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THE SUBMINIATURE TIMES

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

Rollei-16 - 1963-67.

EDITOR'S JOURNAL:

SOLVING THE 7 BASIC ROLLEI-16 PROBLEMS

Camera owners are of a stripe. At baseball games Mamiya-16 owners sit where they can yell at the home plate umpire. Minolta-16 owners sit where they can shower clumsy outfielders with debris. Rollei-16 owners are more likely to have a season ticket to the Press Box. Isolated from more rabid subminiholics, they never complain (in print) about their cameras. Decorum aside, there are seven problems:

CASSETTES The Rollei-16 uses one cassette at a time. The film is wound across the live area onto a split reel. It is then rewound, and the cassette removed to process the film.

Problem #1. The cassettes are difficult to locate. Real Rollei-16 cassettes are extinct. Edixa cassettes work as well, and are a lot easier to find, if pricey. You can easily modify the still available Minolta-16, and 110 cassettes by simply breaking off the receptacle side of the cartridge. A flange on the left side of the 110 cassette will require some sanding, but it works. Using the camera this way, you won't be able to rewind the film. So unload the camera in the dark. Put the exposed film directly into your processing tank, or into a container for shipping.

Problem #2. Scratches traced to reloadable cassettes. This is a maintenance problem. 16mm movie film doesn't have the tough anti-abrasion coating of 35mm film. If you pull enough film through your only cassette, you'll eventually get a buildup of particles in the light trap. Break a toothpick in half, push one end down to the bottom of the light trap to hold the two sides apart. Use the other half of the toothpick to gently 'comb' the material upward. If you use a bright light and a magnifier you can actually see the lint coming out like dandruff.

FILM The Rollei-16 was introduced in 1963 when films were thicker. If you use only ISO 200 or higher speed movie films, you've probably never seen that Carl Zeiss Tessar hitting on all cylinders. Unfortunately, the newer microfilms are being put on a 2.5mil thick base. You may be able to find a single perforated microfilm, but on very close inspection, you'll see that objects on the horizon aren't pinpoint sharp..No real solution to this, other than to use microfilms for copying at close range. Save the color for scenery.

Problem #3. Color film availability. Kodak has short 100' rolls of single-perforated chromes, and color negative emulsions, with names like Color Negative 250T. The code number at the end denotes the film speed and color balance. Color Negative 250T is ISO 250, balanced for tungsten lighting. I've tried the 50D. The Rollei-16 loves it, and the local 1-hour kiosk does a nice job.

Problem #4. Black and white films. I've just heard that single perforated Eastman 1461, and Plus-X 7276, are available from Kodak again. If this is so, its good news. High resolution 1461 can be used at ASA 25. Plus-X Reversal can be used at ASA 400. But the maximum speed on the Rollei-16 is only ASA 200. To set the meter properly for very high film speeds, set the indicator at ASA 200, then depress and turn the inner dial to -1. This is ASA 400. At the beach go to -2 which is ASA 800. At -3 you'll be using ASA 1600, process your film accordingly. If you turn the dials in the oppposite direction you can go down to ASA 1.5.

Problem #5. The viewfinder fails to close occasionally. The viewfinder latch is connected to the rewind crank. If you close the crank handle securely, then depress the viewfinder, it will always shut tight.

Problem #6. "The low light indicator is hard to see."

A small window beside the lens pipes light through a green filter and a prism to the viewfinder. The green light is visible when there is sufficient light to take handheld pictures with the film currently in the camera. Some owners (expecting a red light) see no warning in low light levels, and use the camera normally, getting blurred pictures.

If you hold the camera up to a light and slowly move it to darkness, you'll see a lever flip up to cover the green filter. There is no red warning light! Thus, if you don't see the green light, brace the camera.

Problem #7. These are minor annoyances lumped together to save space.

(A) No tripod thread. A tripod adapter, as well as Mutar closeup, and telephoto lenses are available; getting rarer, but still seen at camera shows.

(B) Factory support and processing. Factory interest has headed south. For repairs, owners report good luck with Essex Camera Service (201) 933-7272.

Local labs will process Kodak Color Negative 16mm film as if it were 110. SHOOTERS will handle b&W too. Save your original cassette since putting your name on it doesn't work reliably, ship film in 35mm film cans labeled "Exposed 110 color negative film. Open in darkroom only." SHOOTERS (708) 956-1010.

(C) Film lost in the mail. Happens to everyone at least once. I used to work in a lab. When a name tag and film part company, they always have someone examine the film for a name and address. To make your film LOSS PROOF always photograph a card bearing your name and mailing address on the first frame. Yes, you'll lose a frame, but they'll never lose your film again.

Subminiature lives!

Al D.

DALSA INC.
CCD Image Sensors

CA-D1 CAMERAS

CA-D1 High Frame Rate Area Scan Cameras

FEATURES

- 10,000 Frames / second (max.)
- Frame Transfer Architecture
- 32x32, 64x64, 128x128, or 256x256 PELs in a Square Matrix
- TURBOSENSOR™ Technology
- 16 MHz Free-Run Video on a Single Output
- High Resolution Image Capture within Standard Optics

DESCRIPTION

DALSA's CA-D1 series cameras are high speed, high resolution area scan cameras which use TURBOSENSOR™ technology in a frame transfer architecture for high speed, medium resolution image capture. Data is provided at a high 16 MHz data rate on a single output in free-run video format. The CA-D1 camera is available with four different imaging arrays from the IA-D1 TURBOSENSOR series: 32x32, 64x64, 128x128 or 256x256 PELs with a 16µm pitch in a square matrix. The CA-D1 camera can scan data at frame rates up to 10,000 frames per second. The smaller the array size, the faster the frame rate of the camera.

Image Sensor characteristics are the major factor affecting the performance of CCD cameras. DALSA designs and manufactures its own image sensors and this is one of the reasons for the superior performance of the CA-D1 cameras.

The CA-D1 cameras are also available with an 8 bit digital board module (A154), and a sample and hold board module (A143) which provides video with gain and offset correction that is compatible with most frame grabbers.

A summary of features of the CA-D1 camera is provided in Table 1.

APPLICATIONS

DALSA's CA-D1 area scan cameras are used in the applications such as:

- **Machine Vision**

  The CA-D1 cameras can achieve stop actions of 100 µs without a high speed shutter or high speed strobe light. This corresponds to a frame rate of 10,000 frames per second.

- **Position Detection**

  The CA-D1 cameras offer higher frame rates than RS170. This allows greater accuracy when determining position due to the enhanced stop action.

- **Instrumentation**

  The CA-D1 cameras can be used to provide information about objects shape or size.

- **Motion Tracking**

  The CA-D1 can be used to track the movement of an object. With the CA-D1-0064, objects moving at 300 ms across the selected aperture can be captured in stop action. The smaller the array size, the faster the frame rate of the camera.

Table 1: CA-D1 Camera Configuration

Camera	Sensor	Number of PELs	Pitch (µm)	Aperture	Special Features
CA-D1-0032	IA-D1-0032	32x32	16	0.512 x 0.512mm	High Resolution Frame Transfer 16 MHz data rate
CA-D1-0064	IA-D1-0064	64x64	16	1.024 x 1.024 mm	
CA-D1-0128	IA-D1-0128	128x128	16	2.048x2.048 mm	
CA-D1-0256	IA-D1-0256	256x256	16	4.096x4.096 mm	

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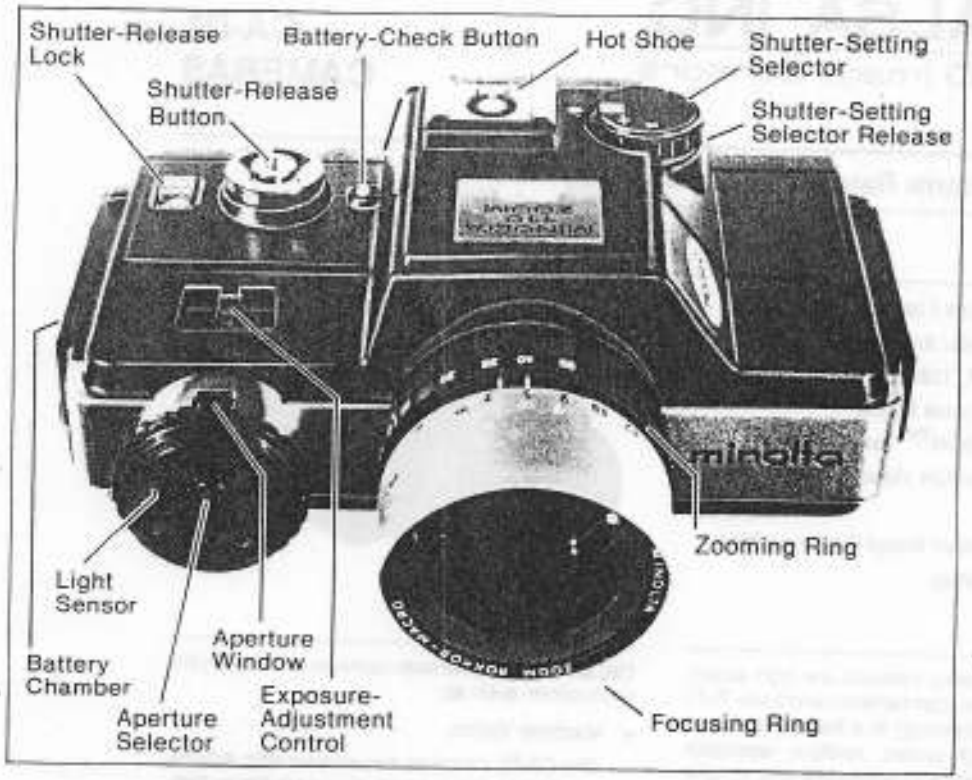


110 ZOOM SLR

In addition to SLR cameras using 35mm film, Minolta produces SLR cameras that use 110 size film in cartridges. These offer many of the advantages of the larger SLR cameras, combined with compact size, economy, and the convenience of drop-in cartridge loading.

The 110 film frame is 13mm x 17mm-about one-fourth the area of a standard 35mm film frame. For many photographic purposes, this is not a handicap.

Color negative, color slide and b&w film are available. Most users of 110 film prefer color negative because they want to end up with color prints. For this purpose, 110 film is a very good choice unless you plan to make enlargements larger than 8 x 10. Medium and small enlargements in color or b&w have excellent quality when made with these Minoltas.

There are special slide projectors for 110-size slides but they are not necessary. Most film processors routinely mount 110 slides in holders with the same outside dimensions as 35mm slides. To be certain, specify 2" x 2" mounts.

Film loading is simple and foolproof. Open the back of the camera, drop in the cartridge and close the back. You don't have to thread the film across the camera or insert the film end into a takeup spool. For some people, this is an important feature.

Both camera models use non-detachable zoom lenses so you have a choice of focal lengths without having to carry several lenses and interchange them. Both models also have a special lens setting to increase magnification for closeup photography such as flowers or insects.

The Minolta 110 Zoom was the first SLR for 110 film. It is unconventional when viewed as a 110 camera and also unconventional when viewed as an SLR.

The camera is automatic only and operates with aperture priority. Aperture range is f/4.5 to f/16. Shutter speed range is 1/1000 to 10 seconds.

THE LENS

An f/4.5 zoom lens with focal lengths from 25mm to 50mm is permanently installed.

The lens has two control rings. The Focusing Ring, at the front sets focused distance from infinity to about 1 meter.

OPERATION

There are three modes: A. puts the camera on aperture-priority automatic exposure, which is the normal setting. In the B. position, the shutter remains open as long as you hold the shutter button depressed. At X, the shutter operates mechanically at 1/150 second, X-sync speed for this camera.

Select the mode of operation by turning the Shutter-Setting Selector while depressing the adjacent release button.

Film speed setting is done automatically-when you load ASA 100 or ASA 400 film cartridges.

To conserve battery power, the viewfinder display does not operate unless incorrect exposure is likely.

The top, red LED lights up to indicate that the shutter speed required for correct exposure of an average scene is faster than the camera can provide-that is, faster than 1/1000 second.

The bottom, yellow LED indicates that shutter speeds will be slower than 1/50 second as a reminder to put the camera on a tripod or other firm support.

The red LED serves as a battery-check indicator when you depress the Battery-Check Button on top of the camera. If the batteries are OK, the LED will glow. The red LED also glows when you have set the camera shutter to X or B as a reminder that the camera does not control exposure automatically in these modes.

A microprism focusing aid is in the center of the frame in the viewfinder.

EXPOSURE METER

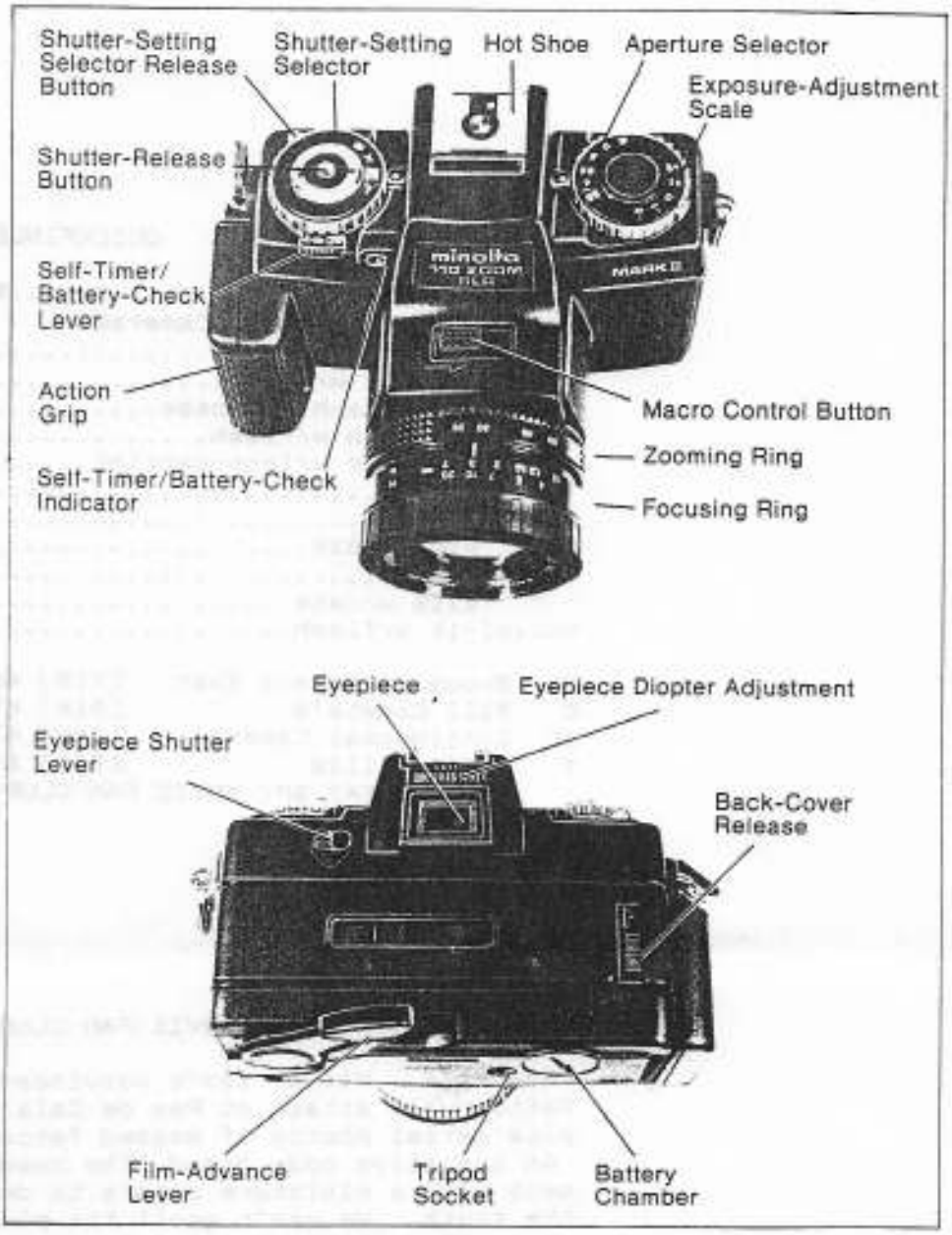
The CdS exposure meter does not view through the lens. It's in a turret projecting forward from the camera body, combined with the Aperture-Selector. When you turn the Aperture-Selector ring, two things happen. The aperture size is set and the amount of light admitted to the sensor is changed in proportion. There the sensor always "sees" the same amount of light that the lens transmits to the film.

MARK II

In nearly every way, the Mark II camera can be regarded as a smaller version of the Minolta 35mm SLR cameras. This model was introduced later than the 110 Zoom SLR, and there are significant differences between the two models.

Metering in the Mark II model is done behind the lens with a center-weighted pattern. The matering and operating range is from EV 5.6 to EV 17 with ASA 100 film. The camera selects shutter speeds steplessly within the operating range.

The camera is automatic only and operates with aperture priority. The aperture range is f/3.5 to f/16.



MINOLTA 110 ZOOM SLR MARK II

Submitted by D. Holland

THE SUBMINIATURE TIMES QUICKFINDER 9/89

GaMi-16	$299	T
"Guide to 110 Russian Cameras 1929-1984"	$11	CC
Minolta-16 EE w/case	39	T
Minox EC w/flash and case	129	B
" EC brown w/flash	450	C
" Enlarger w/lens-carrier	275	B
" B	179	C
" B black	149	C
" Riga #6829	879	C
" 110 S	85	C
" IIIS w/case	169	C
Rollei-16 w/flash	89	T

B	Brooklyn Camera Exch	(718) 462-2892
C	Bill Cameta's	(516) 691-1190
CC	Continental Camera	(312) 675-0410
T	Eddie Tillis	(516) 599-6013

THE GREAT SPY MOVIE FAN CLUB

THE GREAT SPY MOVIE FAN CLUB

May 1944. Hitler isn't convinced that Patton will attack at Pas de Calais. despite aerial photos of massed forces.

An operative code named "The needle" is sent with a miniature camera to determine the truth. We won't spoil the plot because "Eye of the Needle" is a genuine thriller. Haunting performance by Sutherland. You won't be disappointed. We give it four stars. * * * *

Eye of the Needle ('81) Suspense. A Nazi spy (Donald Sutherland) seduces the wife (Kate Nelligan) of a crippled pilot (Christopher Cazenove) on the Scottish coast before D-day. ★★★ (2:15) (TS) Sat. 10:30 p.m.