

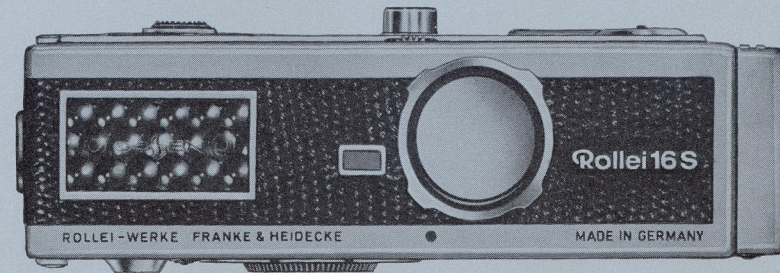
Rollei-Werke  
Franke & Heidecke  
33 Braunschweig

**Rollei**  
Service

13—0011/03—972/00—10  
G & I Br.  
Printed in Germany

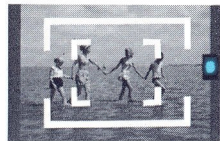
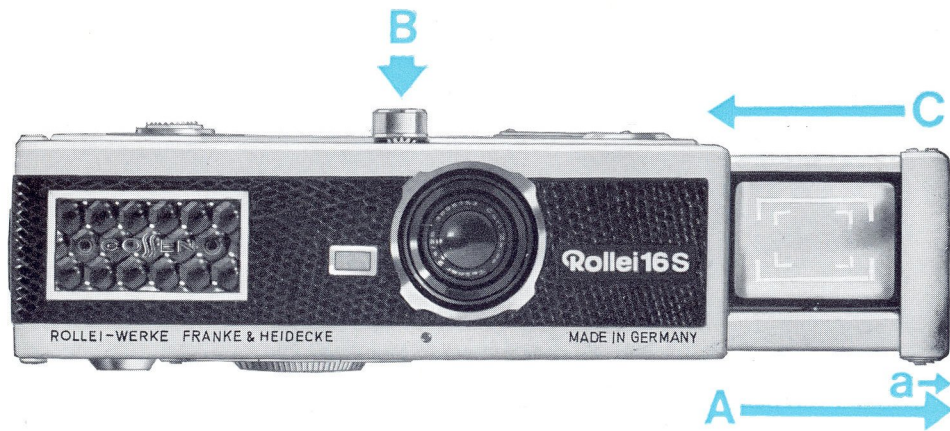
**E**

# Rollei 16 S



in practical use

# Shooting Step by Step



Rollei – a choice for progress

### A. Pull Out the Finder

— while pulling the locking catch (a) in the same direction.

The large brilliant frame in the finder shows the view taken in.

Get the eye close behind the finder. Look straight through. Hold the camera horizontally (watch the skyline).

### B. Shoot

The green finder signal means you are ready to shoot.

Fully depress the release button — firmly but smoothly.

Do not touch the button too soon. The slightest pressure on the button selects the measured exposure value.

### C. Push Back the Finder

— as far as it will go.

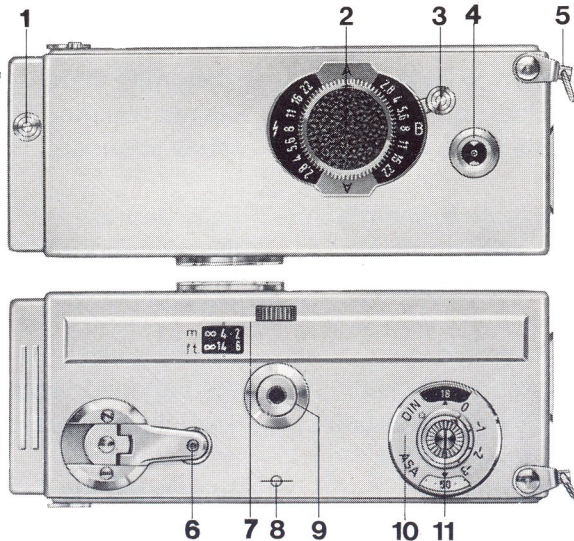
This automatically advances the film and tensions the shutter. On pulling out the finder you are ready to shoot the next picture. You can open and close the finder as often as you like; the film only advances after an exposure.



## Rollei 16 S

Lens: 25 mm. Zeiss Tessar f/2.8; angle of view 45°.  
Focusing range: from ∞ (infinity) to 1.3 feet (40 cm).

- 1 Finder lock
- 2 Exposure setting: automatic, flash, time exposures
- 3 Exposure setting lock
- 4 Exposure counter
- 5 Strap holder
- 6 Rewind crank
- 7 Distance setting
- 8 Film plane (reference point for distance setting)
- 9 Release button with cable release socket
- 10 Film speed setting (ASA-DIN)
- 11 Filter value setting



## Technical data

12 x 17 mm ultra-miniature camera with parallax-compensated  
bright-line view finder  
Standard lens Carl Zeiss  
25 mm Tessar f/2.8  
Supplementary lenses  
Carl Zeiss Wideangle Mutar 0.6 x  
and Tele-Mutar 1.7 x

Automatic exposure control  
from f 2.8/<sup>1</sup>/<sub>30</sub> sec to  
f 22/<sup>1</sup>/<sub>500</sub> sec.  
Dimensions: 1.1 inches high,  
4.3 inches long,  
1.7 inches thick  
Weight: approx. 9.2 ounces

## Care of Your Camera

Your Rollei 16 S will always appreciate careful handling and will repay it with reliable working and perfect pictures. So keep the following points in mind.

Moisture, wind-blown dust, sand and continuous exposure to the sun is bad for any camera. Remember this when storing the camera and when shooting — and especially when you open it to change the film.

Occasionally clean out the inside of the body with a fine brush.

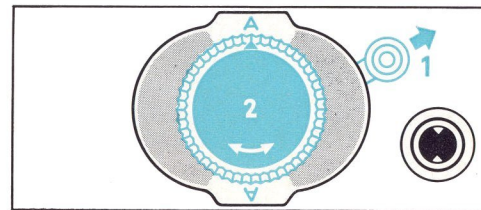
When necessary, clean the optical glass surface with a soft camel hair brush or a piece of chamois leather. In the winter, going from the cold air outside to a warm room may cause condensation on the lens and finder. Preferably wait until this moisture evaporates on its own, without wiping it off.

The Rollei-Werke are as interested as you are in the perfect functioning of your camera and the success of your pictures. So if you ever come across any technical problems:

The world-wide Rollei service is at your disposal wherever you go. Photo dealers and Rollei agencies abroad will always be happy to give you advice and information.

## 1. Set for Automatic Operation

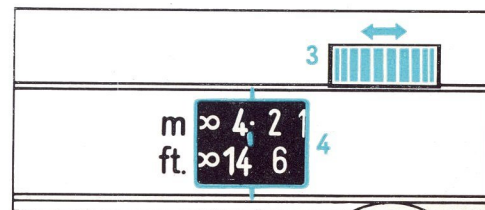
Push the locking catch (1) in the camera base to one side and turn the disc (2) to bring the letter "A" opposite the index mark. A green dot in the finder now indicates that you are ready to shoot. If the green dot does not appear, the light is inadequate for an exposure.



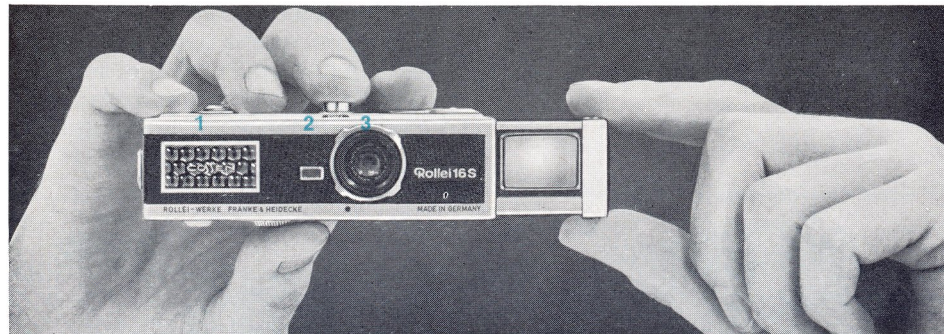
## 2. Set the Distance

Turn the wheel (3) to set the distance in the window (4).

The red index (corresponding to 10 feet or 3 metres) on the distance scale indicates the most useful setting for snapshots. As the depth of field depends on the aperture, this setting yields a zone of sharpness from 5 feet (1.5 metres) to infinity in good light conditions.



The exposure meter window (1), signal window (2) and the lens (3) must not be obscured.



## The Programmed Shutter

The exposure control system is coupled with the special shutter of the Rollei 16 S. It controls the automatic selection of shutter speed and aperture according to the measured exposure value.

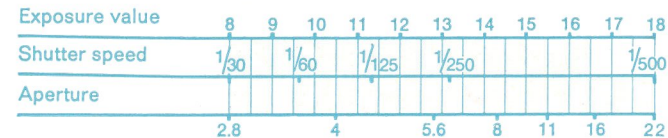
The exposure range starts with  $\frac{1}{30}$  second and aperture f/2.8. Increasing subject brightness is automatically compensated by reducing the exposure time and closing the aperture. The exposure range goes up to  $\frac{1}{500}$  second at f/22.

These settings, corresponding to exposure values from 8 to 18,

take place in the shown steps (vertical intervals). The sub-division of aperture and shutter speed values is closer than with the usual programmed shutter systems (also shown for comparison). Increasing subject brightness therefore quickly leads to fast shutter speeds already at the beginning of the exposure range. This ensures sharp pictures of moving

subjects and reduces the risk of camera shake during the exposure.

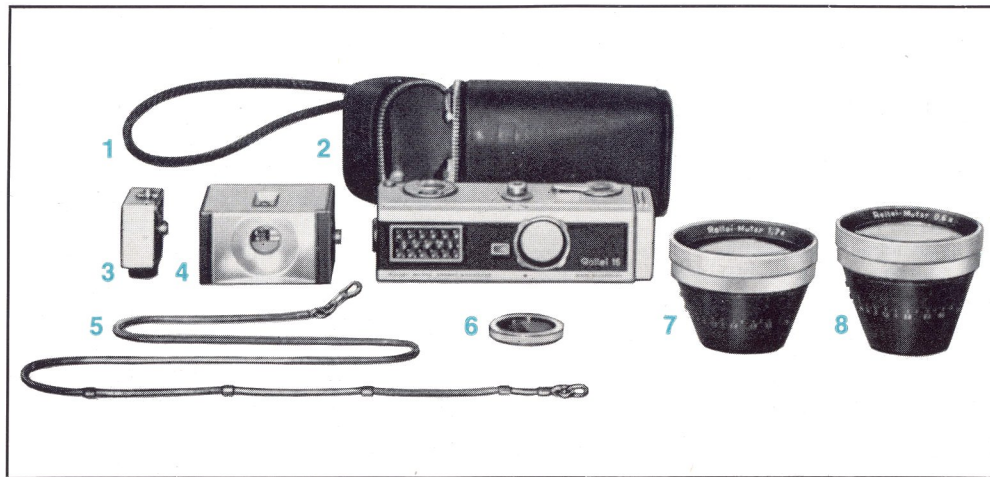
The aperture and shutter speed cannot be controlled independently. The exposure combination used depends purely on the prevailing light. For a 20 ASA (14 DIN) film for instance and summer sunshine the selected exposure value is about 13.



## The Rollei 16 S and its Practical Accessories

- 1 Wrist strap
- 2 Ever-ready case
- 3 Tripod adapter
- 4 Rolleiflash 16 flash gun
- 5 Measuring chain

- 6 Filter
- 7 Tele attachment:  
Rollei-Mutar 1.7 x
- 8 Wide-angle attachment:  
Rollei-Mutar 0.6 x



## How to Hold

Hold the finder with the finger tips of the left hand, without obscuring the open finder frame. The bright-line frame then appears in its full brilliance.

Hold the camera with the right hand like you hold a flute: the second finger presses the release, the thumb is underneath the release button to provide the counter pressure, while the other fingers balance the camera.

In this way you automatically avoid covering the front accidentally. For upright shots turn the camera round without changing your hold.

In both cases press your hand against your head for greater steadiness.

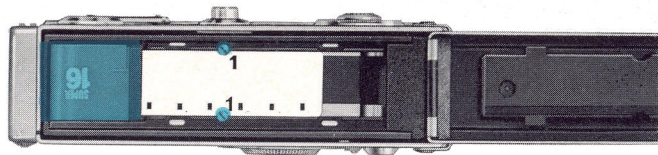
**Now you can carry on.**

**These few steps  
are the whole secret  
of the Rollei 16 S.  
That is all there is to  
automatic picture taking.**

**You only have  
to load the film.  
Please turn over.**

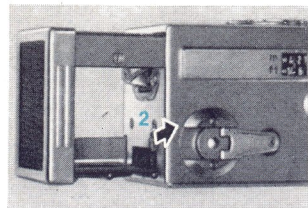


## Loading the Camera



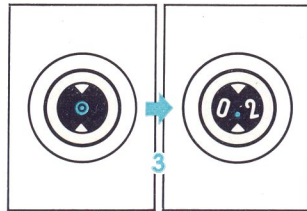
### Inserting the Film

- Open the finder, and pull the locking catch (2) upwards — the back then springs open.
- Insert the cassette and push about  $\frac{3}{4}$  inch of the film underneath the buttons (1).
- Close the back until engagement.



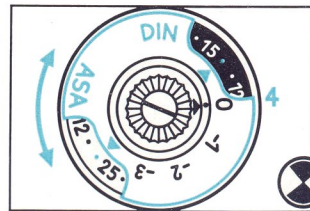
### Advancing to the First Frame

- Set the exposure counter (3) by advancing the film three times:
- Open the finder — fully depress the release button and let go — close the finder Repeat this three times. The counter shows frame No. 1.



### Setting the Film Speed

- The film packing tells you the film speed value in ASA or DIN.
- With the finder closed turn the disc (4) to bring the ASA or DIN rating of the film opposite the index mark. (Keep the red scale at 0 → page 11.)



### Subjects in Colour

Colours come out most luminous in brilliant sunlight. The automatic exposure control is calibrated for this kind of normal illumination. But you can also deal with subjects of great brightness range: go close and point the camera at the main subject area or point it at a surface of similar brightness. Depress the release button only until you begin to feel a resistance, hold the button in this position and get back to your intended camera viewpoint before pressing down fully to take the picture. In this way you get for instance a correctly exposed portrait shot without influencing the reading by an excessively bright or dark background.

### Fun with Colour Slides

Your colour films come back from the processing laboratory as colour transparencies, ready for projection — either in uncut strips or, as requested, framed singly in cardboard mounts. For mounting between glass, Rollei slide frames are available with clear or surface treated (against Newton's rings) cover glasses. In these frames you can project your slides in any normal miniature projector. To ensure screen image sizes up to 43 x 63 inches and maximum image brilliance you only have to change the projection lens and the condenser. Alternative units are available as accessories for most miniature projectors as well as for the automatic Rollei Universal projector (suitable for transparencies from 12x17 mm. to  $2\frac{1}{4} \times 2\frac{1}{4}$  inches).



## Shooting Hints

### Focusing Made Easy

The zone of sharpness in a picture always covers the distance range visible in the scale window. This depth of field facilitates estimation of the subject distance and covers setting errors.

At the normal setting to 14 feet the sharp zone extends from 6 feet to infinity.

As most subjects are at least 6 to 7 feet from the camera, you rarely have to change the setting.

To estimate a near distance of  $3\frac{1}{2}$  feet for portraits, watch the small brilliant frame with the camera held horizontally. The head should just fill the frame.

To measure close-up distances of 16—24 ins. attach the measuring chain to the strap holder and stretch it towards the subject.

### Fast Action Shots

The best way of ensuring sharp pictures of fast movement is to shoot in bright sunshine.

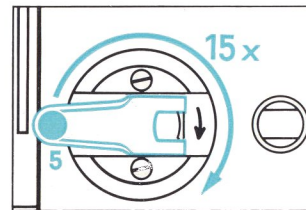
The more brilliant the light, the shorter the automatically selected exposure time.

With very fast movement or subjects in poor light you can also slow down the movement in the picture by a few special tricks:

Keeping some distance away from the subject; Shooting the movement at an oblique angle from the front instead of from the side; With movement across the direction of view, by following the subject in the finder (swinging the camera), while releasing.

Your photo dealer stocks SUPER-16 films for black-and-white and colour shots with your Rollei 16 S.

Avoid loading and unloading the camera in direct sunlight. Turn your back to the sun and handle the film in the shadow of your own body.



## Unloading the Camera

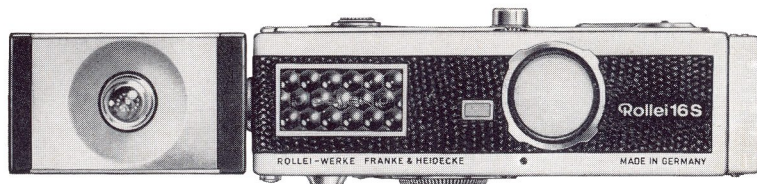
The exposure counter shows when you have reached the last shot. After that pressing the button fails to release the shutter — another sign that the film is finished.

- Open the finder.
- Unfold the crank (5) through  $180^\circ$  and turn it about 15 times in the direction of the arrow. If the crank does not lie down flat at once, start turning while it is still partly standing up until it lies flat under light pressure. The crank now engages the spool core, which rewinds the film in about 15 turns.
- Unlock and open the camera back. Remove the cassette and rewrap in original packing.

On opening the back the exposure counter automatically returns to its starting point.

## Flash Shots

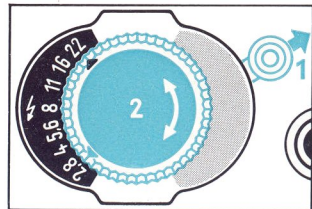
Shutter speed  $\frac{1}{30}$  sec.  
apertures f/2.8 to f/22.



### Set to $\frac{1}{30}$ for Flash

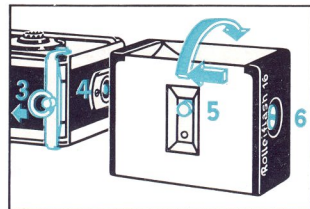
Push the locking catch (1) sideways and set the index mark of the disc (2) opposite the required aperture on the left-hand scale marked  $\frac{1}{30}$ . (Aperture settings → page 9.)

This sets the shutter to  $\frac{1}{30}$  sec.



### Fitting the Rolleiflash 16

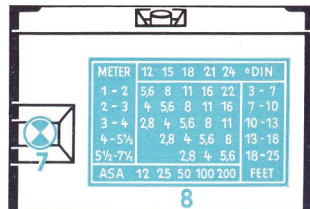
Swing the strap holder (3) sideways and set the index mark behind the camera. Plug the Rolleiflash 16 into the flash socket (4), push against the camera and turn to secure. Remove in the same way — while pressing the button (7).



### Inserting the Flash Bulb

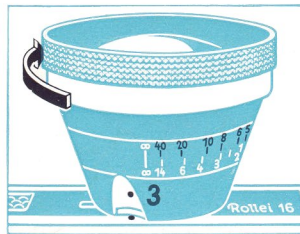
Push the flash bulb into the socket; after the shot press the ejector (5).

To preserve the battery always store the Rolleiflash 16 without a flash bulb in it.



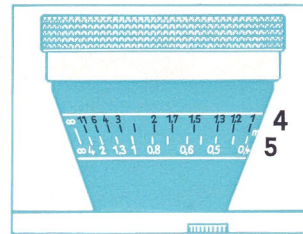
### Setting the Distance

Look up the required subject distance on the coloured scale (4) to find the corresponding value on the white scale (5). Set the camera to the white value.



### Reading off the Depth

Look up the distance figures opposite the index lines on each side of the set distance of the white scale (5), and read off the corresponding distance values on the coloured scale (4).

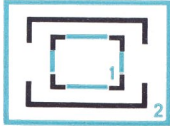


The depth of field ranges on the coloured scale thus always correspond to the intervals of three white index lines. This shows you instantly the latitude you have in estimating the distance with the Rollei 16 S.

Examples with the Mutar 1.7 x:  
Camera set to 4 feet,  
sharp zone from 8 to nearly 18 feet.  
Camera set to 2 feet,  
sharp zone about  $4\frac{1}{3}$ — $6\frac{1}{2}$  feet.

Example with the Mutar 0.6 x:  
Normal camera setting at 14 feet  
yields a zone of sharpness  
from 3 feet to infinity.

Telephoto and Wide-angle Shots



The finder shows three image frames for three ways of shooting. To cover the additional fields 1 and 2 in full size on the film, fix the appropriate Rollei Mutar unit in front of the lens. The Mutar 1.7 x reduces the subject area taken in to that of the small frame 1. The subject comes closer with a telephoto effect. The Mutar 0.6 x takes in the extreme view of a wide-angle shot corresponding to the full finder area 2. Comparing the finder areas shows you at a glance the best field of view for the subject.

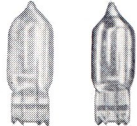
Exposure	Focal length	Angle of View
with Mutar 0.6 x	16 mm.	65°
without Mutar	25 mm.	45°
with Mutar 1.7 x	42 mm.	27°

The coloured distance scale of the Mutar shows the subject distance (green in feet, red in metres), and the white distance scale the required camera setting. When shooting with the Rollei Mutar units, reduce the film speed setting of the camera by one step (1 DIN value).

Attaching in the Mutar Units

Insert the Mutar unit into the bayonet mount of the lens so that the red dot (3) — or the green dot when using the feet scale — is opposite the black dot on the camera. Turn the lens to the right to secure.

If the green finder signal does not appear, the flash gun becomes your “portable sun”. Flash shots are simple and straightforward with the Rolleiflash 16 and AG 3 B bulbs, for B + W and colour film.



Finding the Right Aperture

Unless the instructions for the flash indicate different values, the table (8) of the Rolleiflash 16 shows the required aperture for any distance setting: Look up the distance setting and the film speed in the margins of the table. Trace along the two rows of figures until they meet and read off the required aperture. Example: 8 feet (7—10 feet), 20 ASA (use the 25 ASA column): aperture f/5.6.

If the same distance figure appears in two columns of the table, the aperture corresponding to the greater distance range applies to dark subjects, and the aperture for the nearer distance range to light subjects.

Inserting the Battery

Unscrew the screw (6) with a coin and pull off the housing. Insert a 15 volt photo-flash battery (it lasts 1—2 years) between the contact springs. Note the orientation of the plus pole.

Electronic Flash Shots

An electronic flash unit can be connected to the flash contact of the camera or of the tripod adapter (→ page 10).

The guide number quoted by the maker is the product of aperture x distance for each film speed. To obtain the required aperture divide the guide number by the distance.



## Time Exposures

Time exposures of any length, apertures from f/2.8 to f/22.

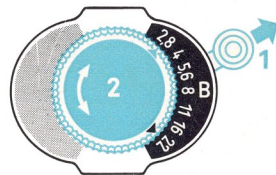
With the Rollei 16 S you can make time exposures from one second up to several minutes.

For this purpose set the camera to the aperture range marked "B": pull the locking catch (1) sideways and set the index mark of the disc (2) to the required aperture on the right-hand "B" scale. Depress the release button for the required exposure time.

Do not jerk the camera. Use a cable release (screwed into the release socket) and mount the camera with the tripod adapter on a firm stand.

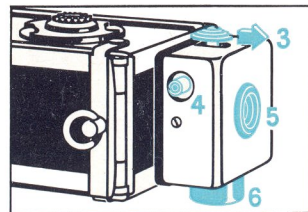
The exposure time depends on the available light. Each higher f-number (lens stop) calls for a doubling of the exposure time.

When a flash gun is connected to the camera, the flash will also fire in this range. This provides, for instance, a foreground fill-in flash during time exposures of outdoor night scenes.



### The Tripod Adapter

Fit it like the Rolleiflash (→ page 8). To remove, pull the button (3) sideways. (4): Flash contact for a flash gun. (5) and (6): Tripod bushes for upright and horizontal shots.



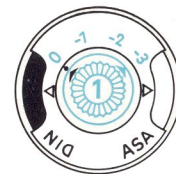
## Pictures with Filters

Fit the filter to the bayonet mount in front of the lens and secure by turning to the right. Close the finder. Read off the exposure value correction (e. g. — 1.5) from the filter mount and set it on the camera: press the button (1) and adjust the red index mark to the appropriate value on the red scale. Now the camera automatically ensures correctly exposed shots even with the filter.

After removal of the filter close the finder and reset the index mark to 0 again.

### Using Filters

Filters improve the colour rendering: In black-and-white shots the medium yellow filter (filter correction value — 1.5) and the green filter (— 1.5) darken the sky, make clouds appear more brilliant and emphasize the modelling of snow shadows. Subject tones of the same colour as the filter (yellow and green) record lighter. The orange filter (— 1.5 to — 3) darkens the blue sky to dramatic thunderstorm effects and makes yellow and red tones record lighter.



The H 1 filter (correction value — 0) will absorb UV rays to improve shots in high mountains above 6500 ft. or by the seaside, (especially by midday sun).

With colour film it is often desirable to subdue the predominant blueness of the light on brilliant cloudless days and to avoid blue casts in the picture. The H 1 filter (correction value — 0) and the colour conversion filter R 1.5 (— 0) provide progressive degrees of correction. With the R 1.5 filter the colour rendering becomes warmer.