

AGFA AUTOMATIC 66



MADE IN GERMANY

INSTRUCTIONS FOR USE

Please fold this page open!

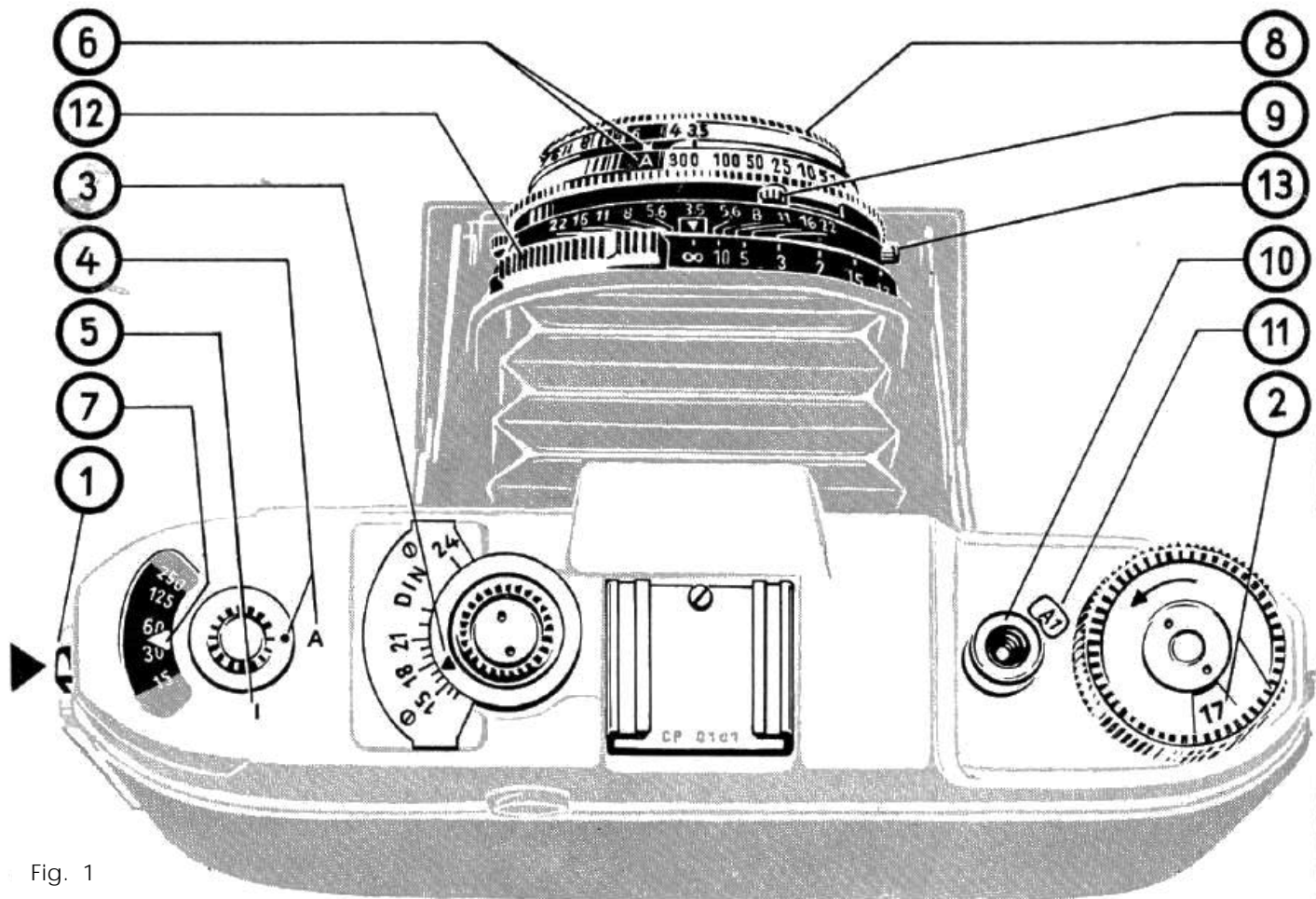


Fig. 1

DESCRIPTION OF THE INDIVIDUAL PARTS

- ① Baseboard Release Button
- ② Film Transport Knob with Built-in Film Indicator
- ③ Adjustment Disc for Setting the Film Speed (DIN or ASA Scale)
- ④ Adjustment Disc for Activating the Automatic Mechanism. In the Picture Green Dot next to **A** = Automatic Mechanism Switched On.
- ⑤ Red Marker for Switching Off the Automatic Mechanism
- ⑥ Exposure Time Setting Ring for Automatic Mechanism: Green **A** next to Green Marker
- ⑦ Moving Pointer of the Exposure Meter above the Shutter Speed Display
- ⑧ Diaphragm Setting Ring with Click Stops
- ⑨ Shutter Winding Lever, push down towards Baseboard Floor
- ⑩ Shutter Release button with Threaded Cable Release
- ⑪ Frame Counter Window
- ⑫ Focusing Lever
- ⑬ Flash Contact

See Page 6 for the Quick Start Guide!

The principle of the Agfa Automatic 66

With the Agfa Automatic 66 we are giving you a camera that, for the first time, uses a built-in exposure meter to regulate the shutter speed fully automatically.

It should be expressly pointed out that working with the camera does not require any knowledge of the function of the automatic mechanism. If we nevertheless give a brief explanation of its operation, it is not least because of the lively technical interest shown in this new feature.

It can be assumed as known that light meters use light-sensitive photoelectric cells, which show the amount of light hitting the cell converted into exposure and diaphragm values via a galvanometer by means of corresponding needle deflections.

With the construction of the Agfa Automatic, it has been possible to make this needle deflection the starting point for automatic shutter speed control. The process now taking place can be compared with the mode of operation of an air pump, the air inlet opening of which is adjustable and the piston of which is under spring tension. At the

moment of releasing the shutter, the needle deflection is locked and at the same time regulates the air flowing into a cylinder.

With a small needle deflection, the air inlet will be small and cause a delay in the closing process; If the needle deflects further, the air inlet is enlarged and a rapid closure process takes place accordingly. By ingeniously transferring the spring tension of the shutter to the pneumatic system, we obtain the necessary mechanical force on the one hand, but on the other also automatically the precisely timed opening of the shutter, as it corresponds to the measured light conditions of the subject.

In addition to this shutter speed control, two more factors need to be taken into account: the position of the diaphragm and the sensitivity of the film material used.

The choice of diaphragm has to be left to the photographer, because depending on the object, he wants to influence the depth of field, for example. An array of finely tuned resistors is connected to the photocell circuit and is activated by turning the diaphragm ring. A look into the window of the instrument needle shows that the expected exposure time can be changed by adjusting the diaphragm. So, for example, with moving objects you have the possibility to regulate the exposure time accordingly.

The sensitivity of the film material is set on the top of the camera; by turning the adjusting knob, a blind in front of the photocell is adjusted, which influences the sensitivity of the light meter.

The automatic exposure time controller in the Automatic 66 was developed by Agfa Camera-Werk according to patent DBP 923525. A number of individual well-known principles have been combined into an ingenious construction in such a way that we have come another step closer to the goal of simplifying photography.

ABOUT THIS INSTRUCTION MANUAL:

In the instructions below for operating the automatic mechanism, we first describe the individual steps for inserting and removing the film, as well as operating the shutter if it is to be used without the automatic regulation. This is primarily the case for flash photography. Other special cases in which the automatic mechanism is not to be used is described on page 20. We also give you a quick start guide that you can use if you are already familiar with the handling of the camera. In any case, please fold out the main illustration on the first cover page, as we refer to this illustration in the text by its individual numbers.

QUICK START GUIDE

Detailed
description
on page

**Important
until the first
shot!**

1. Film insertion. 8-11
2. Set the type of film on the film indicator (2) 7
3. Set automation (4), set green point next to green **A**. 18
4. Set the ASA scale (3), set the black triangle to the desired sensitivity of the film. 18
5. Set the locking ring (6) to the shortest possible exposure time, the green point next to the green **A**. 18

**Important for
each
subsequent
shot!**

6. Aim at the object, note the scale (7) of the exposure meter, if necessary adjust the diaphragm (8). 19
7. Set the focus distance using the range-finder, move the focusing lever (12) until the central range-finding image coincides with the viewfinder image. 16/17
8. Tension the shutter winding lever (9) and push the release button (10). 14
9. Turn the film transport knob (20) as far as it will go, the next film frame number will then appear in the frame counter window (11). 12

FILM INDICATOR

This device is meant to be a memory aid to enable you to remember at any time the kind of film with which your camera happens to be loaded. You should therefore make it a rule to set it immediately after the insertion of a film.

The ASA number or the type of colour film can be found on the film packaging.

Types of film indicated:

12, 32, 80, 125 ASA

Col RD Colour Reversal film, Daylight

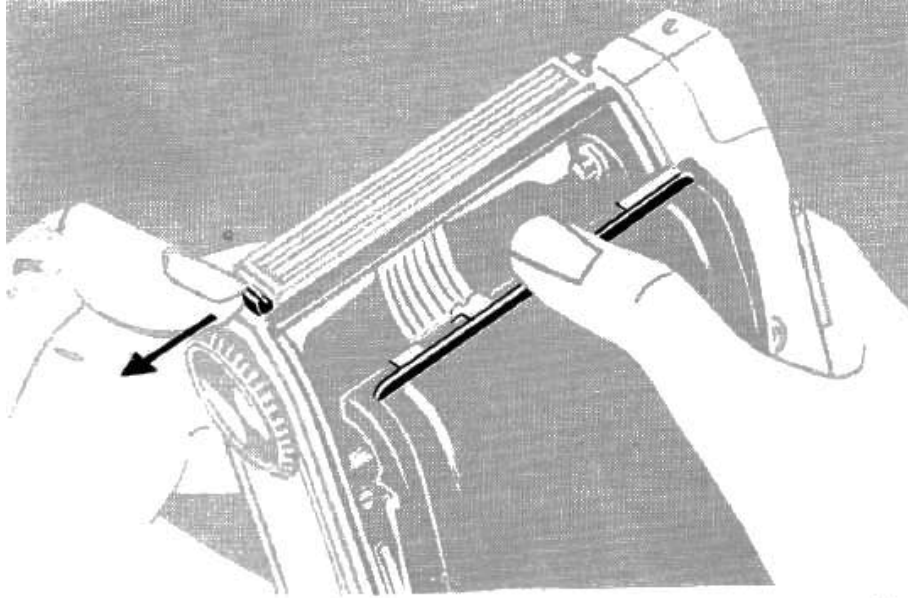
Col RT Colour Reversal film, Tungsten (artificial light)

Col ND Colour Negative film, Daylight

Col NT Colour Negative film, Tungsten (artificial light)

Col CN 17 Colour Negative film for Daylight and Tungsten, universal film for colour
and black and white

Setting: The spring-loaded disc on top of the film transport knob (2) is depressed and rotated against the direction of the arrow until the desired mark is visible in the window, then it is released again.



FILM LOADING

OPENING THE CAMERA BACK

Lateral displacement of the small locking lever unlocks the back of the Automatic 66, which can now be fully opened (Fig. 2).

Fig. 2

FILM INSERTION

First, the lower spool peg is pulled out by turning the knurled disc to the left (Fig. 3). The standard 120 rollfilm is unwrapped, preferably in subdued light, and the adhesive tape removed; the hand should grip the backing paper of the film firmly right up to the insertion to prevent uncoiling.

Next, the spool is placed into the fixed upper peg, and allowed to slide into the spool-chamber. The knurled disc is turned to the right again until its projection engages in the spool recess.

The tapered end of the backing paper points towards the take-up spool (Fig. 4)

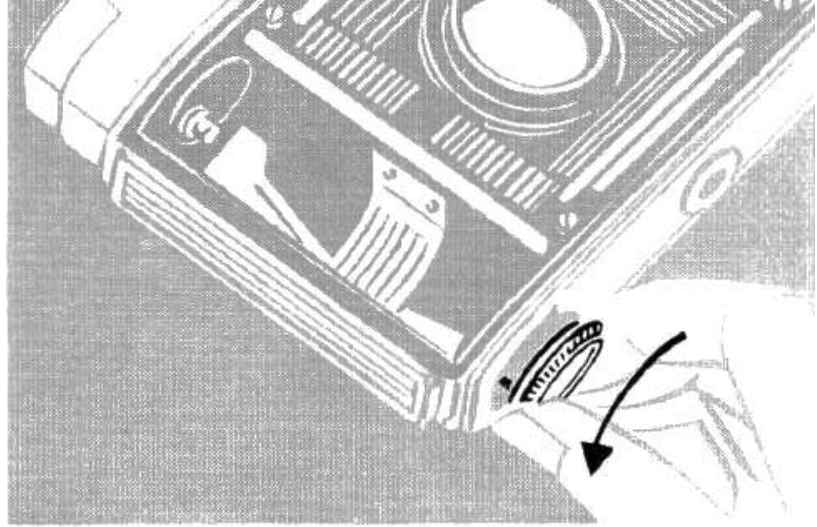


Fig. 3

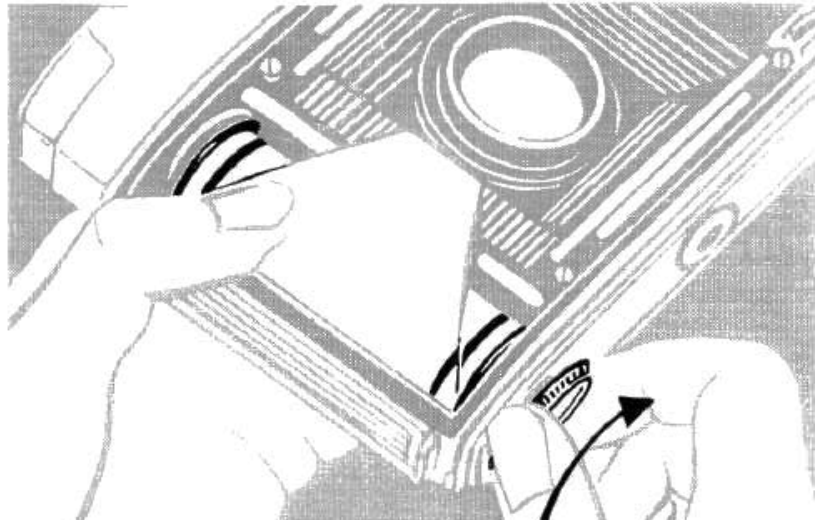


Fig. 4



The backing paper is pulled over the film channel up to the take-up spool, and the tapering end inserted into the wider of its two slots (Fig. 5). Care should be taken that after a full turn of the transport knob, the backing paper is threaded correctly between the flanges of the empty spool.

Fig. 5

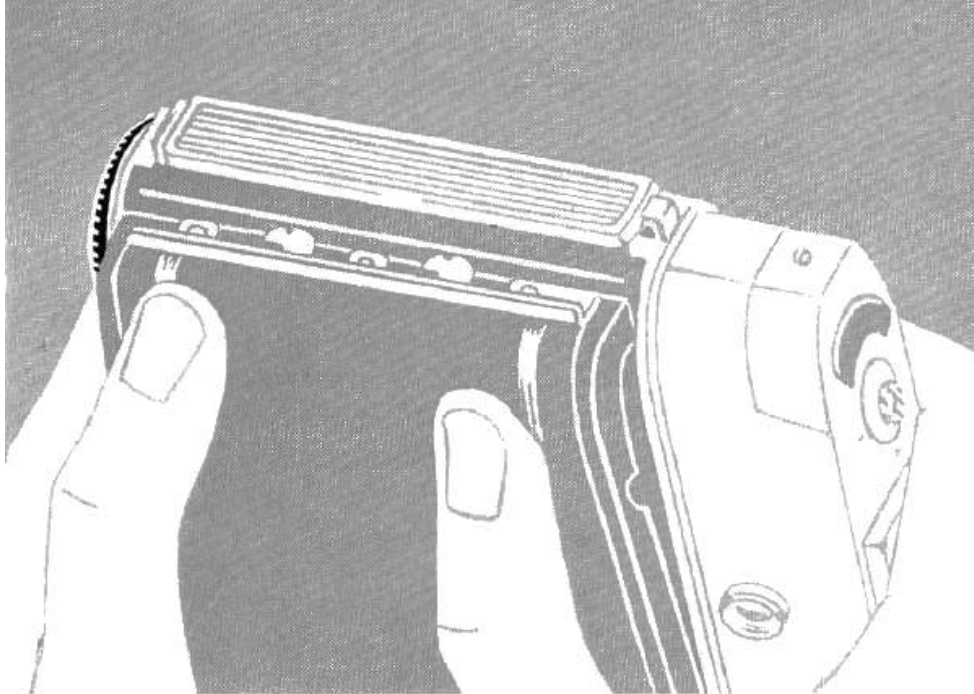


Fig. 6

The back is now closed and pushed home by pressure of the two thumbs (Fig. 6). Care should be taken that the knurled discs in the camera baseplate have been turned to the right as far as possible, as they will be locked by the closed camera back.

The release button (10) situated next to the transport knob should **on no account** be pressed during film winding, as this interferes with the counting mechanism.

After closing the back, the transport knob should be wound on until resistance is felt, or until the knob can no longer be turned in the direction of the arrow. At the same time, the counter window (11) next to the transport knob shows that the counting mechanism has moved from 'A' to the number 1, and the film is ready for the first exposure. For each following exposure, the transport knob should be wound on to a stop; numbers 1 - 12 will then appear automatically in the counter window.

Note! The frame counter, as well as the shutter release only work with film in the camera. Neither can be tested with an empty camera.

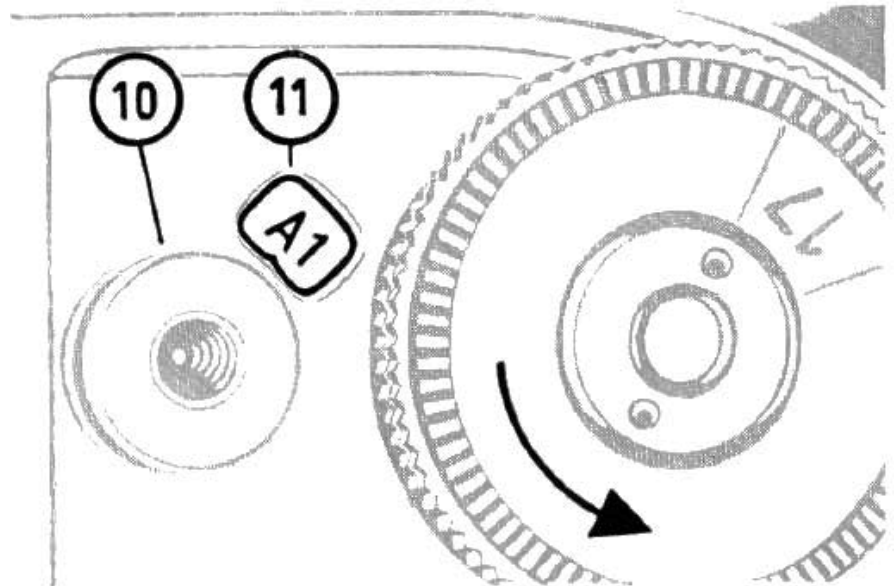


Fig. 7

OPENING THE BASEBOARD

Pressure on the locking button (1. fig. 1) causes the baseboard with the lens panel to slide into the taking position. It is best to tilt the front of the camera obliquely downwards during this operation.

THE DOUBLE - EXPOSURE PREVENTION DEVICE

The Automatic 66 is equipped with an ingenious double and blank exposure prevention device. This means that the release button is locked after each exposure until the next number appears in the window after the transport knob has been wound on. Even if shutter-winding has been forgotten, no release is possible. On the other hand, the film transport is blocked until the shutter has been released. One should therefore make it a point to wind the film on immediately before an exposure.

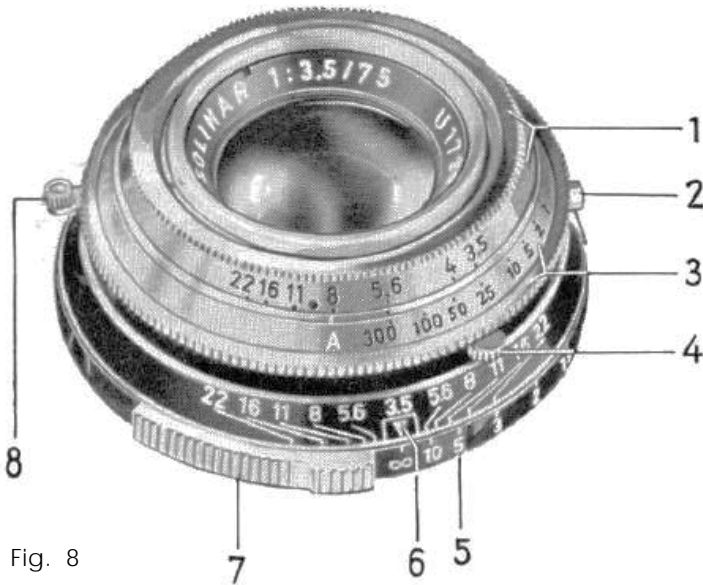


Fig. 8

The Prontor-SVA shutter

Number key:

- ① Knurled ring and scale for setting the diaphragm. Set to the middle red mark.

In automatic mode: Set only full f-stops that click into place.

In manual mode: half aperture values can also be selected.

- ② Flash contact 3 mm. Ø for connecting the flash cable.

- ③ Knurled ring and scale for exposure time setting:

In automatic mode: as in fig. 1 point 6 set the shortest exposure time by setting the green **A** next to the green dot.

In manual mode: any exposure time can be set; the numbers mean fractions of a second, for instance 2 = $\frac{1}{2}$, 25 = $\frac{1}{25}$ of a second.

- ④ Shutter winding lever; tension by swivelling towards the flash contact before **each** exposure.
 - ⑤ Distance scale for lens focussing, refer to range-finding section p. 16/17.
 - ⑥ Index mark for distance-setting and depth-of-field scale (5).
 - ⑦ Focusing lever
 - ⑧ Self-timer lever (also set when using M-synchronisation). Tensioning is only possible after tensioning the shutter winding lever (4); **not** available in automatic mode.
-

Flash technique *(only use in manual mode! Switch off automatic mechanism with knob (4) at marker 5 fig. 1).*

The Prontor-SVA shutter of the Automatic 66 is fully synchronized and has a synchro-lever for X and M-setting (13) fig. 1 underneath the flash contact.

To trigger the flash at 'M', the self-timer lever must also be cocked; its effect as a self-trigger is then suspended.

The information on the packaging of standard flash bulbs provides information about which synchronization mode and which shutter speed can be used for the individual bulb types.

Electronic flash units must **always** be used with the X-M synchro-lever in the **X position**.



RANGE - FINDING

Now we will proceed to find the object distance. This is done with the built-in coupled range-finder in a very simple way. A glance into the viewfinder eyepiece in the back of the camera shows that the viewfinder image is divided: into an overall bright image and a circular central cut-out, which is tinged light blue. This central (range-finding) image will at first show two laterally displaced images (see fig. 10). If the focusing lever is moved as illustrated, complete coincidence of the two central images will result (fig. 11).

Fig. 9

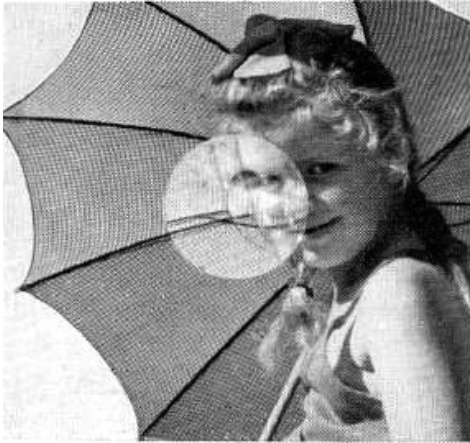


Fig. 10

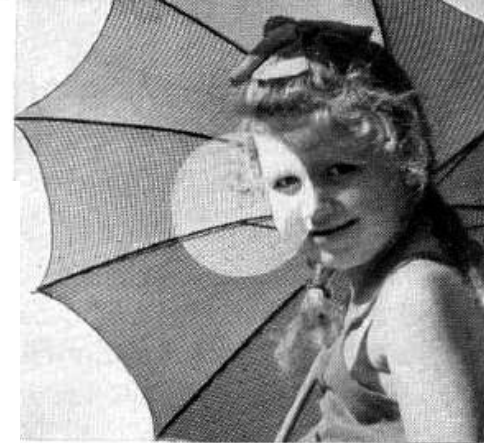


Fig. 11

This point automatically indicates the desired sharp focusing of the lens on the object concerned.

Comparison of the distance numbers on the distance ring opposite the triangular mark in the centre will confirm this. The result of the range-finding operation is absolutely reliable and relieves you of the need for judging your distances.

Either now, or before the range-finding, the shutter is wound. The view-finder window of the camera is brought up close enough to the eye so that the view-finder field can be fully seen right to its corners.

The camera is held with both hands as illustrated and the release button pressed home gently and smoothly with the index or middle finger of the right hand. It is important to adopt a firm stance and not to give the camera a lateral tilt.

Exposures with automatic control of exposure time.

Fold open the page with fig. 1 whilst reading this chapter and pay close attention to the following three items:

1. ASA Setting

With your thumb you press down on the locking disc (3) fig. 1 next to the ASA scale and place its black pointer next to the ASA number that corresponds to the inserted film (information on the film package)

2. Automatic mode

Next to the scale with the moving needle is the button for the automatic mechanism. You can adjust it by pressing your thumb so that the green dot is next to the green **A** (Fig. 1). The automatic mechanism is now switched on.

When switched back to the red line (5), the camera works with the set shutter speeds without automation, e.g. B. for flash photography, or in the special cases mentioned on page 20.

3. Shutter

The large knurled ring of the shutter is turned as far as it will go for the shortest possible time so that the green **A** is next to the green dot (see point (6) in fig. 1).

When these three functions have been set, the exposure will work automatically. In the exposure window of the top cover, the position of the needle (7) shows the approximate exposure time after aiming at the object. If the white pointer is in one of the two red

fields, this means that the exposure can no longer be regulated automatically. You can then try to bring the pointer back into the black scale area by adjusting the diaphragm ring. If this does not succeed, the automatic mechanism must be switched off and the camera used in the usual (not automatic) way. When the exposure time drops to $\frac{1}{25}$, timed exposures with a tripod are indicated.

When using filters, the automatic mechanism can still be used. To compensate for the exposure meter, set the ASA scale on the top cover of the camera.

If you use for instance a filter that requires a value one full f-stop higher (filter factor 2), the ASA scale on the top of the device should be reduced by a factor two. E.g. film material initial setting 100 ASA, with filter: set to 50 ASA. Do not forget to reset the ASA scale to the initial value when the filter is no longer used.

Basics:

Shutter speed and aperture stop can be individually controlled with the help of the diaphragm control, despite being automatically regulated.

If the time for moving objects appears too long, a shorter time can be achieved by opening the diaphragm.

If you value greater depth of field, the exposure time is continuously increased when the diaphragm is closed. **The individual f-stops have click stops; therefore only these numbers should be set!** Intermediate positions are to be avoided.

Angle of Inclination of the Camera

When using the automatic exposure control, the Agfa Automatic should not be tilted more than 15° to any side; The correct position of the camera is shown in figure 9 on page 16.

SPECIAL CASES OF EXPOSURE METERING

For the use of the exposure meter in the Automatic 66, the same restrictions apply for certain exposure conditions as are prescribed for the manual exposure meter and are mentioned below.

Please always remember that the release button has an important function, because it locks the pointer deflection of the galvanometer when it is released. For an automatic exposure, releasing the shutter on the lower small lever and switching on the forward drive is ruled out.

In addition, one should forego the automatic exposure if extraordinary differences in brightness in the subject or its immediate surroundings would normally force a "close-up measurement". To name extreme examples, these would be, for example, shots through a dark archway, brightly dressed people in front of a dark forest background, or a black dog in the snow, or similar.

In such cases, one can help oneself in such a way that one approaches the subject with the automatic switched on until the pointer deflection no longer shows any major

changes. The automatic system is switched off and the previously determined exposure time is triggered with normal handling of the shutter.

DEPTH - OF - FIELD

In addition to the exposure, the diaphragm also determines the zone of sharpness in front of, and behind, the focused distance. Small diaphragm settings (stopping down) appreciably increase this zone of sharpness, or depth-of-field. It also increases the farther away the subject is from the camera. Its extent for the respective diaphragms is indicated on the **depth-of-field scale**.

In addition, the depth-of-field scale next to the focusing ring (fig. 7 page 14) with the distance numbers indicates approximate depth-of-field. As an example: if a distance of 3 m. was chosen; the boundary lines to the left and right of the triangular index mark show the sharp focus zone on the distance scale: at f/11 it extends from 2 m. to 5.30 m. The exact depth-of-field zones resulting from these various settings are found in the table on p. 22.

DEPTH - OF - FIELD of the Agfa Color-Solinar 1:3.5 f = 75 mm

With the focus distance set at	and the diaphragm set at						
	1:3,5	1:4	1:5,6	1:8	1:11	1:16	1:22
	the zone of sharp focus will be from m to m						
1,0 m	0,97—1,05	0,96—1,07	0,93—1,09	0,90—1,12	0,87—1,17	0,82—1,27	0,77—1,41
1,2 m	1,15—1,26	1,14—1,27	1,12—1,30	1,08—1,35	1,05—1,41	0,99—1,54	0,93—1,72
1,5 m	1,41—1,60	1,40—1,61	1,37—1,67	1,32—1,75	1,26—1,87	1,17—2,10	1,09—2,48
2,0 m	1,84—2,19	1,82—2,22	1,76—2,32	1,68—2,49	1,58—2,75	1,44—3,32	1,31—4,43
3,0 m	2,65—3,46	2,60—3,54	2,48—3,82	2,30—4,33	2,12—5,20	1,88—7,90	1,65—21
5,0 m	4,80—6,15	3,95—6,78	3,64—7,93	3,27—10,55	2,88—18,9	2,42—∞	2,02—∞
10,0 m	6,80—19	6,50—22	5,73—41	4,85—∞	4,07—∞	3,22—∞	2,58—∞
∞	16—∞	15—∞	11,1—∞	8,20—∞	6,10—∞	4,36—∞	3,25—∞

Circle of confusion 0.075 mm.

With this lens, the distance to the subject is measured from the **film plane** (= rear edge of the accessory shoe).

CLOSING THE CAMERA

Before the camera is closed, the focusing ring must be returned to Infinity. The struts remain locked until this has been done. Attempts to close the camera by force lead to damage. When the focusing ring has been returned to Infinity, both struts will readily give way to even pressure, and the baseboard will return into the camera body where it snaps shut.



Fig. 12

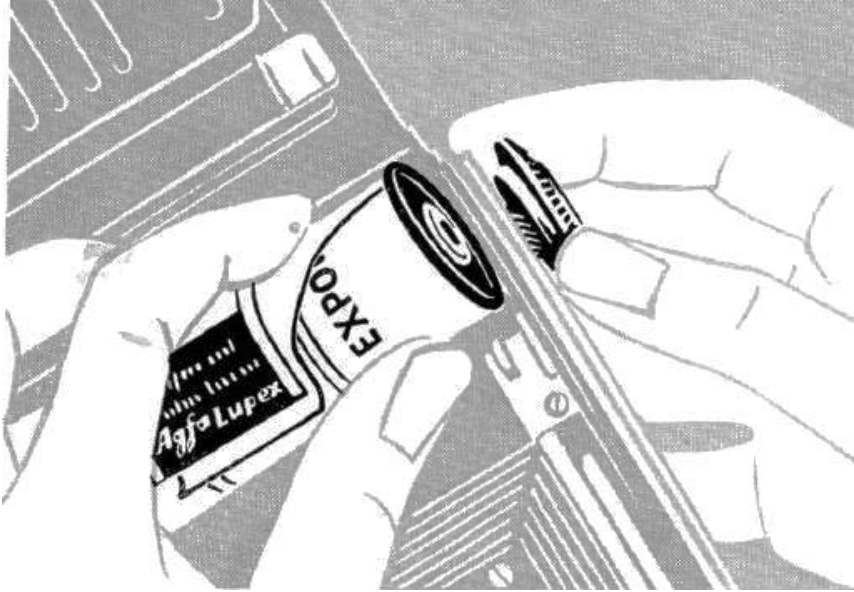


Fig. 13

UNLOADING THE CAMERA

After the 12th exposure the transport knob is turned repeatedly until a resistance is felt. The back is opened – on no account in direct sunlight – by unlocking it as described on page 8 – but not fully. A few further turns of the transport knob will completely wind the end of the backing paper still protruding over the film channel.

The back is now opened fully, the knurled knob of the take-up side gripped (see fig. 13) and turned fully to the left. Slight oblique pressure on the upper spool flange lifts the spool a little, so that it can be easily taken out and removed as shown in the illustration. The spool should be held firmly, secured with adhesive tape at once and placed in a light-tight wrapping.

On opening the camera back, the counting mechanism automatically returns to its starting position A, i.e., it is already at the correct setting for the next film insertion. The only other operation required is the transfer of the empty spool to the take-up side. It is advisable to give the transport knob a short turn until cog is vertical so that it can be easily and fully inserted in the **slotted** recess of the empty spool. The lower spool peg is retracted by a short left turn of the knurled disc (fig. 14) - the empty spool is depressed - and the peg, by a right turn of the knurled disc, inserted into the round hole of the spool. The camera is now ready to receive the next film.

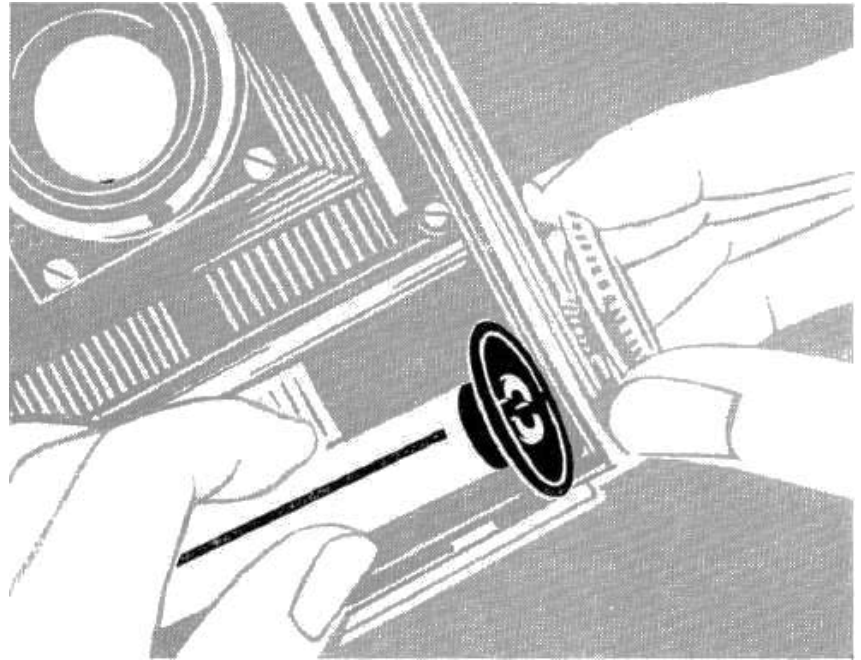


Fig. 14

AGFA FILM FOR THE AGFA AUTOMATIC 66

To finish, may we make a few suggestions for your choice of film?

For black and white film we recommend to always reach for Agfa-Isopan-F-Film 32 ASA. It is fine-grained, contrast-rich and accepts large exposure variations.

With dull weather Agfa Isopan ISS 80 ASA should be used. It allows considerable margin for diaphragm and exposure time settings.

Under poor lightning take Agfa Isopan Ultra 125 ASA.

Use the Agfacolor reversal film CT 18 for daylight shots or the Agfacolor reversal film CT 16 for shots with artificial light. If it is a matter of capturing the blaze of colours of nature or creating coloured interior shots, then this is the film for you that will turn what you have experienced and seen back into an event at home.

If you have already worked with Agfacolor film, then you know it, otherwise please believe us: With Agfacolor film it is just as easy to work as with the black and white film, but especially with the Automatic 66, which automatically gives you the correct shutter speed by means of the coupled exposure meter.

And now we wish you a lot of fun and success with your Aga Automatic 66.



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