



Attached to the SRT 101 or the SR 1 S, the deluxe double track Auto Bellows 1 provides calibrated extension between the lens and film.

It features an automatic diaphragm coupling system and attaches to the SR camera bodies in the same manner as a lens. Used with the standard 55 mm. Rokkor lens, the Auto Bellows 1 permits continuous magnification between  $\times 0.7$  and  $\times 2.9$ .

The detachable focusing rail con be used separately for positioning or focusing the camera (when the camera is equipped with MC Rokkor lens and extension tubes or close up lens).

A wide range of optional accessories, for slide copying strip film copying and specimen photography, may be used with the Auto Bellows 1.

Designed to suit the particular needs of professional and industrial photographers, the MINOLTA SRM features a built in motor that not only advance the film up to 3 frames per second in a reflex viewing mode, but also rewinds the exposed film rapidly back in the cartridge. A detachable handgrip contains 8 AA 1.5 volt penlite batteries to power the motor. The automatic stop/reset frame counter and an easy loading facilitate quick operation. Because the handgrip is detachable, wire or wireless remote control is possible, through the use of an extension cord, AC adapter, radio control, or a combination of them.

The drive is initiated by a release button on the handgrip Continuous or single frame shooting is selected by simply turning a knob, with the handgrip removed, the SRM can be used as a regular SLR camera, since all the necessary elements are incorporated in the camera body. The Minolta SRM has the features of the SR 1 S except the self timer; or of the SRT 101 except the self timer and the TTL metering. A clip-on CdS exposum meter is available.

A special sports view finder is helpful for fast moving subjects. With a 250 frames magazine, the photographer can get a large number of pictures continously. All lenses and accessories of the MINOLTA SR T 101 and SR 1 S can be used with the SR M.



Some new lenses have been developed Computer design and high refractive "rare earth" glasses combine to keep the Rokkor lenses up in the leading class. Those lenses are very fast. The 16 mm focal length Minolta Auto MC UW Rokkor OK f/2.8 to 16, has a 180° diagonal field, a 137° horizontal field and a 85° vertical field! without giving a circular image, it is the fastest ultra wide lens ever made for 35 mm SLR cameras.

cameras. Eleven elements in 8 groups internal built in turret filters 1A-Y48-056-80B. Helicoïd focusing down to 0,3 m (1 ft). Depth of field at f/16: infinity to 0.4 m. Very strange lens hood in accordance with the field angle it allows TTL metering at full aperture and reflex viewing! The other new MC Auto Rokkor lenses are the: f/2.5 28 mm, f/1.8 35 mm, f/1.2 58 mm, f/1.7 85 mm, f/2.5 100 mm and f/4.5 300 mm.



The **Minolta SRT 101** is a single lens reflex camera with instant-return mirror, indication of the actual speed in the viewfinder, TTL cells of the CLC type located on the pentaprism, semiautomatic metering by tracking pointer and total integration of the viewing surface whether the aperture remains completely open or is closed.



The cadmium sulphide cells (CdS) have a particular location. They stand on two prisms acting as light channels. One is connected with the front side of the pentaprism, the other with the rear side. This design enables the Minolta engineers to achieve a special type of light integration, which they call CLC (Contrast Light Compensation). Each cell meters on half of the area of the focusing screen, and it is the average of these two measurements, computed by the galvanometer, which determines the exposure time. Thus, if one of the two areas contains elements being either very bright or very dark, the metering system insures an automatic compensation. This is therefore a viewing field total integration of a special type. The area is metered in a fairly even fashion. This cell layout screens the sensors well away from any parisitic light entering through the eyepiece.

This metering correction is particularly efficient when shooting at horizontal landscapes, in which the sky occupies a great extent of the picture (for vertical shooting of the same subject, make a horizontal metering—the virtual dividing axis of the viewing glass is parallel to the long side of the picture—then view vertically and shoot).

The power is supplied by a Mercury battery of the MALLORY PX 13 type (or RM 625 type for cold weather) to be found in a container located on the right side of the bottom. The grooved top lid can be unscrewed by thumb action. A sketch of the battery positioning is indicated on the lid. Just a

reminder that Mercury batteries, due to their shape, cannot be mounted in a wrong position. The cell switch, on the right side of the bottom, has three positions: OFF (cells off)-ON (cells in operation)-BC (Battery Check). It can be actuated by thumb pressure and rotation. When the red mark is lined up with BC, the meter needle in the viewfinder reaches a rectangular mark if the battery is good. If the meter needle remains above the mark, the battery must be changed. Its useful lifetime is 14 to 18 months. When the camera is not in use, the switch should be OFF, and if the camera is stored, then the battery should be removed. As on all TTLs, this camera does not have a zeroing of the exposure meter.

The back opens at 180 degrees by pulling the rewind knob. Turn the take-up spool if possible in the direction indicated by the arrow (the single arrow is not always visible). Introduce the film leader in the slot, which can take up to 4 perforations. Locate the film on the sprocket, by turning the take-up spool slightly if necessary. The film winds with the emulsion on the outside. Drop the cartridge in its recess on the left, and push the rewind knob in. The instructions advise to cock until the two rows of the film perforations have reached the take-up spool, with possibly one shutter release in order to wind up to that point. Close the back by simple pressure. The counter, visible through the top right window, has an automatic return to the S (start) position marked in red, whenever the back is opened.

Cock once. Release. Cock once more, and the counter reaches the 1 white mark, indicating the first picture to take. The counter will then advance one step at each cocking. The cocking action has no particular tell-tale; only the blocked lever tells it.

To monitor the film transport, stress the film by a gentle winding of the rewind knob until it stops. It will then turn anticlockwise at each cocking.

The film advance lever is operated by the right thumb. It is easy to grasp, even when lies on the case. It has a first 20 degrees dead sector, followed by a 155 degrees actual cocking stroke. This is a low friction device, the cocking movement by itself being rather hard but quiet. The displacement imposes a change of hand position on the case if cocking is to be achieved in a single stroke. One can also cock in several smaller strokes. But the action must ultimately be completed, because the internal release lock stays on until the last millimeter of stroke. The numbers 20 and 36 are marked in red on the counter. Beyond 36 frames the counter will not go further than the 37 mark and slips.

The release button is on the axis of the cocking lever and falls naturally under the right forefinger; its stroke is short and smooth. The shutter noise is relatively loud as on most reflex cameras with instant return mirror. This button is threaded for fitting a cable release.

When the complete film is exposed, push on the film rewind button imbedded on the right side of the case bottom. This button stays in after being pushed, and will only spring back at the next cocking action. Sometimes when the cocking lever stopped halfway in its stroke, the button does not engage. Keep pressing on it, complete the cocking stroke—(do not release)—and push the film rewind button which will then remain engaged.

Unfold the crank and wind it in the indicated arrow sense. Lift the knob open the back, take the cartridge out, and if necessary blow away the film bits that could have been torn at the end of the rewind action by the take-up spool catch.

The textile focal plane shutter provides 11 shutter speeds according to the standard progression from 1/1000 to 1 second, and B exposure. There is no intermediate speed. The shutter speed dial, on the top of the camera, does not turn during release. A stop between the 1/1000 and B positions cramps its continuous rotation during speed selection. The selected speed appears between two marks at the bottom of the viewfinder, below the picture on a scale.

The reminder disc for the type of film in use, only indicating the sensitivity, is to be found on the back of the camera. It is also useful to convert DIN (9 to 36 engraved red) into ASA (6 to 6400 engraved white). The film ASA sensitivity is set in the window of the shutter speed dial, after lifting and rotating its outer ring. One views the subject, the cell switch being ON, and one obtains the alignment of the meter needle with the tracking needle by rotation of the shutter speed dial or of the diaphragm ring (their movements are cross coupled). If the meter needle touches the upper edge of the circle of the tracking needle, then one underexposes by 1/2 an f stop; on the lower edge, one overexposes by 1/2 an f stop.

At 100 ASA the cell covers exposure values of 4 to 18. There is full cross linkage from 50 to 800 ASA and this covers 15 exposure values. The linkage gets



limited for extreme sensitivity settings: at 6 ASA, its range goes from 1 second to 1/125, and at 6400 ASA from 1/8 to 1/1000. The meter needle is always free, it reaches a well defined position at all times, and remains steady for all sensitivities from low to high. The meter needle looks less free when the camera is set for very high sensitivities. The metering takes place only at full aperture with the MC Rokkor Lenses (MC = Meter Coupled) designed for the Minolta SRT 101. With the Auto-Rokkors designed for the SR1, SR3 and SR7 bodies, the metering takes place at stopped down aperture. After having cocked, one pushes the large piston located under the lens mount and one operates either the diaphragm ring or the shutter speed dial, or both, in order to align the tracking needle with the meter needle; another push on the piston reopens the diaphragm, or one releases directly. If the diaphragm has been reopened, it closes down upon release to the preselected value like with the MC lenses.

With the manual preselection lenses, one focuses at full opening, then one dials a speed, one aligns the tracking needle with meter needle by rotating the diaphragm ring, and one releases (no use is made of the piston).

The two triangular marks on the right side of the focusing screen near the cell pointer indicate the limits of the speed/ opening cross linkage.

The viewed image is erected by a fixed pentaprism. This image is almost life-size with the 58 mm lens. The whole field is not totally visible for people wearing glasses (they may wear eyepiece correcting lenses) and there are a few lateral reflections; but it is clear and aberration free.

The focusing screen is very elaborate. Its centre part is a microprism spot, usable up to f/5.6, and surrounded by a ground glass colar without Fresnel lens; finally the remaining area is mat with a Fresnel pattern backing of hardly visible pitch.

The lenses are interchangeable through a large diameter well designed Minolta bayonet mount. To remove the lens push down the grooved knob on the upper left of the body front and rotate the lens 50 degrees to the left. Present a new lens with its red mark facing the elegant red mark on the body, and turn it to the right until it locks.

The standard lens is the MC Rokkor PF f/1.4 of 58 mm focal length, with 6 elements in 5 groups. It carries on its front a distance scale, white in meters from infinity

to 0.6 m, and green in feet from infinity to 2 feet. The setting is smooth and extends over 180 degrees. In the middle, a depth of field scale has an "R" mark for infrared photography. The aperture ring is at the back of the lens and covers a range of 1.4 to 16 by half click-stops over 45 degrees of displacement, which is adequate for a TTL setting (one may use the intermediate stops if necessary). The diaphragm preselection plunger, protruding out of the lens, is very vulnerable when no back cap is in place. The diaphragm can only be manually set when the camera is cocked and one has depressed the above-mentioned piston. The shutter can be released with depressed piston or open diaphragm: in both cases, after release, the diaphragm reopens and the piston springs back.

The **Minolta SRT 101** will be available with other standard lenses, an f/1.7 of 55 mm, with 6 elements in 5 groups, or an f/1.2 of 58 mm with 7 elements in 5 groups.

One can mention as **MC Rokkor** interchangeable automatic diaphragm lenses: the f/3.5 28 mm and f/2.8 35 mm wideangles, the f/3.5 and f/2 100 mm, f/2.8 135 mm, and f/3.5 200 mm telephoto lenses. All lenses can take slip-on lens hoods, except the 200 mm which has one built-in. Filters are of the screw-in type.

Thirty-two lenses for measuring at stopped down aperture are foreseen. In particular one can mention: an f/9.5 18 mm very wideangle, an f/6.3 1 000 mm very long telephoto; f/3.5 50 to 100 mm and 80 to 160 mm, f/5,6 100 to 200 mm and f/8 160 to 500 mm zooms; a photomacrography f/3.5 50 mm lens with direct focusing down to 23 cm; and a bellows lens of 135 mm f/4.

The camera has a self-timer. Its lever is on the right front side. It gives a retardation of 8 to 11 seconds depending on the amount of arming (do not use on setting B, or the exposure will last 2 seconds). A special button gives the retarded release, and is covered at rest by this lever. This type of release can be armed before or after the shutter cocking, and when armed but no more desired, one just has to release normally. The retarder must then remain armed, because if one releases it then, it will only unwind to an intermediate position where it locks the main release button. One should rather fully rearm the retarder, cock the shutter and execute a retarded release. If one has left the retarder armed, one merely pushes the secondary release whenever one needs it.

The mirror can be locked in its high

position (to avoid vibrations, when using the 21 mm lens...) by turning 135 degrees down and clockwise the knob situated on the right of the lens mount (the exposure meter does not work any more). In doing so one becomes aware of 2 important features of the Minolta SRT 101: a/the mirror moves up and back very slightly at the beginning of its stroke before pivoting. This enables the manufacturer to use a large mirror and to keep vibrations down through a mechanical linkage which is more complex than average. b/Vibrations are further reduced by braking at the end of the mirror stroke through a retractable flap moving up. This flap serves a second purpose: when viewing it masks part of the light beam coming from the lens, thus equalizing the area of the two metering fields of the cells.

The shutter is synchronised as follows: at terminal X, from 1 second to 1/60 for electronic flash, from 1 second to 1/30 for F flash bulbs, from 1 second to 1/15 for M flash bulbs; at terminal FP, from 1 second to 1/1000 for FP flash bulbs. The standard 3 mm diameter terminals are located on the side of the lens mount. The flash unit may be fitted to the accessory shoe located on top of the prism housing.

The serial number is engraved on the top of the case, as is the film plane mark. The finish of this modern camera is in mat chrome and black leather casing. Two eyelets can receive a carrying strap. The bottom has a tripod Kodak threaded socket located very close to the center of gravity.

The weight, with the f/1,4 58 mm lens, is 990 grams and the dimensions are 146 mm in length, 100 mm in height, and 93 mm in depth. The camera is delivered with an ever ready semi-rigid black carrying case. The packing is pleasant, in printed beige cardboard, and the instructions manual is very complete and rich in its presentation, with many tables (depth of field — lens caracteristics...). It is complemented by a depth of field booklet (in English units) and by an accessory and lens catalogue.

A comprehensive list of accessories exists: lens hoods, filters, screw type extension tubes set, bellows with one or two runners, slide copying adapter, microscope attachment, reproduction stand,  $\times 2.5$ viewing magnifier, eyepiece correction lenses from — 4 to + 3 diopters, close up lenses 1 and 2, panorama head, rightangle viewfinder, adaptors for Praktica and Exakta lenses (allowing focusing over the whole of their range) and Leica screw-in

# Linear enlargements $\times 10$ approximately. MC ROKKOR PF 58 mm f/1.4 - No. 5083323



Center

8

MC TELE ROKKOR QF 200 mm f/3.5 - No. 1439303

Edge



Edge

type lens (for photomacrography), oscilloscope adaptor...

The **Minolta SRT 101** is a modern TTL reflex camera with very special features as described: CLC metering, mirror... it is efficient.

#### Camera tested serial number 1234247.

Indicated speeds	Actual speeds
1	1
1/2	1/2
1/4	1/4
1/8	1/7.1
1/15	1/16.1
1/30	1/28.5
1/60	1/58.8
1/125	1/116
1/250	1/250
1/500	1/360
1/1000	1/858

## **BAD FEATURES**

- No cocking signal.
- No zeroing of the exposure meter.
- Take-up spool rotation sens insufficiently marked.
- No tell-tale for film transport.
- Cocking stroke requiring a displacement of the hand on the case.
- Release noise rather loud.
- Shutter speed dial with stopped rotation.
- No specific under- or overexposure mark in the viewfinder.
- Exposure meter linkage limited for extreme sensitivities.
- Focusing screen not entirely visible to glass-wearers.
- Preselection plunger vulnerable when back cap off.
- Self timer difficult to disarm (see text) but can stay armed if not used.
- Occasional film bits torn away at the end of rewind.
- No tell-tale disc for the type of film in use.
- Film rewind button not always catching (see text).

## GOOD FEATURES

- TTL cell of the CLC type with integration at full aperture opening and setting by tracking needle.
- Quick return mirror, and lifted up mirror position.
- Cell power switch, and battery check.
- Depth of field check enabling the use of SR 1, SR 3 and SR 7 camera lenses.
- Possibility to use manual preselection lenses.
- Clear aberration free viewed image.
- Speeds readable under the image on a scale.
- 180 degrees opening of the back, automatic return exposure counter.
- Possible cocking by short strokes, smooth and quiet, 20 degrees away from rest.
- Smooth release button.
- Film rewind button springing back automatically.
- Good lens mount.
- Rewind crank.
- Synchro terminals of standard diameter.
- IR mark, film plane reference, serial number on the body self timer, tripod threaded socket.
- -- Many accessories and handsome presentation.

VM Éditions, 3, place Malesherbes, 75-PARIS (17°). Téléphone : 227-25-44. US Editions published in France by VM Éditions. Abstract from « PHOT'ARGUS ». Copyright © 1969 by VM Éditions (PARIS). Chief Editor : Robert MONNIER.

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Made and Printed in France by : Busson Ltd., PARIS.

Subscription « Phot'Argus test, a full report (R) » in English, 6 issues per year, air mail delivery : 13.75 \$.

Regular Phot'Argus (R) Magazine suscription, 6 issues per year, air mail delivery : 3.95 \$.

Dépôt légal 1969/2°; nº 297 P