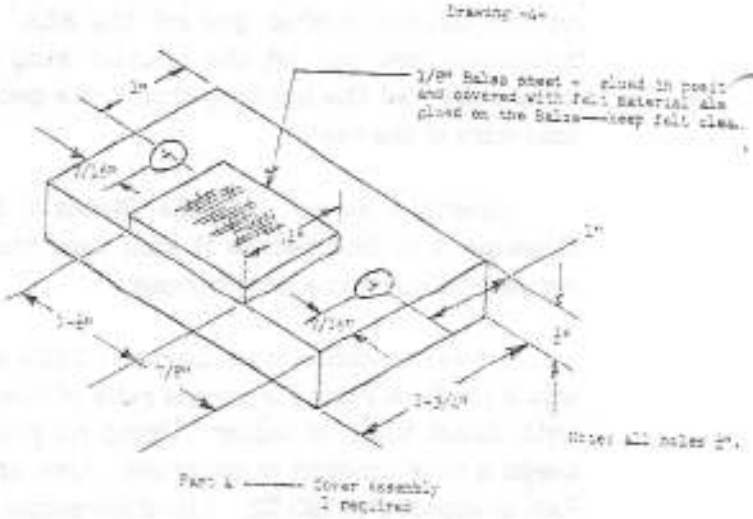
Model #	Microfiche Formats	Screen Size	Overall Dimensions	Magnifications	Weight
1000	18X,22X,30X,54X	8"Wx10"Hx4"W"	14Hx12"Wx15D"	75% COM 75% Source	10 lbs.
1100	24X,32X,36X,54X	10Wx11H"	17"Hx13"Wx14"D"	75% COM 100% Source	12 lbs.
2000	21X,28X,42X,85X	9"Wx12"H"W"	15"Wx14"Hx17D"	90% COM 90% Source	11½ lbs.
2100	24X,32X,36X,54X	11Hx11"W"	13Hx19Wx5"D"	75% COM 100% Source	11 lbs.
3000	24X,42X,48X,72X	11Wx14H"	17"Hx16Wx18D"	100% COM 100% Source	13 lbs.
R/P 9000	24X,28X,36X,42X, 48X,54X	8"Wx11"HxW"	22"Hx18Wx28"WD"	75% COM 100% Source	62 lbs.

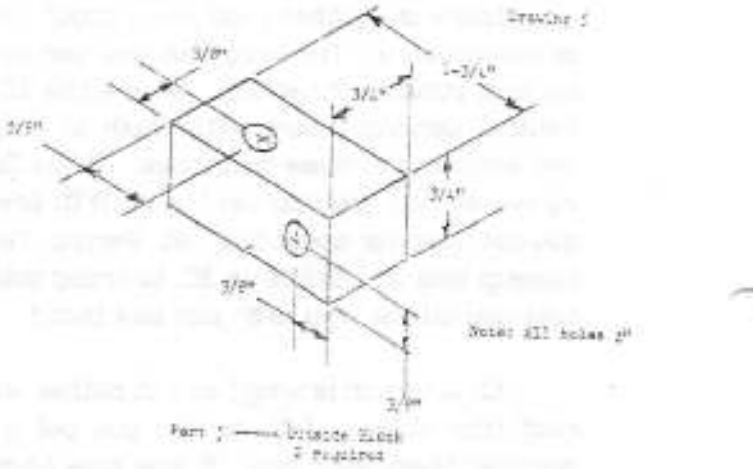
The EYE COM portable microfiche viewer is available from Stationers, 2155 Silber Rd., Houston, TX 77055 1 800-678-6002

QUICKFINDER 11/94

Kiev Vega	$149	B
KGB Players	1350	B
PK420 Electronic watch/cam kit	1595	B
Minox B black w/xcase	449	W
" B chrome	215	W
" BL w/case	725	W
" Bl Instruction book	30	W
" C black w/case	299	W
" EC	199	W
" LX black	489	W
" Meter	89	W
" Riga Latvia w/case	1250	W
Nicnon binocular/camera	899	W
Webster's dictionary (110), mint	49	C

B Brooklyn Camera (718) 462-2892
C Camera One 1 800 949-1302
W Woodmere Camera (516) 599-6013





9.5 THE MINOX CLUB

Dear Al,

Minox is supplying a substitute for the PX 27 battery. It's a holder with four 1.55v silver #386 batteries (that's 6.2v?). California is one state prohibiting sale of batteries containing mercury.

I belong to a fairly large camera club in Sacramento but haven't met anyone interested in subminiatures. Interest seems to be limited to 35mm & 2-1/4.

I'd like to suggest a "Lonely Subminiature Owners" column that would enable us to connect with other users in our area.

Keep up the good work.

Larry Rees
146 Pinebrook Dr.
Folsom, CA 95630

Said and done, Larry,

Lots of 9.5ers in your area. One last note-Some copies of the filmsplitter instructions in Newsletter #70 were very light. Anyone needing a darker copy of lines 1-15 please send a stamped envelope.

Subminiature lives!

Al D.