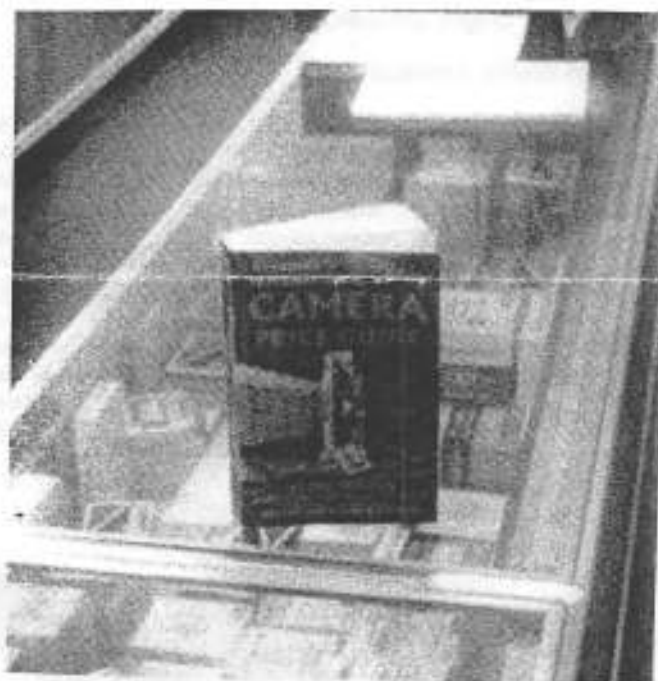


THE SUBMINIATURE TIMES

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.



MYSTERY REKINDLED On publication of our Issue #8, August, 1989, a reader called to say that the format of his Echo-8 camera/lighter was 5 x 8mm, not 6 x 6mm as we reported. Our references were "Ultra-miniature Photography", Cooper '58, and "New Ultra-miniature Photography", Cooper '61. We asked the caller if he'd used his camera, or measured the negatives. He hadn't. We considered the matter ended, particularly when both "Subminiature Photography" White '90, then The Christie's Auction '91, listed the Echo-8 format as 6 x 6mm.

Hello! The latest edition of "Kennedy's" says there were two models. "The earlier camera measured 15 x 42 x 56mm and a later model 17 x 47 x 58mm. Their format was 5 x 8mm." Two cameras, two sizes, and possibly two formats? Informed response would be appreciated.

*"Kennedy's International Camera Price Guide 1994" USA Photo Trade, Satter Inc., 4100 Dahlia St., P.O. Box 7234, Denver CO 80207

PINHOLE CAMERA mounted in an eyeglass case was demonstrated recently at The Spy Factory. Tiny single-board fits behind a tie, shirt button, or any convenient 1/32" hole.

Autofocus-auto iris provides continuous high resolution video from .03 to 200,000 lux, for 3 hours on a 9V battery. Pocketable Sony GV-S50 mini-recorder also receives UHF-VHF. Contact: Ron Hardman, The Spy Factory, 5358 Westheimer, Houston, TX 77056. Catalog (713) 960-8779.

FLATHEAD TRIPLE ZERO is the infamous tiny metal screw which pops out of subminiature cameras and hides in dark corners. For emergency replacements contact: J.I. Morris, 394 Elm St. Southbridge, MA 01550 (508) 764-4394. 24 hr FAX (508) 764-7650.

UPDATE: MINOLTA-16 film will be available "for a short while longer"! B&W ISO 100 Plus-X. \$3.00 per 20 exp. No shipping charge from Minolta's Ramsey, NJ office (201) 825-4000.

Can You Develop and Print Kodak Disc Film in Your Home Darkroom?

Yes, indeed, if you have the right-size pencil and an electric drill.
For best prints you'll also need a very bright diffusion enlarger

By Bob Schwalberg and Walter Johnson

Souping your own Kodacolor HR Disc films calls for one standard Kodak Flexicolor (C-41) processing kit, a suitably sized plastic pencil to jam into the disk hub, and an electric drill. The pencil is your processing rod, which Walter Johnson kept twirling throughout the standard 3 1/4-minute development, changing direction to avoid potential flow marks. The drill? For drying, natch. Kodak's new Disc processor will spin at 2,000 rpm, which is close to what most home-handyman electric drills do. Chucked with polishing or sanding attachment to prevent their flying off, drying seems to take about four minutes.

Printing the little negs presented only one problem—not enough light from standard dichroic diffusion heads, like the Chromega on Walter's venerable Omega D-2. This caused us to switch the condensers, and the more sharply collimated light increased the graininess. The negatives are phenomenally sharp, but 13x16-cm blowups demonstrate the need for a bright diffusion head.

Filtering was no problem, for Walter,

that is. First guesstimation was 20M plus 40Y, and fine-tuning called for 25M and 35Y. For a 16X magnification Walter ran the D-2 head up to the top of the column, using a 50-mm Componon-S lens at f/4 with a 10-sec exposure.

Kodak may not have intended anything like this, but wet-side processing of the new Disc film is so pleasurable that a lot of home color workers might like to try stretching the little 8x10-mm negs themselves.



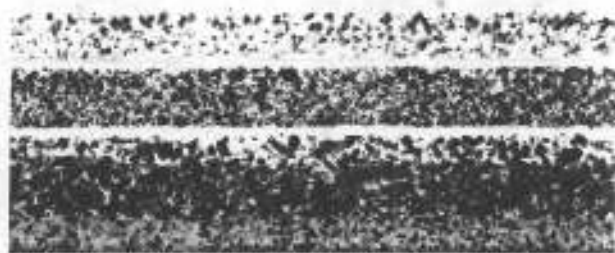
Spin on a pencil.



Dry on a drill.



Look Ma, no hands!



The secret of Kodacolor HR Disc film sharpness lies in its new thin-layer construction shown in these cross-sectional photomicrographs of unprocessed (left) and processed (right) negatives. From top to bottom these are yellow, magenta, and cyan layers

reproduced at a magnification of about 4,000X. All layers above the base have a thickness of about 0.001 in. (0.0254 mm), and the remarkable Kodak Disc-camera lenses are accurately prefocused onto the central, magenta image layer.

Record Breaking Offer!

Willoughby Peerless

CAMERA STORES

AMAZING LOW PRICE ON
LATEST, BRAND NEW

MINOX III S

PRECISION MINIATURE

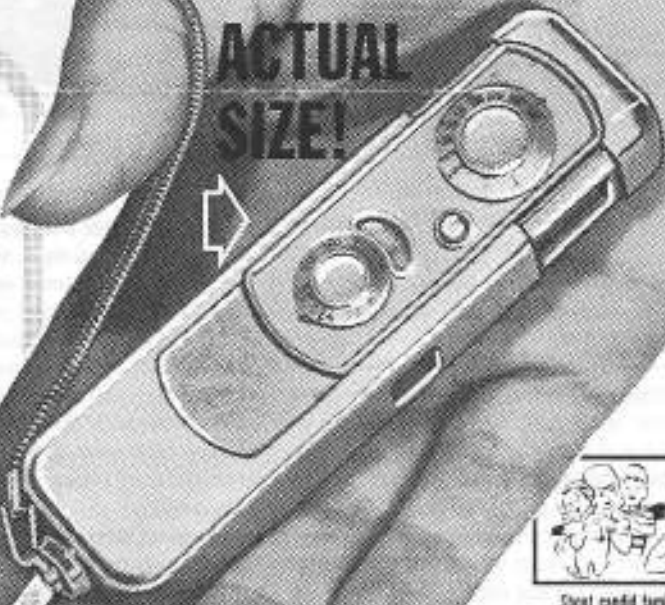
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Sharp f3.5 lens. Synch. shutter to 1/1000 sec.
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Only 3 1/4" long... weighs a mere 2 1/2 ounces.
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Wide choice of fine grain and hi-speed films.
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Its superb quality has never been duplicated.
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Please send prepaid

☐ Minox III S w/case & chain @ \$89.95
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I enclose \$ ☐ Send C.O.D. (\$5 Deposit enclosed).
Add approximate shipping charge.

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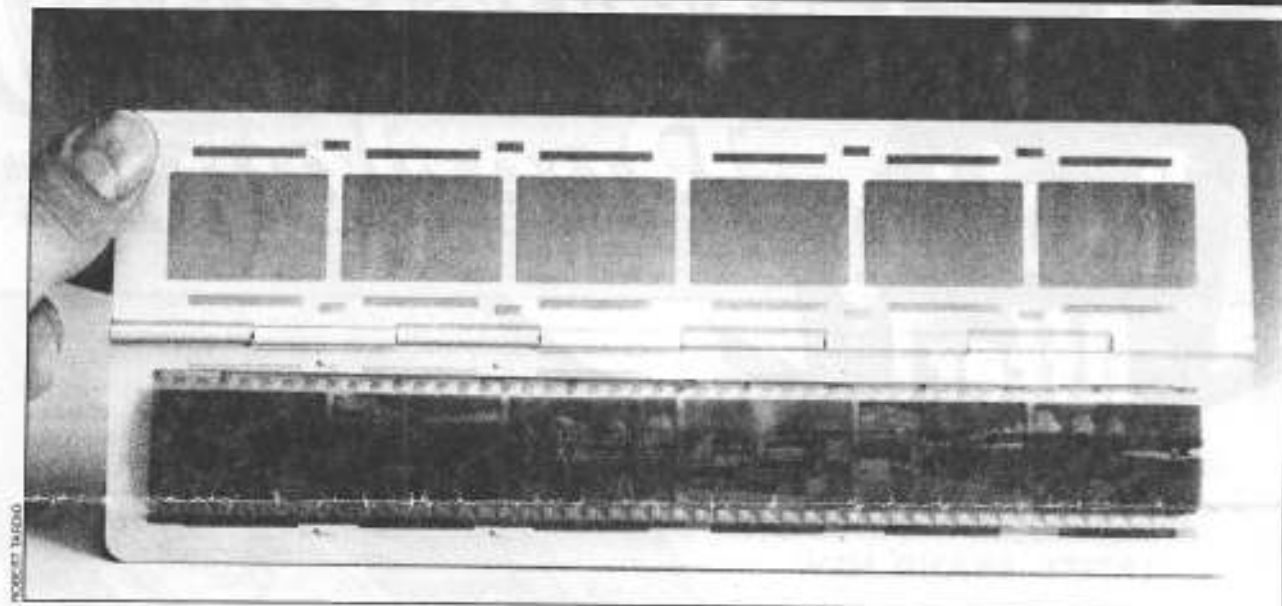
ADDRESS

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VIDEO



The negative-holder unit, which comes with Porter's Video Slide/Negative Copier, secures a strip of film. When inserted into the copier, the strip can be moved from frame to frame.

Obviously, most photographers don't shoot slides or movies specifically to transfer them to video. However, if you're a real video fanatic who must obtain the best possible image on the tube, here are a few helpful tips.


First of all, favor subjects having moderate contrast and relatively diffuse lighting, and use a medium-contrast film (try Ektachrome 100 or Agfachrome 200 for a start). If you don't intend to project your slides for an audience, you might even try shooting with low-contrast slide-duplicating film, such as Ektachrome 5071—a particularly good choice because of its fine grain.

Also, be aware that a television screen is a rectangle with an aspect ratio of 4:3,

which means that it measures four units wide by three units high. Motion pictures are similar, but 35mm slides have an aspect ratio of 3:2. To allow for the cropping done by the camcorder and television screen, compose your pictures so that no important material is at the sides. This is especially critical with title slides. Always hold your camera horizontally when shooting slides; in any case, avoid busy pictures and extreme wide-angle shots; small details are lost. Close-ups are better. Shoot with these suggestions in mind, then go ahead and transfer your film-based pictures to the magnetic medium.

Once your movies and slides are transferred to videotape, you can bet that

Some changes are inevitable when you make a videotaped copy of a scene. The copy on the right has less detail and higher contrast than the original at left and is cropped at the sides.

they will no longer languish on the shelf, waiting for you to garner the energy to project them. Now you can show them as easily as popping in a cassette and pushing a button. Your most laborious task will be selecting which movie to watch. The moderately reduced image quality of a home-video transfer is often a small price to pay for the convenience of showing your work. Just don't forget where you stored the original slides when relatives and friends ask you for prints. That's when the added quality of a photograph sure comes in handy. 

MANUFACTURERS OF FILM-TO-VIDEO TRANSFER UNITS

Ambico, 50 Maple St., Norwood, NJ 07648; Hama Photo Systems, Inc., 7200 Huron River Dr., Dexter, MI 48130; Hudson Photo Industries, 2 S. Buckhout St., Irvington-on-Hudson, NY 10533; Sima Products Corp., 4001 W. Devon Ave., Chicago, IL 60646.



Dear Al:

Help. I bought a Mec-16 SB in mint condition. All of my negatives are scratched and fogged. My darkroom is not absolutely pitch black, but dark enough for other films, papers, etc. Your ideas would be appreciated.

George Bell, San Francisco, CA.



Dear George:

The Mec is a fine camera which never had a reputation as a 'scratcher'. The supply side cassette works flawlessly. The remaining suspect is that receptacle cassette which has more little metal parts than a tinker toy.

Because you get light leaks along with the scratches, I'm going to guess that if you dismantle the cassette, you will find one of the felt light trap seals missing, or pushed out of position. It's a strip of material which measures 3/8 x 11/32".

The fastest replacement is to open a 35mm cassette, cut the amount of felt you need, saving the rest in an envelope.

Attach the fresh seal with a rubber cement 'dry mount'. That is, put some rubber cement on the back of the felt, and some on the inside of the cassette opposite the intact piece.

Use a fork to hold open the jaws of the cassette. This helps to prevent putting rubber cement any place other than where you want it. In a minute or so everything will be dry. Work slowly, and you can press the new piece into place on the first try. This 2-minute repair job will last about 20 years. And try loading your cassettes at night.

Al D.

REGISTER EARLY for Fundamentals of Electronic Imaging. R.I.T./T&E Seminar, July 21-22, 1994. (716) 475-2759.

TOTAL COST FOR SHIPPING OF ANY ONE, OR AS MANY OF THE FOLLOWING ITEMS BY AIR MAIL IS \$15



ALL PRICES ARE IN US DOLLARS

LASERCOMS

Communicate high quality audio or data on an IR laser beam. Circuitry employs FM techniques with a 200KHz carrier. The kit includes two PCBs (transmitter and receiver), all the on-board components, an electret microphone, a speaker, a 3mW-780nm laser diode, a suitable collimating lens, and the instructions. That's everything you need to make a high quality IR laser communications link which has been tested to over 300 metres. An optional relay (12V) makes this unit double up as a perimeter protection system. Relay activates when the beam is broken.

\$39

A similar kit which does not include the laser diode and the collimating lens, but is supplied with an IR LED instead, is also available. This kit produces identical results over a much shorter range of 3-4 metres. All that is necessary to demonstrate communications on a light beam, a light beam relay, and "five optic" cable communications. Fibre optic cable is not supplied.

\$23

12V relay suitable for use with either of the above: \$2 extra.

PASSIVE NIGHT VIEWER



This kit is based on a BRAND NEW monocular night vision scope which is completely assembled and requires an EHT power supply. The EHT power supply is provided in kit form, and is easy to build. The scope employs a high gain passive first generation image intensifier tube which is made in Russia. It will produce useful images in sub-moonlight illumination, and can be IR assisted in total darkness.

\$240

Available "Ready made" for an additional \$50

IR BINOCULARS



HELMET NOT INCLUDED

High quality helmet mount, ex-military binocular viewer. Will stretch and clip over most military and some lightweight construction helmets. Note that the helmet is not provided. Self powered by one 1.5V, "C" size battery. Adjustable eyepiece and focus from 1 metre to infinity. Requires IR illumination. Limited stocks, at a CLEARANCE PRICE OF,

\$220

MINIATURE FM TRANSMITTER



Not a kit but a very small ready-made self contained FM transmitter enclosed in a small black metal case. It is powered by a single small 1.5V silver oxide battery, and has an inbuilt electret microphone. Specifications: Tuning range: 88-108MHz; Antenna: Wire antenna - attached; Microphone: Electret condenser; Battery: One 1.5V silver oxide LR44 / G13; Battery life: 60 hours; Weight: 15g; Dimensions: 1.3" X 0.9" X 0.1".

\$26

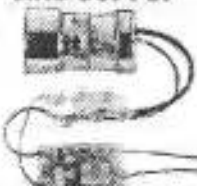
INFRA RED FILTER

A very high quality IR filter and a RUBBER lens cover that would fit over most torches including MAGNITEs and convert them to a good source of IR. The filter material withstands high temperatures and produces an output which would not be visible from a few metres away and in total darkness. Suitable for use with passive and active viewers.

\$11

For the filter and the rubber lens cover.

INFRA RED TUBE AND SUPPLY



These are the key components needed for making an INFRA RED NIGHT VIEWER. The tubes will convert infra red light into visible light on the phosphor screen. These are pre-focused tubes similar to type 6929. Do not require a focus voltage. All that is needed to make the tube operational is a low current EHT power supply, which we provide in kit form. Draws 20mA from a small 9V battery. INCREDIBLE PRICING:

\$60

For the image converter tube and an EHT power supply kit! All that is needed to make a complete IR night viewer is a lens, an eyepiece, a 9V battery, a case and a switch. We may have available some low cost lenses and ready-made power supplies to suit.

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COLLECTOR'S ITEM

We've finally located "The Mamiya-16 Camera Guide"! This is Joseph D. Cooper's work explaining the -16 Automatic, and -16 Deluxe. For the sub-mini professionals: filter factors, tips on exposure for available light photography, color slides, prints, and b&w. Flash accessories, film/developer combinations, image sharpness, solving close-range problems. 1961, 126 pgs. Photocopies...\$15 ea. Please include 10% s&h, 20 % International. "The Subminiature Times", P.O. Box 60311, Houston, TX 77205.

THE QUICKFINDER 6/94

Kombi (1892 submini) \$219 B
Micro-M (9.5mm) 175 B
Minox B blk w/case 399 B

B Brooklyn Cam (718) 462-2892

OPEN FORUM

HELP. We need a copy of pg 70 - "Pocket Camera Photography". Mailed someone our only copy! Al D.

"How to Repair Your Minox"

Reprinted from "Shutterbug" 3/92

A commercial product like WD-40 will work if applied with a Q-tip, but will take a considerable amount of experience and a very great deal of patience. A thin coating of high quality white machine grease, used in sewing machines, should then be reapplied to the sliders and curtains. Once you learn your way around the inside of a Minox, and its foibles and follies, you'll find a \$10 or \$20 junk camera can be brought back to operation and take fantastic negatives. So don't pass up that flea market bargain, just because it doesn't work, with some knowledge and effort on your part it can. With the rarer models such as the Riga, Swastika, or USSR-marked ones, or those in gold cases, it is always worth having them repaired by an expert.

MINUTE BROOCH CAMERA

TAKES, DEVELOPS & COMPLETES

AN EXCELLENT PORTRAIT IN ONE MINUTE

No Knowledge of Photography Needed

NO PRINTING

NO FOCUSING

NO TROUBLE

Any Child can Produce Good Pictures



No. 4904. COMPLETE OUTFIT



No. 4909. MINIATURE FRAME



No. 4907. BROOCH



No. 4908. MEDALLION

The Minute Brooch Camera is a marvel of ingenuity. It seems impossible but the proof of the Camera is in the portrait, and you may soon satisfy yourself that it will turn out in one minute, pictures with which any photographer would be pleased. Twelve plates can be loaded into the Camera and the developing is done practically automatically in the Developing Tank which is practically a part of the Camera itself without trouble or mess. It is the newest method of photography, in which skill and experience are not necessary. All the troubles of picture-taking in the ordinary manner are swept away. You do not require to know anything about chemicals or their action upon postcards, you merely place the round plates in the camera, take a shot at your friend or at some interesting view, drop the plate into the developer in the Camera, and in ONE MINUTE you have a completed picture. The new method is a PLEASURE, not work or worry; it is so simple and easy that any child who can use its hands can take good pictures.

The Camera, which is made of wood, covered with imitation leather, weighs but a few ounces. It is less than 3 1/2 inches high, 3 1/4 inches long, and 2 1/2 inches wide, easy to carry about and always ready to take and finish a picture in one minute. The LENS is of a high grade, universal focus, needs no adjustment, and takes clear and brilliant pictures at any distance, from a few feet to any visible distance. The SHUTTER is of the latest improved design, that works perfectly. The MAGAZINE will hold 12 round plates, of one inch diameter, in one loading. The finished pictures are mounted in the accompanying Brooches, Medallions, or Miniature frames, in a moment. The DEVELOPING TANK is attached to the Camera, and holds a single solution that develops, tones and fixes the picture in one minute with absolute certainty and with no care or attention on the part of the operator; it cannot be over-developed. 12 of the Button Plates and a supply of developing solution and the pretty little brooches, medallions and miniature frames are included with each outfit, so that there is nothing more to buy. You can start taking and completing pictures as soon as you receive the camera.

Now do not hesitate about buying one of these wonderful cameras. We guarantee every statement we make. Send today and have the never-failing pleasure of making excellent pictures of your family, friends, or neighbors, your house or your domestic pets. You haven't to wait a week for results; you complete the picture that everyone will highly value, in ONE MINUTE.

PRICES

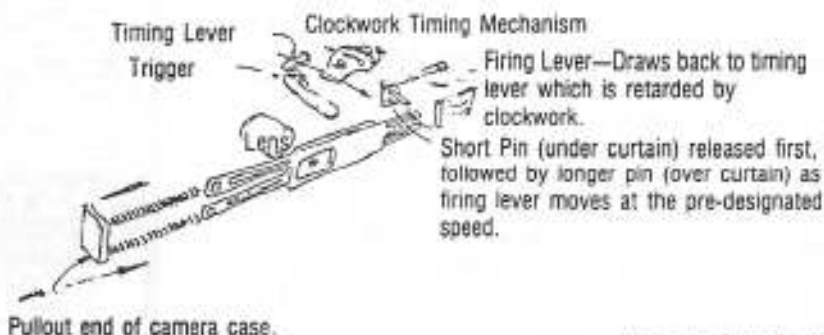
| | | | |
|---------------------------------------|--------|--------------------------------------|--------|
| No. 4904. Brooch Camera Complete | \$4.35 | No. 4907. Brooches, Per Dozen | \$0.25 |
| No. 4905. Extra Plates, Package of 12 | .35 | No. 4908. Medallions, Per Dozen | .25 |
| No. 4906. Developing Solution | .45 | No. 4909. Miniature Frames, Per Doz. | .60 |

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RACINE, WIS.

The Minox Mechanical Shutter And How It Works.

Shutter Firing



(Conclusion)