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**MINOX** 35 PL

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Modifications reserved Printed in Germany

VIII/83

**Owner's manual**

## Introduction

This detailed instruction manual will help you to make the most of your Minox 35 PL. The most important text sections are printed in **bold type**.

References to parts, controls or camera signals are followed by a numeral in brackets; This is the number of that part in the annotated illustrations on pages 4 and 5.

Most handling steps work without a film in the camera. So get familiar with your camera by trying it out before actually taking pictures.

Many operations of the Minox 35 PL are controlled electronically. The camera therefore only works with a battery.

Despite its small dimensions the Minox 35 PL is a full-frame 24 x 36 mm miniature camera and takes any standard 35 mm (No. 135) cartridge.

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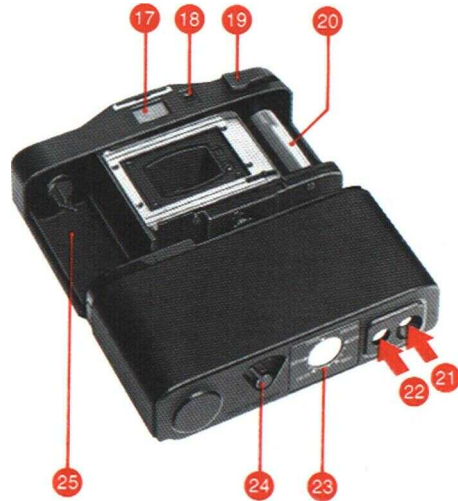
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- 13 Distance scale
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- 15 CdS cell
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- 17 Viewfinder eyepiece
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- 20 Take-up spool
- 21 Rewind release
- 22 Tripod bush
- 23 Film speed scale
- 24 Back cover lock
- 25 Film chamber



## The battery

Certain functions of the Minox 35 PL, such as the shutter and automatic exposure settings, are controlled electronically. The camera therefore only works with a battery. It requires a 5.6 volt mercury oxide battery, for instance:

Duracell PX 27

Varta V 27 PX

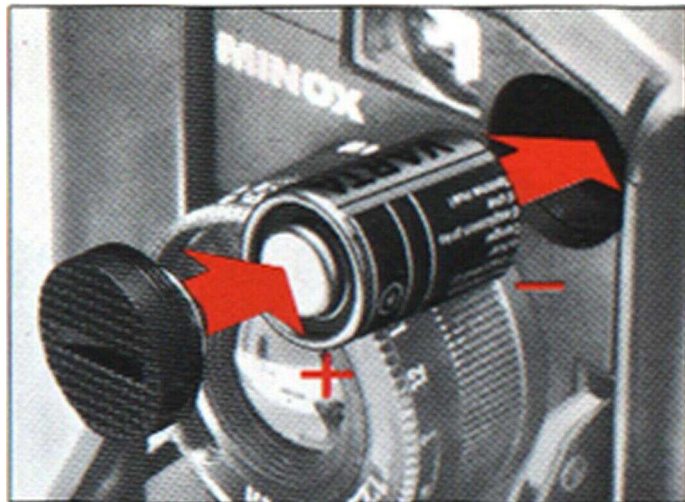
or equivalents.

## Inserting the battery

Open the front cover (16).

Unscrew the battery compartment cover (11) anticlockwise, with a coin if necessary.

Insert the battery so that the + end faces the inside of the compartment cover, also marked with a + sign.



Replace the cover and screw tight again.

A click on pressing the release does *not necessarily* indicate correct operation of the electronic shutter. So check the battery.

## Battery check

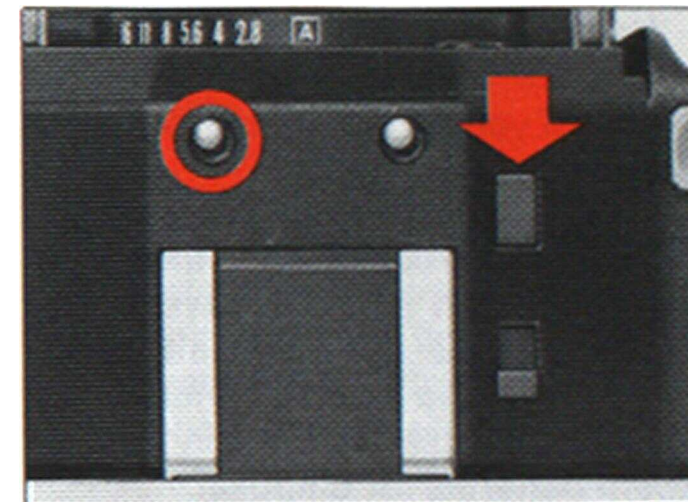
Open the front cover (16), fully advance the film transport lever (19) - see page 12 - and check as follows:

Fully depress the small rectangular battery check button (3) between the hot shoe and the green release button. If the left-hand green LED (7) in front of the hot shoe lights up, the battery is OK.

If the green LED (7) fails to light the battery is exhausted or was inserted the wrong way around.

If the green LED (7) goes dim within 2-3 seconds, the battery is nearly exhausted - so replace it as soon as possible.

The battery check does not indicate how much longer the battery will last. To be on the safe side, replace the bat-



tery once a year by a new one, even if the battery check is still positive.

Apparent early failure of the battery may in fact be due to a poor contact. Remove the battery from the camera, firmly rub down both contact faces with a rough cloth and replace.

Never keep spent or too old batteries in the camera. Also remove the battery if you do not expect to use the camera for some time.

Note: The battery used here contains mercury compounds that could pose a health risk. So never throw used batteries on a fire; also keep them out of the reach of small children. Photo dealers usually accept spent batteries for disposal.

## Opening and closing the camera

**To prepare the Minox 35 PL for shooting, fully pull down the front cover (16). After shooting push the cover up again against the camera body.**

Opening the front cover automatically extends the lens (14), closing the cover retracts it.

The closed cover also covers the viewfinder, blocks the release and switches off all electric circuits.

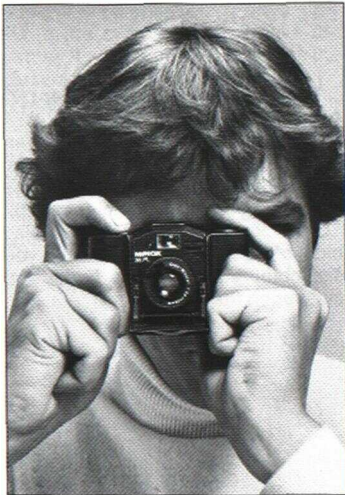
With the camera closed you can still advance the film (page 12) or rewind an exposed film (page 24).

## The viewfinder

**The bright frame in the finder (17) outlines the field of view.**

In certain light conditions a red signal appears in the finder below the bright frame at the right. This is the slow-speed warning signal (page 16).

The closed front cover (16) also blocks the finder view. So when you see nothing through the finder you must open the cover.



## Holding it right

The picture at the left shows a convenient camera hold for horizontal shots, the illustration opposite a suitable hold for upright views.

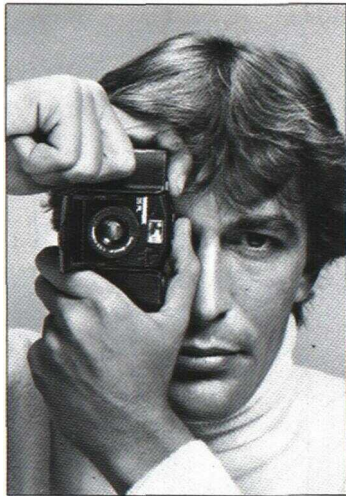
To minimise the risk of camera shake hold your 35 PL steady while you shoot

Keep your fingers clear of the lens (14) and of the CdS cell (15). Preferably press your fingers flat against the front of the camera body.

## Releasing

Once you have framed the view you want in the bright-line finder frame, gently depress the green release button (2). That triggers the shutter to take the picture.

On pressing the release, the self-timer LED (9) briefly lights up on the camera front. During the exposure the red slow speed warning LED lights up on the camera top (6) and in the finder at the bottom right. This red signal remains lit until the shutter closes - a useful indication during long time exposures with the camera mounted on a tripod.





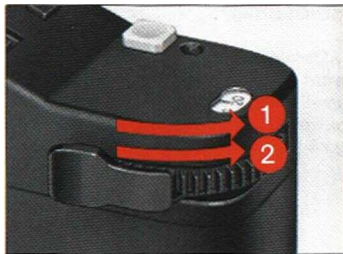
## Advancing the film

Pull the film transport lever (19) - at the top right of the camera back - fully out to the right and forward. Repeat this.

If you failed to pull the lever fully forward either time, pull once more.

If you have loaded the film and it is advancing correctly, the knob with the rewind crank (8) at the top left of the camera also rotates as you operate the transport lever. So do not obstruct this knob as you wind.

A light dot on the rewind crank (8) shows up this movement.



When the whole film is exposed, the transport lever no longer swings out fully and the release is blocked.

You can advance the film with the front cover open or closed.

## The frame counter

The frame counter (1) - the white window at the far right of the camera top - tells you how many pictures you have taken on the film.

The frame counter returns to its start position when you remove the camera back to change the film (see page 24) or as soon as you then press the release (2).

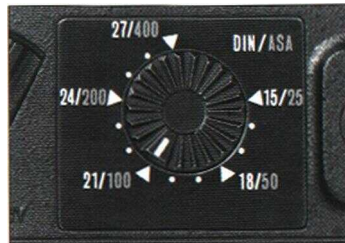


## Setting the film speed

Every film package carries an ASA speed rating (and often DIN).

To set the automatic exposure program of the 35 PL for the film speed, turn the dial (23) in the camera base to the appropriate ASA (or DIN) rating of the film.

The dial engages at every speed setting. The unmarked dots between



the arrowheads indicate intermediate speeds, for instance 64 and 80 ASA between 50 and 100 ASA.

ASA speed figures are marked in red, DIN figures in green.

If you have set too high a film speed, your pictures will be underexposed; too low a speed setting yields overexposed shots.

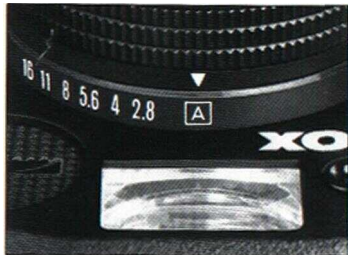
## Daylight exposures

### Program automation

For all shots without flash set the white arrowhead on the lens mount (12) to A (automatic control).

At this A setting the camera automatically selects a correct aperture and shutter speed combination for the subject brightness and film speed.

The f-stops, for instance 2.8 - 4 - 5.6 etc. on the aperture ring (12) are only used for flash shots (page 18). If you accidentally set the ring to an aperture figure instead of to A, daylight and other shots without flash - e.g. bright interiors lit by artificial light - may be wrongly exposed.



The electronic program of the Minox 35 PL yields aperture/speed combinations from f/16 to f/2.8 and from 1/500 to 4 seconds at 100 ASA (up to 15 seconds at 25 ASA or up to 1 second at 400 ASA).

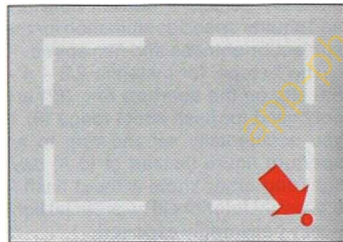
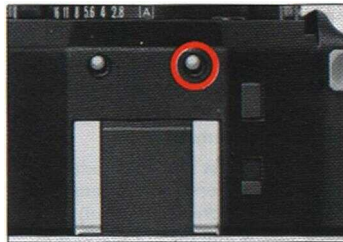


### The slow-speed warning

If the camera is ready to shoot (front cover open, film advanced) at an exposure time longer than about 1/30 second, a red flashing signal warns of likely camera shake with hand-held shots.

The red signal flashes clearly on top of the camera (6) and also in the finder (at the bottom right). There it appears weaker to avoid glare in the finder image.

The automatic control of the Minox 35 PL can also generate exposures much longer than 1/30 second. The red flashing signal is thus *not an* underexposure warning but only a recommendation to use a flash unit (pages 27 to 29) when photographing moving subjects (e.g. people) indoors. Or - for static subjects - mount the camera on a tripod (page 32).



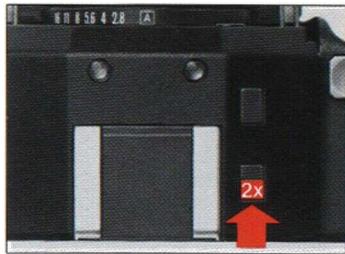
The slow-speed warning uses battery power. So close the front cover when you put away your Minox 35 PL.

### The backlight switch

If you push the backlight switch (4) - the small rectangular button next to the hot shoe - fully forward, this automatically doubles the exposure.

A red window with 2x in white reminds you that you have switched on the backlight switch.

Apart from lightening shadows in backlit subjects, use the backlight switch also for outdoor views where predominant snow or a bright sky area could cause the meter to set insufficient exposure.



## Flash exposures

The hot shoe of the Minox 35 PL takes any electronic flash unit with a centre contact in the foot - as well as the Minox TC 35 and FC 35 computer flash units which are specially matched to the Minox 35.

**Push the black blanking plate out of the hot shoe towards the rear. Fully push the foot of the flash unit into the shoe.**

This disengages the automatic exposure control of the Minox 35 PL and sets a fixed shutter speed of 1/90 second.

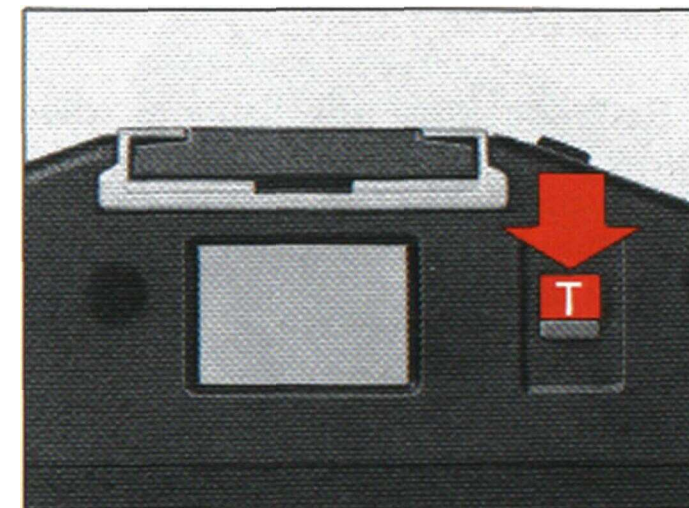
**Do not take flash shots with the aperture ring (12) set to A (automatic). For flash shots select one of the marked apertures between f/2.8 and f/16 (including intermediate values)**



**- check the instructions of the flash used.**

With some electronic flash units (not with the special Minox flashes) you must operate the film transport of the 35 PL immediately after every flash shot. For unless the shutter is tensioned, such flash units either fail to give a ready signal for the next flash or (more

rarely) may automatically trigger the next flash after recycling. (This is not a fault but a feature of the electronic circuit.)



## The selftimer

**Push down the small sliding switch (18) at the right of the finder eyepiece to uncover a red window with T (timer) in white. This delays the shutter release by about 12 seconds after you have pressed the green release button (or released with a cable release).**

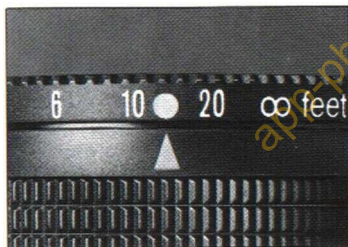
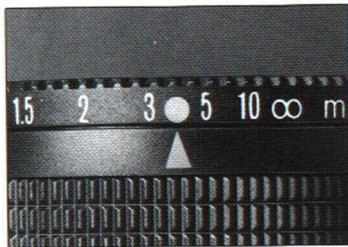
A red flashing LED on the camera front (9) signals that the selftimer is running but the exposure has not yet started. The flashing rate doubles after 4 seconds and again after 8 seconds of the delay period.

## The distance setting

Estimate the approximate distance to the main subject and set this on the distance scale (13). In view of the considerable depth of field of the 35 mm lens a really accurate setting is only necessary at near distances of around 3 to 4 ft or 0.9 to 1 m.

For a useful snapshot zone set the scale to the green dot between 10 and 20 ft or between 3 and 5 m; in good light this then covers everything from about 6 to 60 ft or 2 to 20m.

For landscapes without near foreground set the scale to  $\infty$  (infinity).



## Loading the film

Never load the camera in direct sunlight—at least do it in the shade of your body.

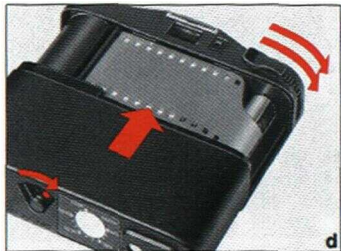
Turn the back cover locking lever (24) in the camera base to uncover the recessed red dot, then pull off the back from below (illustration a).



Insert the film cartridge in the film chamber (25) to the left of the film track, with the film leader pointing to the right

Turn the take-up spool (20) with the right thumb to bring the broad slot of the spool core to the top.

Now press the rewind release (21) at the right in the camera base to lock



the take-up spool. Push the film leader underneath the metal sleeve as far as it will go (illustration b), then let go of the rewind release button.

Open the camera's front cover so that you can operate the release button.

Alternately advance the film and release until:

- The full film width is drawn with both perforation rows across the film track and lies flat against it (arrow in illustration c); and
- One tooth of the sprocket wheel (at the right below the film gate) engages a perforation hole of the film (circled in illustration c).

Replace the camera back by pushing it on and lock by turning the back lock in the camera base to cover the red dot again (illustration d).

Advance the film, release the shutter, advance once more. Check that the rewind crank (8) at the left in the camera top rotates - watch the light dot. The frame counter (1) is now at 0.

Set the film speed on the scale in the camera base (page 13).

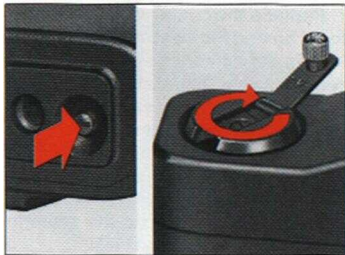
During shooting you can still check that the film is advancing correctly: Whenever you work the film transport lever, the rewind crank with the light dot must rotate, too.



## Unloading the film

After the last exposure (No. 36, 24, 20 or 12 on the frame counter, depending on the film length) you must rewind the film into its cartridge:

Unfold the rewind crank end with the light dot (8, in the camera top at the left), press the rewind release button (21, in the recess in the camera base at the right) and let go. Rewind the film by turning the rewind crank clockwise.



The film is fully rewound when the crank starts turning more freely.

After rewinding remove the camera back and withdraw the cartridge from the camera.

If the frame counter (1) does not return to its start position on removing the back, release the shutter once.

However the frame counter automatically resets itself during loading at the latest when you have pushed the film end into the take-up spool and advanced the film and released the shutter before closing the back (see page 22).

## Care of the camera

Periodically clean the front lens element, the outer finder window surfaces and the curved window in front of the CdS cell. Remove any dust with a soft brush, air blower or special lens cleaning tissue - these are obtainable from photo dealers. Do not use lens cleaning fluids.

Immediately remove fingerprints from the front lens; such marks greatly reduce definition.

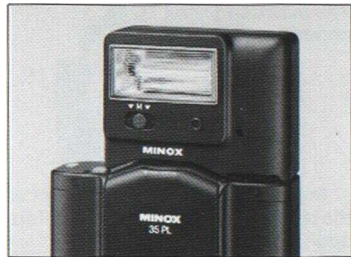
When changing film, check that the back of the lens and the camera interior are also clean and dust-free.

### The matched Minox FC 35 computer flash

The Minox FC 35 electronic flash is the smaller of the two computer flashes designed for the Minox 35 cameras. It is 3 x 5.5 x 7.5 cm (1.2 x 2.2 x 3 in.) large and weighs 130 g (4.6 oz). The metric guide No. for 100 ASA is 18 (59 in feet).

You have two aperture options with two working ranges of the computer control: At the "green" setting the flash covers subjects up to 4.5 m or 15 ft. At the red setting the limit is 3.2 m (10 ft) but the depth of field is greater, for at any given film speed you use one stop smaller than with the green setting.

If you switch off the automatic control of the PC 35 you can cover greater



distances with high-speed films, e.g. up to 13 m or 40 ft with 400 ASA.

Recycling time: Approx. 10 seconds. Batteries: 2 size AAA alkaline manganese cells. Capacity approx. 60 to 80 flashes per battery set. (All data based on DIN 19011 specifications.)



## The matched Minox TC 35 computer flash

The TC 35 is the more powerful of the two Minox 35 flash units and offers additional features.

The guide No. (in accordance with DIN 19011) is 26 (m) or 95 (ft) at 100 ASA. Three aperture options with ranges up to 9, 6.5 and 3.25 m (30, 21 and 10½ ft). LEDs on a scale show available ranges and working apertures; in manual mode (range with 400 ASA up to about 18 m or 60 ft) this serves as an aperture calculator.

In computer (automatic flash duration control) mode, and especially at

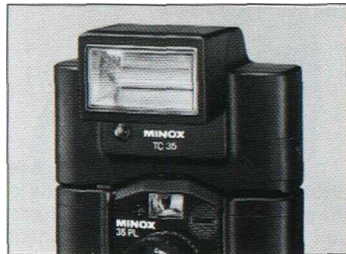
near to medium distances, the thyristor series circuit provides fast recycling (1 to 10 seconds) and a high capacity (about 80 to 500 flashes) per battery set of 4 size AAA alkaline manganese cells. An economy circuit automatically switches off the unit when not in use for longer periods, so saving batteries.

A test button and green LED provide a battery check.

For bounce flashing the flash reflector tilts up to 90° in 15° steps. On triggering a test flash, a built-in auto

check control shows by a green or red signal whether the flash power is sufficient for the subject in question.

For storage in its leather case or for carrying in a jacket pocket swing the reflector up; the unit is then no thicker than the camera. It is 10 cm (3.9 in.) wide, 6.5 cm (2.6 in.) high with the reflector pointing forward or 9.1 cm (3.6 in.) tilted up through 90°. It weighs 188 g (6.6 oz) with batteries.

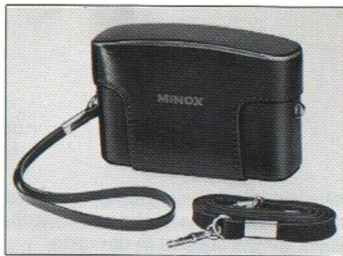


### The ever-ready case

The black leather ever-ready case of the Minox 35 PL is closely tailored to the camera so that it is no bigger than a soft zip pouch. But you can shoot much faster with it.

An eyelet at the left and right of the ever-ready case takes the wrist strap supplied; fit it at whichever side you find more convenient for handling. The 90 cm (3ft) neckstrap – an optional extra accessory - attaches to both eyelets for carrying the camera round the neck.

You can remove the top of the ever-ready case altogether. If you carry the

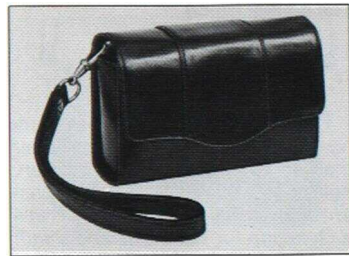


Minox 35 PL slung around your neck in the bottom section of the case, with the camera front open and the filter and lens hood in place, you can walk around and be instantly ready to shoot (see illustration page 33).

### The belt and wrist pouch

This smart elegant case is a piece of luxury leather work in top-quality soft burgundy red Naskapi leather. It is totally unlike any ever-ready case: It ideally matches smart leisure wear and you can carry it either slung around your wrist or fixed to your belt (up to 4 cm or 1 ½ in. wide). When used as a belt case, remove the leather wrist strap with its brass snap hook.

For shooting you remove the Minox 35 PL from the case. The sides are ingeniously tailored so that the closed case fits snugly around the Minox, yet you can get into the open case with the fingers to grip the camera easily and securely from both sides.

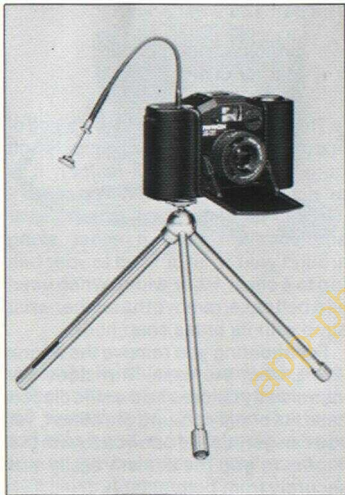


## The pocket tripod

The Minox pocket tripod is a very handy camera stand - not much larger than a pencil when closed but very rigid as a table and wall support - even on rough surfaces. It can also serve as a chestpod for horizontal shots with the Minox 35 PL. The Minox pocket tripod includes a cable release - indispensable for tripod shots.

Screw the tripod screw into the bush in the camera base. Do not screw the camera too tightly onto the tripod but tighten instead the large milled plate of the tripod against the camera body.

Screw the cable release into the thread next to the release button.



## Push-on filters with collapsible lens hood and leather case

The Minox 35 PL takes only Minox filters marked either "Minox 35 GT" or "Minox 35 GT/PL/PE". Minox filters not so marked are intended for the older EL and GL models and do not fit the Minox 35 PL.

### *The skylight filter*

This reduces any blue cast liable to arise in colour slides taken by brilliant blue sky light. In daylight the filter also absorbs ultraviolet rays that could - with any film - impair definition.



### *The 4 x neutral density filter*

This reduces the light coming through the lens to one-quarter and is recommended for shots in bright sunlight on high speed film (400 ASA).

## Technical data

*Type:* Minox 35 PL miniature camera.

*Minox code Nos.:*

10.721 with distance scale in metres

10.722 with distance scale in feet

*Picture size:* 24 x 36 mm.

*Film:* Standard 35 mm cartridge (No. 135).

*Lens:* 35 mm Minox Color-Minotar f/2.8, focusing range from infinity to 0.9 m or 3ft. The lens retracts automatically on closing the front cover.

*Automatic exposure control:* Electronic program control (with aperture ring set to A) from 1/500 second at f/16 to 4 seconds at f/2.8 with 100 ASA. Longest reliable time depends on film speed, e.g. 15 seconds with 25 ASA down to 1 second with 400 ASA.

*Slow-speed warning:* With exposure times longer than 1/30 second a red

LED blinks on top of the camera; also visible in the finder via a fibre-optical light guide.

*Backlight switch:* Doubles the exposure.

*Release:* Soft release, blocked if front cover is not fully open.

*Cable release socket:* Next to release button in camera top.

*Selftimer:* Electronic, approx. 12 seconds delay. Red flashing LED on camera front during delay time; flashing frequency increases in three steps.

*Viewfinder:* Bright-frame direct finder with slow speed warning signal.

*Frame counter:* Counts forward, returns to start position on removing camera back and releasing shutter.

*Flash contact:* Hot shoe, X synchronis-

ed, automatic time switching to 1/90 second.

*Tripod bush:* in.

*Battery:* One Varta V 27 PX, Duracell PX 27 or equivalent (5.6 volts).

*Battery check:* Check button, green LED signal.

*Camera body:* Glass fibre-reinforced Makrolon.

*Size:* (Width x height x depth): 10 x 6.1 x 3.1 cm (3.9 x 2.4 x 1.2 in.)

*Weight:* Approx. 190 g without or 200 g with battery (6.7 or 7.1 oz respectively).

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