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THE KREUZNACH PETIE

Several readers bought Peties from Adorama last month. The camera uses 16mm paperbacked roll film (see "My Favorite Spy" Bob Hope, '51.) One problem is that with a fixed aperture of $f/9$ and single shutter speed of $1/50$ th sec., the best daylight films are in the ISO 10-25 range. The 14×14 mm format also requires unperforated stock.

There are many good choices in black and white: Fuji HR, Kodak 1455, AHU 3480, and Copex Pan.* But for color photography everyone drew a blank until we received the article on pgs. 2-3, from Tony Weeks, of Chicago, IL.

It turns out that modern color 'duplicating' films work fine in old roll film cameras. Eastman Color Print Film 5384 is available in 16mm as Emulsion 7384. Ektachrome 16mm is Emulsion 7399. Use the paper backing from a 110 cassette. Any of the mail order labs can process it except SHOOTERS USA, which just ended 16mm service.

*Bob Firth, of Shawnee, KS. has 16mm x 100ft Copex Pan (ISO-25), to swap. (913) 268-9254.

READING LIST

"The Art and Science of Photo Reconnaissance"

D. Brughiani, "Scientific American" 3/96



THE SECRETS OF 5071

Ektachrome Duplicating as an extended range slide film ■ By David Brooks

Some months ago, a friend mounted a show of color prints in a gallery. While at the opening, I was told she had been asked by the gallery owner to reproduce her color transparencies using Cibachrome to make the color prints for the show. The reason given was that Cibachrome is reputed to have superior archival qualities, making the prints more saleable. This would have been no problem for my friend except that the contrast of the prints did not reproduce her images as she wanted. Unfortunately, the cost of making contrast control masks for each image was prohibitive.

This is not an uncommon problem. Contrast build-up occurs anytime you reproduce color reversal film images. That's why special low-contrast films are made for the purpose of duplicating slides.

DUPING FILM IN-CAMERA

Hey—wait a minute! If slide duplicating film is of low contrast, why not use it to make original images if they are going to be reproduced with reversal color print materials? The idea is simple and logical, but actually using duping film in a camera has its limitations and practical problems. First of all, color duping film is only available regularly in 35mm and sheet sizes. Of course that leaves out medium format, which is a very popular medium with serious color photography artists. Secondly, the only slide duplicating emulsion types which are not special order items are balanced for use with tungsten illumination.

On top of that problem (which would require light balancing filtration), and compounding it, is the fact that duplicating films are quite slow. The reasons they are turtle-like is that they are made

for high resolution and fine grain, which is all to the good for making large prints, of course. But what speed? There is no ISO number neatly printed on duplicating film labels. The information on the label of Ektachrome Duplicating Film Type 5071 consists of recommended exposure factors and suggested filtration. Undaunted, intrepid (you're supposed to laugh here) gets a supply of film, camera, and MacBeth Color Checker, ready to do battle with what seems like all too many imponderables.

FIRST TEST

The information on the boxes of my first batch of Ektachrome 5071 indicated it had an exposure factor of 2 and a filter recommendation of CC10Y and CC50C. On the inside information sheet the factor 2 translated to mean EI 25, which I immediately dialed into the camera's ISO index. I must admit I ignored the filtration recommendations because I couldn't reconcile the starting values with the numbers on the box and the value of a No. 85 conversion filter. None of the numerous references in my library provide the component value of an 85 filter in CC density numbers. So going ahead, half in ignorance, I set up the Color Checker illuminated by the sun at a 45° angle and made a series of bracketed exposures a couple of stops on each side of the meter reading of a gray card with the No. 85 filter on the lens.

Voilà! Was I glad I went ahead without figuring in the filter recommendations. The EI 25 setting provided just the right density range representing the color patches and gray scale of the Color Checker. But even more amazing, the color balance was very close—just a little magenta in the mid and light gray tones. Also, the density variation between the

different bracketed exposures suggested that yes, the film is low contrast; in fact, it's just plain flat.

SECOND TEST

I figured that on the basis of just a hint of magenta color shift, I could shoot the film in daylight with just the No. 85 filter, and correct the color in printing if necessary. So on my next trip I took the rest of that batch of 5071 and shot all kinds of nature, landscapes, and whatever else came across my path, bracketing exposures generously. I also exposed a few rolls of portraits made with electronic flash in the studio.

When I got the slides back I woke up the guys at the lab counter with a whoop and a holler. The outdoor stuff looked great! It wasn't as flat as I'd feared, but there was detail way deep in the shadows like I'd never seen in slides before. Even though the image contrast was less than normal slide films produce, there was no loss of color saturation. And the colors were right on the mark for all the daylight-exposed subjects. The portraits were equally pleasing contrast.

COVER PAGE

TOP: On normal color slide films, sunsets usually produce pure black silhouetted foregrounds. With Ektachrome Duplicating Type 5071 film, the exposure can be balanced to obtain detail in both the sky and foreground.

BOTTOM RIGHT: The subject brightness range of naturally lit interiors is often beyond the range of regular color slide film, but not 5071 duplicating film.



wise, even though soft lighting was used; and the density was just about perfect, exposing at EI 25 without bracketing. Color balance was another issue. For some reason, the electronic flash brought out the magenta shift I saw faintly in the Color Checker and multiplied it several times.

CIBACHROME PRINT TEST

I took the best of the 5071 slides, both daylight and studio images, to the same lab that made the prints for my friend's gallery show. When I showed the slides at the lab, the response of the technicians was as curious as mine as to what the resulting prints would reveal.

It was only a short time before I returned and picked up the finished prints, none of which I could fault in any way. The corrections necessary to reproduce the 5071 slides were completely within the parameters normal for printing other color reversal emulsions. The contrast of the images was much less than I would expect from Cibachrome prints from normal slides containing average subjects. Gone were the chalk and soot for highlights and shadows brilliant slide images reproduce in reversal prints made without the aid of a contrast mask. Even backlit scenes produced luminous detail in the shadows of Cibachrome prints made straight from 5071 slides.

MORE TESTS

I was obviously encouraged to do more with Ektachrome Duplicating film. But my next purchase provided a different emulsion batch with a lower exposure factor resulting in an EI of 20 and distinctly cold magenta coloration. Again the shift was most pronounced with electronic flash. The solution was to shift to a No. 85C conversion filter plus CC10G and CC30Y for flash. Daylight use only required CC05G and CC15Y with the 85C to obtain a neutral color rendition. Again, as far as I could determine, the practical solution to filtration didn't jibe with the film manufacturer's recommendations.

This seems logical enough, because natural subjects are quite different from the dye images to which the film is designed to respond. However, I had hoped a second test might reveal some consistency between the recommended filtration and what would be needed for daylight and flash camera subjects. Each emulsion batch seems to require a test for practical filtration even after trying a third and fourth emulsion batch. There is a solution to this problem, and

that is to buy a large enough stock sufficient to last some time, and keep it under refrigeration.

These additional tests were not just to find a logic to translate the manufacturer's filter suggestions into usable daylight and flash slide shooting recommendations. I was also intrigued by the appearance of the first field/studio tests—enough to question what other uses the film has when shot like any other slide film. First of all, could I get print results of studio portraits and similar subjects printed on Ektachrome reversal paper which would come close to the look of Vericolor Type S color negative film printed on the portrait grade of Ektacolor paper (formerly Type 74)? And secondly, would the long exposure range of Ektachrome Duplicating 5071 film produce normal contrast slide images from subjects having extreme contrast, like backlit water scenes with specular highlights?

CONCLUSIONS AND RECOMMENDATIONS

I have always been frustrated by the inherent contrast of reversal films limiting the lighting contrast I can use effectively in the studio. To a large extent, 5071 has solved the problem. In addition, it softens tone gradation, smoothing out complexion reproduction and making flattering portraits on Ektachrome paper viable. In fact, in complexion areas which are broadly lit, tone separation is sufficiently low to either reduce or entirely preclude the need for retouching. I would even consider using the film for fashion if I wanted to preserve the delicate gradations of silks and satins.

Outdoors, the possibilities are even greater than I suspected. Logically, 5071's low contrast preserves detail in both shadows and highlights of scenes too contrasty for regular slide films. Much greater detail and a more realistic rendition is created in a slide of sidelit or backlit scenes with full sunlight than can be achieved with any other slide film. On the other hand, front-lit subjects and any amount of overcast combined with 5071 produce the duldest imaginable results. But even though duplicating film has a longer exposure range compared to other slide films, intensely colored subjects reproduce with color saturation equal to other films regardless of the fact the difference between highlight and shadow density is less.

If you have been frequently disappointed with slides having large areas of lifeless black "D" max and burned out highlights, you might want to share my new habit of carrying an extra camera body loaded with 5071. Or maybe your curiosity matches mine and you will be the first to find out what kinds of 4x5 transparencies can be created with the sheet film version of Ektachrome Duplicating film. Better hurry, though, because I can hardly sit still imagining the color print qualities that might result!

WHEN THE METER LIES

1. There are two basic circumstances that will cause your meter to lie to you. The first is when a large portion of the scene you're photographing is considerably brighter or darker than your main subject. The second is when your subject itself is abnormally bright or dark.

Let's first consider a scene where a large portion is brighter than your main subject. This occurs primarily in backlit situations, where most of the light is coming from behind your subject. When you point your camera at the scene, the light meter sees all that brightness and says, "Boy, that's a bright scene. I'd better call for very little exposure to compensate." So you center the meter needle and shoot, and when you get your picture, there's a nicely exposed bright area and a very dark (underexposed) subject.

2. Solution: Take a close-up meter reading of your subject. That way, your subject—not the bright background—will be properly exposed. Any time a major portion of the scene is brighter than your main subject, take a close-up meter reading that includes only your subject and not the bright area. Then move back and take the picture from any distance you want.

If you can't get close enough to your subject to take a close-up meter reading, take a normal reading of the whole scene, then open the lens aperture two stops and shoot a bracketed series of exposures. (Bracketing will be explained at the end of this article.)

3. Now let's consider the opposite problem—a scene in which a large portion is darker than your subject. This occurs frequently at stage shows and music concerts, where a spotlight performer is surrounded by a lot of empty black unit area. Your meter sees all that black and says, "Boy, that's a dark scene. I'd better call for a lot of exposure to compensate." So you center the meter needle and shoot, and when you get your picture, there's a muddy gray dark area surrounding a burned-out white subject.

4. Solution: Again, take a close-up meter reading of your subject. That way, it—not the vast empty black area—will be properly exposed. Any time a major portion of the scene is darker than your main subject, take a close-up meter reading that includes only your subject and not the dark area. Then move back and shoot the picture at any distance you desire.

If you can't get close enough to your main subject to take a close-up meter reading, take a normal reading of the whole scene, then close the lens aperture two stops and shoot a bracketed series of exposures.

5 & 6. As touched upon in the Introduction, the light meter is designed to provide proper exposure when you meter an "average" scene or subject—one of medium brightness. If you take your reading from a brighter subject—say a sandy beach or snow in the sunshine—the meter will see all that brightness and decide to give less exposure than required, resulting in a medium-toned rather than bright scene in the photograph (No. 5). Solution: When metering a particularly bright scene (one you want to appear that way in the resulting photo), open the lens a stop or two from the one indicated by the meter reading (No. 6).

FREE CLASSIFIED

WANTED: Minox Easel w/masks, Copying Arm Attachment & Film Guide Masks 10mm square & 16mm cine (all above for Minox II/III Enlarger). Minox slide mounts. Tessina wrist strap. Please contact Bob Firth, 11121 W. 72nd Ter., Shawnee, KS. 66203
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H (913) 268-9254.

50 Years **MINOX** made in Germany

Two 'Golden Treasures' and the new flagship MINOX TLX

The new top model of the ingenious subminiature camera for the 8 x 11 mm film format is the MINOX TLX. The specialists in Giessen for optoelectronics and precision engineering have tailored a new garment out of robust anodized titanium for their 'flagship', that has been on offer in light metal alloy and black since 1978 under the reference 'LX' in time for their 50th Anniversary in autumn 1995. The new MINOX TLX in the colour of precious titanium has black focusing scales and a black brand name signature. This masterpiece of camera technology is hand assembled out of 275 components.

For the 50th Anniversary of MINOX in Germany two special models in a limited edition have been brought out. The small MINOX AX Gold with dimensions of 83 x 28 x 16 mm, a replica of the A model from 1945 with all the technical details of the camera in current production, but purely mechanical without battery or electronics and also the MINOX LX Gold. Both hand assembled anniversary cameras bear the facsimile engraving of the inventor, the signature of the 90 years old Walter Zapp. They are delivered in a polished walnut box with a brown leather case, a gilded measuring chain and certificate.

Golden MINOX cameras have already been produced on earlier occasions. The first one, a MINOX B with crown and crest of the Windsors went to Her Majesty Queen Elizabeth II in 1965 and was completely overhauled recently in Heuchelheim after obvious signs of wear and tear showed it had been in constant use. Juan Carlos, the King of Spain, and the talk showmaster Hans Meiser both photograph with golden MINOX cameras; so does Götz George alias "Schimanski". The Hollywood star Anthony Perkins had a platinum MINOX LX, and the most expensive German camera in production costing almost 10.000 DM was the MINOX LX Sterling made in 1992 out of solid 925 sterling silver; the hundred purchasers insist on absolute discretion. But the standard basic MINOX model has also been used as a photographic notebook by personalities through the course of time - President Eisenhower and Frederike, the Queen of Greece. Andy Warhol created innumerable works of art with his MINOX. He knew how to use the surprise effect in situations where nobody had a camera in the hand. The inconspicuousness of the tiny camera has made it a standard requisite for the 'soft felt hat' all over the world. The MINOX often plays an important supporting role in spy thrillers as well as in real life of agents.

MINOX GmbH, Postfach/P.O. Box 10 07 61, D-35337 Giessen/Germany

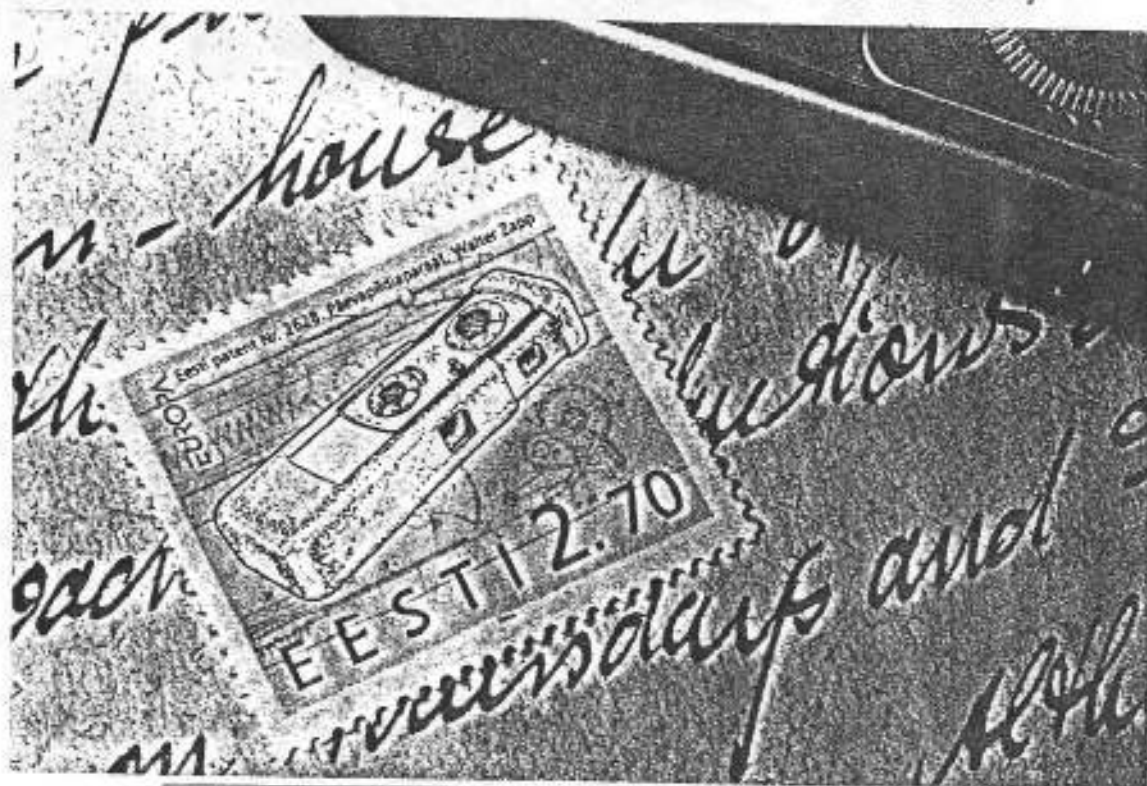
MINOX - Postage stamp advertizes for Europe

The Post Office in Estonia honours Walter Zapp, the inventor of the MINOX

We know from spy thrillers that MINOX negatives from spies are glued underneath a postage stamp and sent to their masters. The MINOX to be seen on a postage stamp on the other hand is quite new - completely unharmed and "quite openly" the patent drawing of the ("Päevapildiparaat"), the first subminiature camera from Walter Zapp. It comes from the young Baltic Republic of Estonia*and has been issued as a special European issue in the honour of the inventor Walter Zapp. The Baltic German Walter Zapp was born in fact in neighbouring Latvia in 1905 where his "MINOX Riga" was built before the Second World War. The cosmopolitan already had the idea for the smallest production camera in the world in 1922 when he was a photographic apprentice in the Estonian capital of Tallinn (formerly Reval).

MINOX GmbH has issued a commemorative leaflet together with the postage stamp specially issued by the Republic of Estonia for Walter Zapp's 90th birthday on the 4th of September 1995 and for the 50th anniversary of "MINOX made in Germany". The DIN A6 commemorative folder can be obtained from by sending in cash and a standard size stamped addressed envelope.

MINOX GmbH, Postfach/P.O. Box 10 07 61, D-35337 Giessen/Germany



INEXPENSIVE TROUGHS FOR MAKING LARGE PRINTS

By Norman Truitt

If you would occasionally like to produce 16 x 20-inch or larger black-and-white prints, but don't have the dark-room counter space to set out three trays of that size or the \$40 or more it takes to buy them, try using the light plastic troughs sold by wallpaper or "do-it-yourself" discount stores for wetting prepeasted wallpaper.

They measure at the bottom about 28 inches long, 5 1/4 inches wide and 4 inches deep. I purchased some for 84¢ each at K-Mart, and have seen them advertised for less.

The paper can be held by plastic clips or clothespins at each end or side (I use my fingers), and rolled up and down in about a quart of solution.

The troughs would be clumsy for washing prints, but most photographers have a bathtub available. □

These plastic troughs are an excellent and inexpensive alternative for making larger prints.



SHARPER THAN IT LOOKS This photo of a 1980 AMC spirit was taken by reader Bob Dome, with a Pentax-110 on Kodacolor 200.

One of the sharpest Pentax-110 prints we've seen in a while, under magnification you can read the dealer's name HUFFMAN on the plate frame. Way to go Bob. Keep 'em coming gang.

HOUSTON AREA SUBMINIHOLICS will be meeting briefly at the 39th Houston Camera Show and Sale sponsored by The Photographic Collectors of Houston, Hobby Airport Holiday Inn. March 23, 10:30 A.M. (Look for Leonard Hart's table with the Minox goodies.) Subminiature lives!



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