

MINOX 35 GT



Owner's Manual

Introduction

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

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 GT are controlled electronically. The camera therefore only works with a battery in place.

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

Annotated camera views:

Front view 4

Rear view 5

Handling the camera:

The battery 6

Inserting the battery 6

Battery check 7

Opening and closing the camera 9

The viewfinder 9

Holding it right 10

Releasing 11

Advancing the film 12

The frame counter 13

Setting the film speed 13

Automatic exposure control 14

The lens aperture 15

Automatic electronic speeds 16

The shutter speed display 16

The slow-speed warning 18

The overexposure warning 18

The backlight switch 19

The selftimer 20

Distance and depth of field 21

Loading the film 22

Unloading the film 25

Flash shots 26

More about automatic exposure control 27

Accessories

The matched Minox FC 35 computer flash 29

The ever-ready case 30

The belt and wrist pouch 31

The Skylight filter 32

The natural density filter 32

The pocket tripod 33

Care of the camera 34

Technical data 34

- 1 Frame counter
- 2 Shutter release
- 3 Backlight switch
- 4 Battery check button
- 5 Hot shoe
- 6 Selftimer switch
- 7 Selftimer LED
- 8 Viewfinder
- 9 Film rewind crank
- 10 Battery compartment
- 11 Aperture scale
- 12 Distance scale
- 13 Lens
- 14 CdS cells
- 15 Front cover



- 16 Film chamber
17 Viewfinder eyepiece
18 Film transport lever
19 Take-up spool
20 Rewind release
21 Tripod bush
22 Film speed scale
23 back cover lock



The Battery

Certain functions of the Minox 35 GT, such as the shutter and automatic exposure setting, are controlled electronically. The camera therefore only works with a battery. Use a 5.6 volt mercuric oxide battery, for instance:

Duracell PX 27

Ucar EPX 27

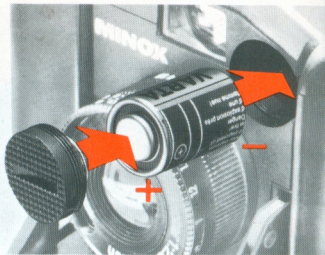
Varta V27 PX

Inserting the battery

Open the front cover.

Unscrew the battery compartment cap – with a coin if necessary – by turning anticlockwise.

Insert the battery so its + end faces the inside of the cap, also marked with a + sign.



Refit the cap and screw tight again.

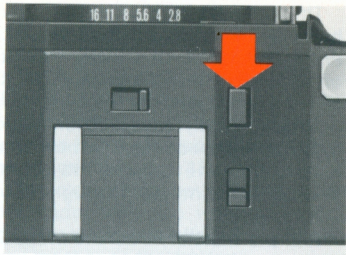
A click on pressing the release does *not necessarily* signify correct operation of the electronic shutter. So check the battery.

Battery check

Open the front cover, fully advance the film (page 12) and switch off the backlight switch (page 19). Check as follows:

Fully depress the small rectangular battery check button (between the hot shoe and the yellow release button). With the check button depressed, the needle along the right hand finder frame edge should swing up to the centre (1/125) or beyond.

Note: If the needle was already above 1/30, it first drops down as you touch the check button and then swings up again for the battery check indication as you fully depress the button.



If the pointer does not reach the "125" mark on pressing the button, the battery is exhausted. If the needle does not move at all, you may have inserted the battery the wrong way round.

The battery check cannot tell you how much longer the battery will last. Preferably replace the battery about once a year, even if the battery check still appears O.K.

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

Remove a battery from the camera as soon as it is spent or too old.

Also remove the battery if you are unlikely to use the camera for prolonged periods.

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

Opening and closing the camera

To get the Minox 35 GT ready to shoot, pull the front cover open and fully down. After shooting push the cover up again against the camera body.

Opening the front cover automatically extends the lens, closing the cover retracts it. So there is no lens cap liable to go astray.

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

Even with the camera closed you can still advance the film (page 12) or rewind an exposed film (page 25).

You can close the cover irrespective of the position of the distance setting ring.

The viewfinder

The bright frame in the finder outlines the field of view.

At the right-hand edge of the finder you see the shutter speed scale and meter needle (page 16).

The closed front cover also blocks the finder view. So when you see nothing through the finder, you know you must open the cover.



Hold it right

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

To minimize camera shake, hold your 35 GT steady while you shoot.

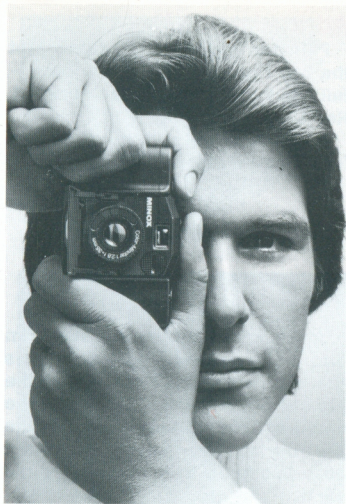
Keep your fingers clear of the lens's view and of the two CdS cells. Preferably press your fingers flat against the front of the camera body.

Releasing

Once you have framed the view you want in the bright-line finder frame, gently depress the yellow release button: That opens the shutter to take the picture.

After an exposure the release remains depressed and only comes up again as you advance the film. That also tells you that you don't have to let go of the button as soon as you have taken the picture – in fact keep it depressed until you are sure the exposure is finished.

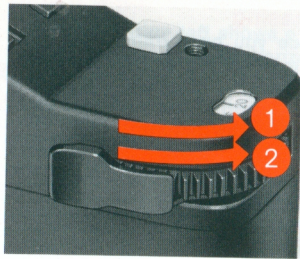
Once you get used to that, you also know from the position of the button whether you have advanced the film.



Advancing the film

Pull the film transport lever – at the top right of the camera back – fully out to the right and forward. Repeat this once more.

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



A check that you have loaded a film and that it is advancing correctly is the fact that the round knob with the rewind crank (at the top left of the camera) also rotates as you operate the film transport lever. So do not stop this knob from moving as you wind.

A light dot on the rewind crank 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 (the white window at the far right of the camera top) tells you how many pictures you have taken on the film.

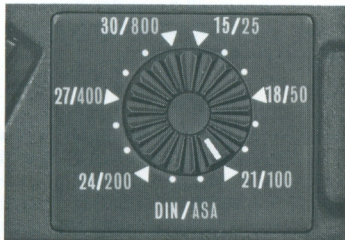
Provided you have not worked the transport lever (even partly) after the last exposure, the frame counter returns to the start when you remove the camera back to change the film (see also page 25).



Setting the film speed

Every film package carries a speed rating in ASA (and possibly DIN).

The exposure control system of the 35 GT must allow for the film speed. So turn the dial in the camera base to the appropriate ASA or DIN value of the film.



The dial engages at every speed setting. The unmarked dots between the arrowheads with speed values indicate intermediate values, for instance 64 and 80 ASA between 50 ASA and 100 ASA.

For clarity all ASA speed figures are marked in red, and DIN figures in green.

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

Automatic exposure control

The electronically controlled shutter of your Minox 35 GT automatically selects the exposure time for any manually preset aperture (aperture priority). An auxiliary CdS meter shows this shutter speed in the finder. With this automatic control you can shoot rapid sequences without resetting the exposure. But you can equally control depth of field or select any shutter speed you want (by the finder display) by adjusting the aperture.

Here is a simple bright-light snapshot setting: Set the aperture ring (the rear milled ring on the lens barrel) to f/5.6 and leave everything else – other than the distance setting (page 21) – to the automatic control. This is fine for quick and convenient shooting, though it does not make full use of the scope of your Minox 35 GT.



The lens aperture

The aperture ring on the lens barrel sets any lens aperture (f-stop) from f/2.8 to f/16.

A high *f-number* (e.g. 11 or 16) is a small lens *opening* or aperture,

a low *f-number* a large *opening*. A higher *f-number* yields a greater depth of field (i.e. deeper sharp subject zone) but also makes the exposure time longer.

Automatic electronic speeds

The electronic shutter of the Minox 35 GT automatically controls the exposure time (shutter speed) during the exposure itself to allow for the subject brightness, film speed setting and preset aperture.

The automatic range of the 35 GT extends from 1/500 second to at least 1 second with an 800 ASA film. In the Minox 35 GT the film speed is electronically entered in the shutter speed control system so that the long-time range of automatic control is correspondingly extended with slower films.

Thus with 25 ASA (15 DIN) films you get automatically correct exposures from 1/500 second to about 30 seconds.

The automatic range for main medium-speed films is:

100 ASA (21 DIN): 1/500 to about 8 seconds

50 ASA (18 DIN): 1/500 to about 16 seconds

You cannot disengage the automatic exposure control of the Minox 35 GT.

The shutter speed display

The electronic shutter establishes the exposure time *during* the exposure itself according to the *then prevailing* light conditions.

However, the Minox 35 GT has a further CdS exposure meter to show you *before the exposure* the time the camera is likely to select at the preset aperture and subject brightness.

The meter of the shutter speed display is switched on when:

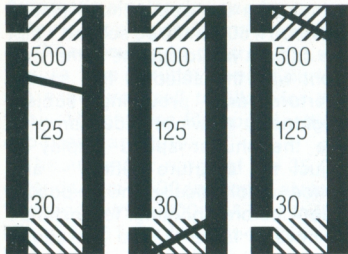
- you open the front cover, and
- you have advanced the film.

The needle thus shows the shutter speed only when the camera is ready to shoot. After an exposure the meter automatically switches off to save battery life.

The meter needle appears as a dark line across the right-hand bright frame as you look through the finder.

It indicates the approximate time – between 1/500 and 1/30 second – that the camera would expose *at that moment* with the selected film speed, aperture and prevailing subject brightness. However, you can also use the shutter speed display to adjust the aperture setting – and hence automatically the exposure time – before shooting, for instance to have a faster speed for sports shots. Look through the finder and observe how turning the aperture ring on the lens barrel also alters the exposure time.

You can estimate intermediate values – e.g. 1/250 second halfway between 1/500 and 1/125, or 1/60 between 1/125 and 1/30.



*Left: Exposure time approx.
1/300 second*

*Centre: Slow-speed warning (needle
in shaded area below 1/30 second)*

*Right: Overexposure warning (needle
in shaded area above 1/500 second)*

The slow-speed warning

When the exposure meter needle drops into the shaded area *below* 1/30 second, the exposure time *at the selected aperture* will be longer than 1/30 second (for instance 1/20, 1/5 or even 3 seconds). With hand-held shots you then risk camera shake. The needle simply reminds you to select a larger aperture if circumstances allow. If they do not, either use flash (pages 26, 29) or expose for longer with a tripod (page 33).

The overexposure warning

When the needle is in the shaded area *above* 1/500 second you risk overexposure even at this shortest exposure time. Here select a smaller lens aperture to bring the shutter speed back to the normal range.

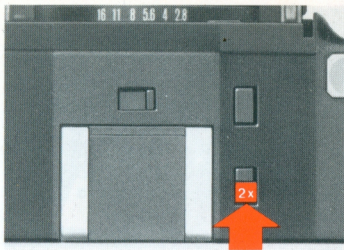
The backlight switch

If you push the backlight switch (the small rectangular button to the right of the hot shoe) fully forward, the automatic exposure times are doubled (e.g. 1/250 instead of 1/500 second).

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

The shutter speed display in the finder shows the increased real exposure time.

Use the backlight switch not just for back-lit subjects (to lighten important shadow detail) but also for outdoor views where a bright sky covers a large part of the picture and would thus cause the meter to set too short an exposure time.

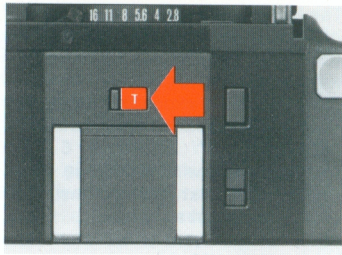


The selftimer

If you push the small sliding switch in front of the hot shoe to the left to uncover a red window with "T" (timer) in white, the shutter release is delayed by about 10 seconds after you have pressed the yellow release button or released with a cable release.

A red flashing LED on the camera front signals that the selftimer is operating, but the exposure has not yet started. The blinking rate doubles each time after the first and second 3 seconds of the delay period.

If you want to use the selftimer with flash, push the sliding switch to "T" before mounting the flash unit, for the latter covers this switch.



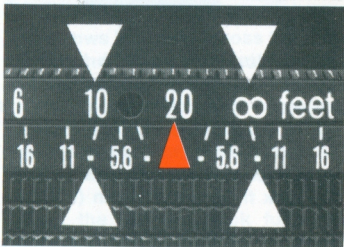
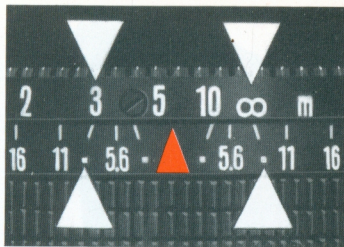
Distance and depth of field

You can focus the Minox 35 GT to any distance between 0.9 m or 3 ft and infinity (∞). To do this, turn the front ring to bring the appropriate distance opposite the red arrow-head index.

The depth of field ring behind the distance scale indicates the available depth of field zone. This sharp zone extends from the left hand mark of the aperture setting in use to the right hand mark of the same aperture.

Dots mark positions for $f/8$ (between 11 and 5.6) and $f/4$ (between 5.6 and the arrowhead focusing index).

Snapshot setting with depth of field from 3 m (above) or 10 ft (below) to infinity at $f/8$.



Loading the film

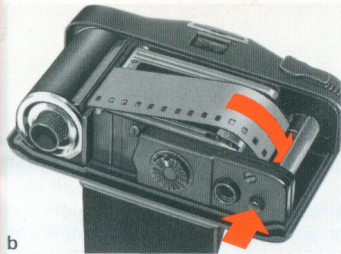
Never load the camera in direct sunlight – at the very least do it in the shade of your body.

Turn the back cover lock lever in the camera base to uncover the red dot in the lever recess, then pull off the back from underneath (illustration a).



Insert the film cartridge in the film chamber to the left of the film track, with the film leader pointing to the right.

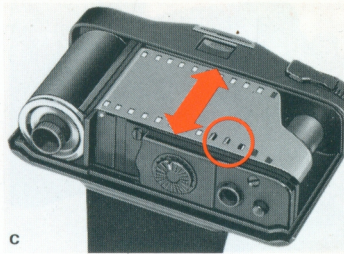
Open the camera front cover to be able to operate the release button. Work the transport lever (pressing the release whenever necessary) to bring the broad open slot of the take-



up spool to the top. Then press the rewind release button (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.

Alternately advance the film and release until

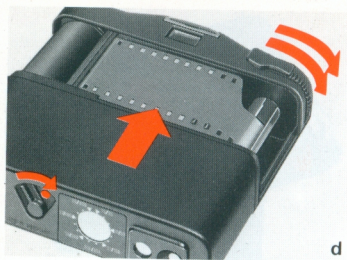
- The full film width with both perfora-



tion rows is drawn across the film track and lies flat against it (arrow in illustration c);

- One sprocket of the sprocket wheel (at the right below the film gate) engages a perforation hole of the film (circled in illustration c).

Push the camera back fully on again and lock by turning the back



lock in the camera base to cover the red dot (illustration d).

Advance the film, release the shutter, advance once more. Check also that the rewind crank at the left in the camera top rotates – watch the light dot.

The frame counter is now at 0. Set the film speed on the scale in the camera base (page 13).

You can also check during shooting, whether the film is advancing correctly as 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, depending on the film length) you have to rewind the film into its cartridge:

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

As soon as the crank suddenly turns more freely, the film is fully rewound.

After rewinding pull off the camera back and withdraw the cartridge from the camera.



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

Flash shots

The hot shoe of the Minox GT takes any electronic flash unit with hot shoe contact – not just the Minox FC 35 computer flash (page 29) which however specially matches the Minox 35 in size, shape and operation.

Push back the black cover plate out of the hot shoe. Push the foot of the flash unit fully into the shoe.

This disengages the automatic exposure control of the Minox 35 GT and sets a fixed shutter speed of 1/125 second.

With some electronic flash units – though not the Minox FC 35 – you have to operate the film transport of the 35 GT immediately after every flash shot. For such flash units may not indicate readiness to fire if the shutter is not tensioned or (more rarely) may trigger a flash immedia-

tely they have recycled. (This is not a fault but a feature of the flash unit's circuit.)

More about automatic exposure control

Amateurs often want extended depth of field and a really fast shutter speed at the same time. Even with the exceptional depth of field of the Minox 35 this is however possible only in very good light and with high-speed film. On most other occasions you achieve fast shutter speeds only at the expense of a large aperture (lower f-number) and hence of reduced depth of field. Conversely, if you increase the depth of field by stopping down (higher f-number) you automatically get a longer exposure time. So you may have to select your priorities:

- a really fast shutter speed,
- maximum depth of field,
- or a compromise between the two.

Even with its automatic exposure

control the Minox GT provides a great deal of choice.

The simplest compromise is the f/5.6 rule: Set the aperture to f/5.6 in good daylight. The shutter speed display in the finder then usually indicates an exposure time short enough for a shake-free hand-held shot. With f/5.6 you get an average depth of field zone as shown on the depth indicator next to the distance scale.

In poorer light (shutter speed needle at 1/30 second or in the slow speed warning field) open the aperture to f/4 or f/2.8. This reduces the exposure time but also the depth of field.

For high speed action (sports etc) you need the fastest possible shutter

speed to avoid movement blur. There set the largest aperture (f/2.8) and check in the finder that the shutter speed is within the range of the electronic control. Stop down only if the meter needle goes into the warning area above 1/500 second, and then stop down only to make the needle go back to 1/500 second. You can set the aperture to any intermediate value.

Where however you need maximum depth of field, turn the focusing ring on the lens barrel so that two matching aperture index lines – e.g. 8 or 11 – cover the required sharp zone. Then set this aperture on the aperture ring.

The finder in that case again shows the shutter speed automatically set by the camera.

Accessories

The matched Minox FC 35 computer flash

The Minox FC 35 electronic flash is specially matched to the Minox 35 camera. It is 7.5 cm wide, 5.5 cm high and 3.0 cm deep (2.95 x 2.17 x 1.18 inches) and weighs 130 g (4.6 oz).

You have two working settings (two apertures): At the "green" setting the flash covers subjects up to 4.5 m or 15 ft. At the "red" setting the limit is down to 3.2 m (10 ft) but the depth of field is greater for the aperture to be used at any film speed is always one stop smaller than with the green setting.

If you switch off the automatic computer control of the FC 35, you can cover greater distances with high-



speed film, for instance up to 13 m or 40 ft with 400 ASA.

Guide No. (DIN 19011): 18 (metres) or 59 (feet) with 100 ASA. Recycling time approx. 10 seconds. Batteries: Two size AAA alkali-manganese cells. Capacity per battery set: approx. 60 to 80 flashes. Flash duration: approx. 1/500 to 1/30,000 second.

The ever-ready case

The black leather ever-ready case of the Minox 35 GT 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 at whichever side you find more convenient for handling. The 90 cm (3 ft) neck cord – this is an optional extra accessory – fits into both eyelets for carrying your camera round the neck.

You can remove the top of the ever-ready case altogether. Thus you can go out ready to shoot with the Minox 35 GT in the bottom section of the case, slung around your neck, with the camera front open and the filter and lens hood in place (see illustration on page 32).



The belt and wrist pouch

This smart elegant case is a piece of luxury leatherwork 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 inches wide). When used as a belt case, remove the leather wrist strap with its brass snap-hook.

For shooting you remove the Minox 35 from the case. The sides are ingeniously tailored so that the closed case fits snugly around the Minox, yet the open case allows you to grip the camera easily from both sides.



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

The Minox 35 GT takes only Minox filters designed for *this* Minox 35 model.

The Skylight filter

This reduces any blue cast liable to arise in colour slides taken by bright blue skylight. The filter also absorbs the ultraviolet component of daylight that could impair definition with *any* film.

The 4x neutral density filter

You need this filter for ultra-speed films (400 ASA or higher) in bright daylight as there 1/500 second at f/16 could still cause overexposure – in other words whenever without the



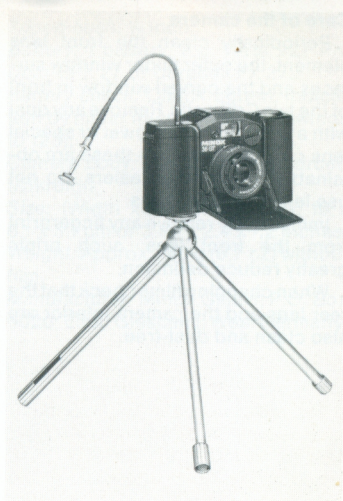
neutral density filter the meter needle goes into the shaded overexposure area above 500 even at f/16.

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 35 GT. The Minox pocket tripod includes a cable release – indispensable for tripod shots.

Screw the tripod screw into the bush underneath the camera. 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 yellow release button in the camera top.



Care of the camera

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

Immediately remove any fingerprint from the front lens; such prints greatly reduce definition.

When changing films check that the rear lens and the camera interior are also clean and dust-free.

Technical data

Type: Minox 35 GT miniature camera.

Picture size: 24 x 36 mm.

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

Lens: 35 mm Minox Color-Minotar f/2.8. Focusing range 0.9 m (3 ft) to infinity. Depth of field scale. The lens retracts automatically on closing the front cover.

Automatic exposure control: Aperture priority (f/2.8 continuous to f/16) with automatic shutter speed control.

Shutter: Electronically controlled automatic shutter, 1/500 second to about 30 seconds at 25 ASA or to about 1 second at 800 ASA. With flash unit in place: Time fixed at about 1/125 second.

Shutter speed display in finder: Meter needle and scale from 1/500 to 1/30 second. Slow-speed warning (times

longer than 1/30 second), overexposure warning (real time shorter than 1/500 second). Indirect shutter speed settings possible.

Backlight switch: Doubles all times set by automatic control in daylight.

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

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

Selftimer: Electronic, approx. 10 seconds delay. Red flashing LED during delay time; flashing frequency increases in three steps.

Viewfinder: Bright-frame direct finder with shutter speed display.

Frame counter: Counts forward, returns to start position on removing camera back if shutter was released.

Flash contact: Hot shoe, X-synchronised, automatically switches time to 1/125 second.

Tripod bush: 1/4 inch.

Battery: 1 battery, e.g. Varta V27 PX, Ucar EPX 27 or Duracell PX 27.

Battery check: Check button, indication by meter needle in finder (swings to 125).

Camera body: Glass fibre reinforced Makrolon.

Size: (Width x height x depth): 10 x 6.1 x 3.1 cm or 3.94 x 2.4 x 1.2 inches.

Weight: Approx. 190 g (6.7 oz) without film.

Manufacturer: Minox GmbH, P.O. Box 6020, 6300 Giessen 1, West Germany.

MINOX

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West Germany