Shutter guide for outdoor pictures

This simple guide will give you good results from two hours after sunrise until two hours before sunset for everyday and conventionally colored subjects. For better results for very delicate subjects, the MINOX Exposure Meter is recommended.

Light Conditions and BKeith aS

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<tr>
<th>Light Conditions</th>
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<tbody>
<tr>
<td>Packing Light</td>
<td>Average</td>
<td>Brighter</td>
<td>Dark</td>
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For shutter settings when using Green or Orange Filter, see page 3.

Minox Developing Tank

The developing of MINOX black-and-white films becomes a simple and convenient matter with the MINOX Developing Tank. You need no darkroom. You place the film cassette into the "light tight" of the tank, and twist the tank cap to unwind the film inside - that's all. The MINOX Tank Thermometer and your wrist are the only other equipment you need. Pre-measured quantities of MINOX dry chemicals for micro-grain development are available in handy packets, ready for solution in water.

Ask your Dealer to show you the simple operations of the MINOX Daylight-developing Developing Tank.

The Viewfinder

The luminous frame within the MINOX viewfinder contains the most pleasing area that will appear on the film. The viewfinder image is automatically corrected, at all distances, to agree with the picture area. (Parallax Compensation). For extreme close-up (10-30 inches), the viewing area has a frame-width within the luminous frame.

Compact weights and easily may be used the MINOX viewfinder without correction lenses.

Setting the Shutter

The length of time the light is permitted to reach the film is controlled by the shutter. The Shutter Speed Dial is conveniently located. First choosing the correct speed on the bezel surface while holding the shutter under the camera and, with the other hand, turning the shutter until the desired speed is set opposite the black dot.

YOUR MINOX is a precision instrument designed and built to give you excellent pictures under all kinds of conditions, indoors and out. As your constant companion, your MINOX is always ready to work with sharpness, speed, and sensitivity. Your care and maintenance of this instrument are essential for its perfect performance. The following hints will be found invaluable. For further information, write for the MINOX Care and Cleaning Guide.

The most important thing for keeps the lens shiny and clean is to avoid fingerprints, dust, scratches, and other marks.

Minnox Enlarger-Copying Stand

With recommended MINOX mounting services can you excellently arrange your own films, you will get even greater satisfaction and pleasure from your MINOX. If you make arrangements yourself, then you can obtain precisely the results you desire, and adapt your work to your own personal requirements. The MINOX Enlarger-Copying Stand is equipped with a light source, condenser unit, and lens system specifically designed for use with MINOX film. This lens system is automatically matched to the enlarging or copying procedure. It is as simple to use as a bicycle. You can copy or enlarge your MINOX negatives and prints to any size possible by means of an adjustable enlarging mirror. The lamp house can be removed, the opening is covered by the support for a Copying Arm to hold the MINOX, or other camera, for photographing documents or small objects at close range.

An automatic film counter permits using the MINOX Enlarger for 8 mm, 16 mm or 35 mm film sizes.

Holding the MINOX

The illustrations show the most practical way of holding your MINOX. With both hands, and steadied against the face. Such a steady, firm hold is essential against camera movement during exposure. Keep both thumbs under the camera and other fingers on top to avoid the possibility of covering the lens window. You might practice this hold in front of a mirror to check yourself. The same hold can conveniently be used for vertical or horizontal pictures.
The MINOX Exposure Meter

- helps you set the correct shutter setting for any picture of a "glanced at remember" scene for the setting until you reach the next exposure reading.
- When a four-set, a black-light viewing box lets you view the picture just as your MINOX camera will see it.

Correct shutter setting means better picture - pictures with fine highlights, good shadow detail, and every subtle tone of the original scene. Color film, particularly requires correct exposure to assure proper color values.

Even smaller than the MINOX camera, the MINOX Exposure Meter is a precision built photo-electric meter with a hexadecimal light gathering box for readings over a wide range of light conditions. It has panel mountings and is shock resistant.

Supplied with a leather case to protect your camera case, and with a chrome chain, the MINOX Exposure Meter is the perfect companion for your MINOX camera. It may also be used with other cameras.

Setting the Distance (Focusing)

The MINOX Distance Scale is calibrated from 0" to infinity (0" to 3790") and is graduated in 2", 5", 10", 15", 50", 100", and 200" steps.

The rear yard for Focus of the Depth of Field for any distance setting are rounded off the Distance Scale. For example, if set at 4" (illustration 8), the Distance Scale reads 4.0 to 15.0, or, if set at 4.5" (illustration 7) reads from 3.0 to 15.0. The printed depth of field is obtained with the SNAPSHOOT SETTING (small dot halfway between infinity - and 0") as shown in illustration 8. You will find this setting convenient for all situations which require quick readiness and fast shooting.

The shutter dial is visible through the open back of the MINOX, the MINOX Focus Lock is visible on the lens diameters corresponding exactly to the close distance engraved on the Distance Scale. With the chain locked in the camera socket, and in field test, accurate measurements can be made at 0" - 16" - 12" - 12" and 24 inches (full length).

The Depth of Field ranges and Subject Size at various set distances are shown in the Table on page 25.

Always 1:3.5 - An Important MINOX Feature

The 15 cm Compass lens of your MINOX yields such extreme Depth of Field, and together with the slightly curved design of the Film Gate gives such outstanding definition over the entire film area, that an adjustable lens diaphragm could be omitted - saving you expensive operation necessary with other cameras.

The MINOX always works at full f/3.5 opening.

The Shutter Speed Dial may be rotated with the camera open or closed, whether the shutter is wound or not.

The engraved figures are fractions of a second (e.g., indicates 1/30 second. 1/200 to 1/25 sec., etc.). Intermediate speeds may also be set.

When the Dial is set at 0", the shutter opens if the Shutter Release is pressed down, and remains open as long as the Release is held down; set at 1" (inset), the shutter opens when the Release is pressed down, and remains open until the Release is pressed a second time. B or T exposures should be made only with the MINOX resting on or against a firm support, or with a tripod (see page 14).

Always use an exposure guide, or the MINOX Exposure Meter, to determine the correct shutter setting for existing light conditions.

### Subject/Field Size and Depth of Field Tables

<table>
<thead>
<tr>
<th>Distance</th>
<th>Subject/Field Size - in.</th>
<th>Depth of Field</th>
</tr>
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<tbody>
<tr>
<td>0&quot;</td>
<td>12&quot; x 8&quot; (0&quot;)</td>
<td>12&quot; x 8&quot; (0&quot;)</td>
</tr>
<tr>
<td>2&quot;</td>
<td>10&quot; x 6&quot; (0&quot;)</td>
<td>12&quot; x 8&quot; (0&quot;)</td>
</tr>
<tr>
<td>4&quot;</td>
<td>8&quot; x 5&quot; (0&quot;)</td>
<td>12&quot; x 8&quot; (0&quot;)</td>
</tr>
<tr>
<td>5&quot;</td>
<td>5&quot; x 4&quot; (0&quot;)</td>
<td>12&quot; x 8&quot; (0&quot;)</td>
</tr>
<tr>
<td>7&quot;</td>
<td>4&quot; x 3&quot; (0&quot;)</td>
<td>12&quot; x 8&quot; (0&quot;)</td>
</tr>
<tr>
<td>8&quot;</td>
<td>4&quot; x 3&quot; (0&quot;)</td>
<td>12&quot; x 8&quot; (0&quot;)</td>
</tr>
<tr>
<td>12&quot;</td>
<td>4&quot; x 3&quot; (0&quot;)</td>
<td>12&quot; x 8&quot; (0&quot;)</td>
</tr>
<tr>
<td>16&quot;</td>
<td>4&quot; x 3&quot; (0&quot;)</td>
<td>12&quot; x 8&quot; (0&quot;)</td>
</tr>
<tr>
<td>24&quot;</td>
<td>4&quot; x 3&quot; (0&quot;)</td>
<td>12&quot; x 8&quot; (0&quot;)</td>
</tr>
</tbody>
</table>

Distance are measured from the head of the camera.

For coverage without important foreground interest, always set the Scale at 0" (infinity).

At this setting, the Depth of Field begins at approximately 12 ft.

For accurate measurement of extreme close-ups (8" to 34") the safety chain of your MINOX carries small bands of distances corresponding exactly to the close distances engraved on the Distance Scale. With the chain locked in the camera socket, and in field test, accurate measurements can be made at 0" - 16" - 12" - 12" and 24 inches (full length).

The Depth of Field ranges and Subject Size at various set distances are shown in the Tables on page 25.

### The Comfortable Filters

You can place the blueish orange or green filters before the lens simply by pushing the located slide - whenever the viewing window - towards the lens window. Make sure the desired filter is fully visible in the lens window. When using the green filters, double the exposure times (i.e., use 2" for 1") and vice versa. When using the orange filter, double the exposure times. For tips on using filters, see pages 16 and 37.

The filters are automatically retracted when the camera is closed. Therefore, subsequent exposures are made without the filter unless the filter is again pushed into position.

### Taking the Picture

When you are ready to "shoot," frame your picture in the viewing window (see page 4), and "release" the shutter release button - don't "snap" it. For critically sharp pictures, the camera must not be moved during exposure. The shutter release of the MINOX works so smoothly - even without resistance - that you will find it easy to operate.

NOTE: The small circle in the lens window indicates that the shutter is wound, ready for an exposure. If the circle is not showing, simply "push-outside" the camera to make it ready.

### Dust in the film chamber

Dust is the enemy of your MINOX film. Never keep a film cassette in your pocket without a wrapper. Before loading the camera, blow out any dust particles which may have lodged in the film chambers.

### If film cassettes will not easily drop into camera when loading

The film gate must be open when the film is dropped into the camera, be sure to push the camera (with open gate) together about 1/2" to close gate. (See page 9).

### If the cassette cannot be removed from camera, or if cassette lid lifts out, but the film is not completely removed from cassette

See previous explanation. Film gate must be open when loading or unloading cassettes. Never use force to remove film. Accidentally opened film may be partly saved it is immediately wrapped in black paper.

### Always use an exposure guide, or the MINOX Exposure Meter, to determine the correct shutter setting for existing light conditions.
**THINGS TO REMEMBER**

**Before loading:**
- Make sure Exposure Counter is set at red dot between 50 and 9.
- Before inserting or removing film cassette — make sure Film Gate is open.

**When loading the picture:**
- Keep fingers away from film window.
- Hold camera steady; squeeze shutter release button.

**At end of film:**
- Do not attempt to take more pictures than the film allows (30 on black-and-white, 26 on color film).
- Always keep Lens Window clean. Fingerprints or other smudges on the lens window cause unsharp pictures. To clean, wrap soft cloth around match stick.

**The Exposure Counter**
- Tells you or a group how many pictures you have taken on the film.
- A number shown on the Exposure Counter indicates minimum number of exposures remaining on the film and is printed in red.
- The Exposure Counter must be set at the red dot between 30 and 9 before a new film cassette is inserted. (Illustration 10). Otherwise, overlapping pictures may result.

**Loading**
- Film cassette should be shielded from bright light.
- Always load — or insert — the MINOX in subdued light, or in the shade.
- Set Exposure Counter at red dot between 30 and 9 by "pumping" count wheel. With camera in pedastal position, press down on unpowered Eyepiece (Illustration 7) and slide open Black Cover until both Film Chambers are free. Insert film into both chambers and close Black Cover (Illustration 11). Close Film Gate (Illustration 11). This action sets the Focus Ring (Illustration 11). If the Focus Ring does not disengage from the camera (Illustration 11).

**Picture Series and Sequence Shots**
- Your MINOX — compact and instantly ready to "shoot" — makes it so easy to get spontaneous, unposed pictures. Whenever possible take a short series of pictures to tell a complete story. With a little practice, you can take an entire sequence of pictures within a few seconds; simply keep your MINOX at eye-level and "pump" the camera with your right hand to advance film and re-cock the shutter.

**Telee-Photography with the MINOX**
- There are times when you cannot get close enough to a subject to get a large enough picture on your MINOX film. In such instances you may want to cock this distance on purpose. Your MINOX may be attached to any high-quality binocular with the MINOX Binocular Clamp. Focusing and view-finding is done correctly through eye of the binocular eyepiece while the MINOX is mounted to the other eye. If you are interested in wildlife, mountaineering, etc. you will find the Binocular Clamp a valuable addition to your MINOX.

**WHAT HAPPENED?**
You will find it easy to get the "feel" of your MINOX within a short time, and to get fine results with every picture. If you should have a failure or a wrong setting, check it against these possible errors and learn to avoid a repetition.

- If the develop is not clear:
  - Distance patch was not set correctly. Always set the distance correctly, especially for close-ups. Use the measuring chart for extreme close-ups.

- If pictures look wavy and out of focus:
  - The lens window is fogged on a camera or other smudge on it. Clean with soft cloth wrapped around a match.

- If there are blurs or double outlines:
  - The camera moved during exposure; hold camera steady or use tripod for longer exposure. Off subject moved; use faster shutter speed for moving subjects.

**Film cassette will drop out of camera with slight tapping, or may be lifted out by its bridge:**
- Once the cassette is in the film box or in the black paper until it is developed.
- Note: Color Film ends at 30 or 26. Sofort Film ends. Unload other two end-pull masters. Advance Exposure Counter at red dot before loading new film.

**CAUTION:** Do not remove film beyond the numbers indicated above, as the film would be fully pulled into the take-up side. This may result in light entering through the cassette slits during loading.

**Attaching the Safety Chain**
- To protect your MINOX against accidental falls, always keep 15 on its back. Insert the rectangular plug at the end of the chain into the corresponding Chain Socket of the camera. The spring-loaded chain will close in the camera. Use the clip at the end of the chain in the manner of a paper clip, inserting it into the slot of the plug slot. Turn the plug one-quarter turn to the right. To remove the chain, reverse these steps; insert clip into slot, turn one-quarter to the left — plug will jump out of socket.

**Changing the Film Type**
- Some day you may want to take color pictures just when your MINOX is loaded with black-and-white film — or vice versa. Thanks to the MINOX Film cassette, it is very easy to "switch" from one film to another at any time.

- When you want to change cassette, and "unwrap" camera winder to transport the last-exposed film frame into the take-up end of the cassette. Then remove cassette in the usual manner (see page 10). Note number bearing on Exposure Counter, write this number on cassette for future reference.

- Before reinserting fresh film, set exposure counter at red dot between 50 and 9, as described on page 9 and load in the usual manner.

- When you reinsert the "darked" cassette. First set exposure counter to numbers back of the number which you read when you removed the cassette, except if you took the cassette out at "0", set counter to "25". (Right in cassette at "25". Now insert cassette in the usual manner. Pump counter three times. This takes up any slack in the cassette and puts your MINOX ready for the next exposure.

- Remember: Load and unload only in subdued light, or in the shade.
TIPS FOR BEST RESULTS

"The Best" File

NIKON film is available in several different types for black-and-white photographs, and for Color Pictures. The black-and-white films vary in sensitivity (speed) to suit every possible need. The sensitivity is expressed in American Photographic Exposure Numbers (APEX) or ASA numbers, and ISO numbers for ASA 100 (Red Label). ASA 100 film is twice as sensitive to light as ASA 25, ASA 250 five times as sensitive as ASA 25, and so on. Thus, color film you choose depends on ASA 35 film, for instance, would require only half the shutter speed needed for ASA 35. The lower the film sensitivity, the finer the detail it is capable of reproducing in the final print. Therefore, the super-sensitive ASA 100 film should be used only in situations when there is not enough illumination for slower films, or when flash exposure is necessary. ASA 100 film is not recommended for ASA 25 and ASA 50 one being sold for industrial pictures—will not yield excellent prints in all possible ranges. ASA 12 film is especially suited for bright beach, mountains, and snow scenes, as well as for close-ups of ordinary small objects with the NIKON used in a tripod.

NIKON Color Film is unsuitable for daylight, and for artificial (daylight) light.

It's a Colorful World

The Nikon 35 Camera has a very wide range of color films, and has an anti-reflection coating— in other words it is ideally suited for Color Photography.

If you have never taken color pictures before, keep in mind the following suggestions which will help you get fine results from the start.

Color film yields the best results in bright or very sunny light; on overcast days, results are usually not satisfactory.

Morning and early afternoon hours are the best time for color pictures. At noon the light is usually too harsh, resulting in very "cold" colors or an overall bluish stage. During the hours just after sunrise, or just before sunset, the light is more reddish, resulting in very "warm" colors.

Watch for the possibility of color reflections (which may not be visible to the eye): A white dress on a green lawn is never pure white, but is faintly green.

Flush is Easy

You can get fine pictures with your NIKON right around the clock, because, when daylight or open light is no longer sufficient, you can attach a flash unit to your camera. Even in daylight, you can produce deep shadows or light effects by using flash.

The NIKON may be used with any type of flash source or to the flash supply of the camera. The shutter has built-in synchronization of the X-type (X=Flash) as flash as on the shutter release of the camera is connected.

Flash Trousos

Synchro-coupled at shutter speeds:

Electronic Flash Units: 1/60 to 1/30 second. Flash Bulbs: 1/60 to 1/30 second. M-2, S, 25 1/15 second to 1/30 second.

A fast flash meter by NIKON is expected to be available soon; very complex flash instructions will be issued at that time.

How to Stop Moving Subjects

Sparks and other fast action calls for high shutter speeds — otherwise your pictures may be blurred. But even under unfavorable light conditions, requiring slower shutter speeds, you can stop motion by using professional lenses. It is easier, for example, to stop action in a subject moving straight across or right angles to the camera. Or, watch for the "still moment" such as is produced by a swing or its highest point after it has reached the top, or the nutter's pivot during the sweep when the bell is at the peak of its swing, and the racket is about to swing. Even 1/20 second will stop "snap" such shots. For very fast motion — automobile race, speed boats, athletes another well-known professional trick will help you get fine results: Keep the eye, look, or take centered in the NIKON viewfinder and follow the subject with the camera, releasing the shutter only instant during this converging. The background will be blurred, adding to the impression of fast action, but the subject stays sharp even when numbered.

The two built-in filters

will help you improve your black-and-white pictures. In sunlight pictures, the green filter will give a blue sky — which would otherwise appear white in the first

print — a richer tone, making white clouds stand out clearly. Green foliage, leaves, etc., which would normally print darker, will appear lighter and better modulated. Because the green filter reduces the overall amount of light transmitted through the lens, you must adjust the shutter speed — in other words use a new film, when the NIKON exposure meter or exposure guide indicates too slow.

The orange filter — which produces three times normal shutter speed — darkens blue skies considerably, but lightens all reddish tones. Even in full sunlight it produces different skies and removes hazy white. It is particularly useful for indoor pictures, snow scenes, mountain landscape, and for hits. DON'T USE THIS ORANGE FILTER FOR PORTRAITS as red lips would appear almost white.

NEVER USE THE GREEN OR ORANGE FILTER WITH COLORED FILM.