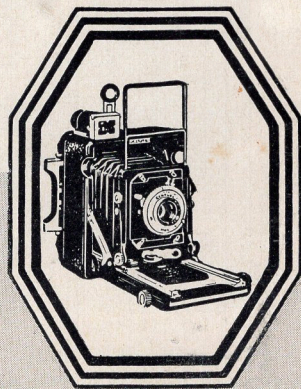
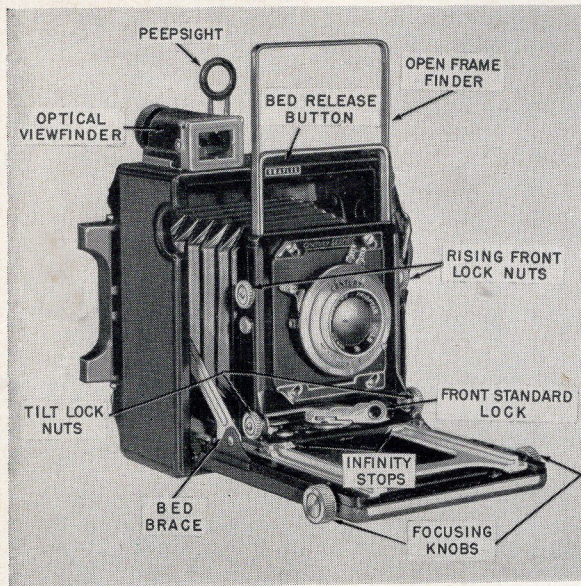


**CENTURY GRAPHIC**

***INSTRUCTION MANUAL***







## HOLDING THE CAMERA

A convenient way to hold your Century GRAPHIC is shown in the sketch (opposite page). This will leave the forefinger in a convenient position to trip the shutter release. Slowly pull down on the release lever until a faint click is heard. At this position, the shutter mechanism becomes cocked. A slight

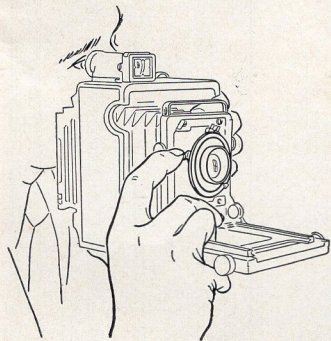
## OPENING THE CAMERA

Press Bed Release Button, pull bed down until it snaps in place. Pull the front standard out with the front standard lock. When all of the way out against the infinity stops, turn the lock to the right or left.

## TAKING PICTURES

Determine the distance to the subject and rack the lens out by turning one of the focusing knobs until the focusing scale is set to indicate the correct distance, or use the ground glass for focusing. Attach the film receptacle to the back of the camera and withdraw the slide. Set the speed indicator and diaphragm pointer for the exposure required. (Use a film exposure guide or meter for best results). Raise the open-frame finder and peepsight and center the subject through both. Hold the camera steady and carefully squeeze downward on the shutter release lever with the forefinger to make the exposure. Replace the slide into the holder.





additional downward pressure will then trip it. Caution: any reverse or upward movement while in the cocked position will allow the shutter blades to open slowly. Try it a few times without film in the camera to become fully acquainted with its operation.

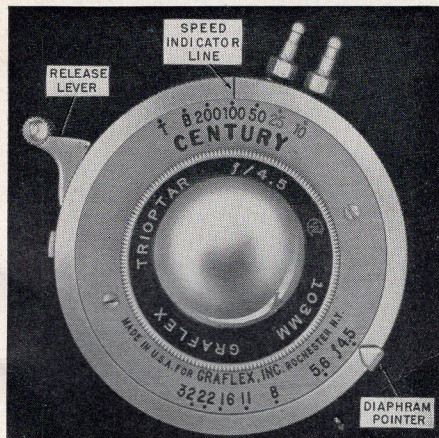
## CLOSING THE CAMERA

Roll the track back as far as possible with the focusing knob. Release the front standard lock and slide the front all of the way back into the camera body and relock. Press downward on both bed braces until they unlock. Swing the bed up, making sure it locks in place.

## CENTURY SHUTTER

*Selecting speeds.* Turn the outer knurled ring until speed indicator line is even with the figure representing the desired shutter speed. Set diaphragm pointer at  $f$ /number for correct exposure (See page 8).

*To operate.* Pull down on the shutter release lever as far as it will go. This is a self-setting shutter and the one operation first cocks and then releases the mechanism. For "Time" exposures, set the speed indicator line at "T". Pull down once to open the shutter and a second time to close it. For "Bulb" exposures, set the line at "B". The shutter will stay open as long as the release lever is held down. A cable release (straight thread type) may be used instead of the release lever.





## FLASH SYNCHRONIZATION

The Century Shutter has built-in synchronization. For the speeds, 1/50, 1/100 or 1/200, use the bayonet base gas-filled SM and SF flash lamps. Use Type "M" lamps (other lamps such as No. 5, No. 25, Press 40, No. 22, etc.) with the shutter set at 1/10 or 1/25. Consult the flash lamp carton or the lamp manufacturer's data for recommended exposures. The Century Shutter is not intended for use with a solenoid.

The GRAFLITE No. 25 Unit, Cat. No. 2725, is recommended. This consists of a 2-cell battery case with 5" adjustable reflector for SM and SF as well as the No. 5 and Press 25 lamps. Attach a 20" shutter cord, Cat. No. 2701, to the contact posts on the shutter and plug into the SHUTTER outlet in the battery case.

The GRAFLITE battery case can be attached to the handle lugs on the left side of the camera, or to an extra pair of lugs, Cat. No. 2756, fitted to the right side (the camera body has holes for receiving these). If there is an accessory Kalart E-5 Rangefinder on the camera, attach mounting plate No. 2754 to it.





## INFINITY STOPS

These fold down to allow the front standard to pass by for the use of more bellows extension as required for copy work or the use of extra, longer focal length lenses. Additional sets of stops are available for such lenses.

## FOCUSING SCALES

These are the modified Vernier type. For infinity (beyond 100') 100' and 50', align the markings for the same distance indicated on both scales. (See illustration A). For shorter distances, use the pointer at the front of the scale and set opposite the figure representing the distance to the subject (See illustration B).

## LENSBOARD

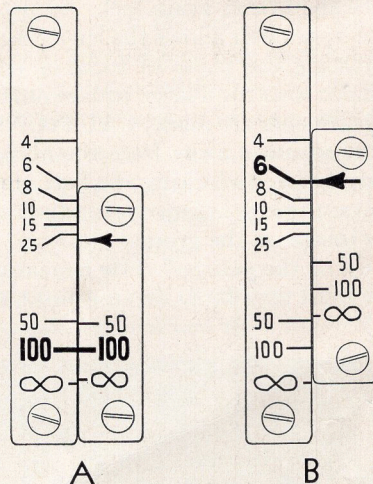
Facilitates interchangeable use of various lenses, including wide angle and telephoto. Move both upper and lower slide locks for removal and replacement of lensboard.

## OPEN FRAME FINDER

Useful when following fast action. Pull the open frame finder up as far as it will go and swing the rear peepsight to the vertical position (see illustration Page 1). Hold the eye as close as possible to the peepsight and frame the subject matter through it and the front frame. For more accurate composition, use the accessory optical viewfinder with its various masks for different focal length lenses.

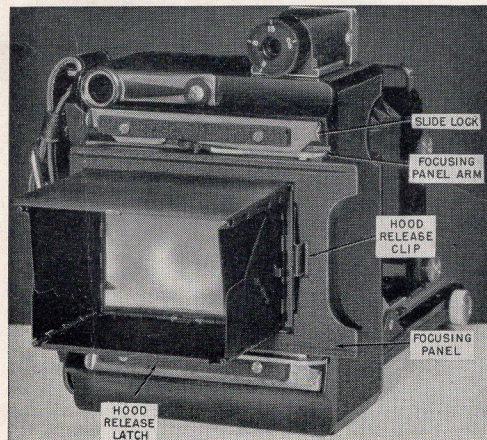
## FRONT MOVEMENTS

These are used to obtain special effects. If a downward tilt of the lens is desired, leave the front standard on the front portion of the track, unlock both bed braces by pressing them downward and move the bed down





until the braces again lock. Adjust the lens by loosening the lock nuts on each side of the front standard. The upper pair allows the lens to be raised for centering the image and the lower pair controls the tilting for adjusting the plane of focus or perspective of the image on the ground glass. To experiment, direct the camera towards a large square object and observe the appearance of the image on the ground glass as these adjustments are made. **CAUTION:** Do not try to use the viewfinder, focusing scales or rangefinder with the front adjusted away from the normal position. Be sure to rack the track all the way back into the camera body before unlocking the bed braces and allowing the bed to return to the normal position. Always recenter the lens before closing the camera. Like the rising and tilting front, the lateral shift aids in centering the image on the ground glass and in obtaining special effects. Loosen the front standard lock lever, press down on the polished plate beneath it and slide the front standard to the right or left. Lock by retightening the front standard. Be sure to recenter the lens before closing the camera.

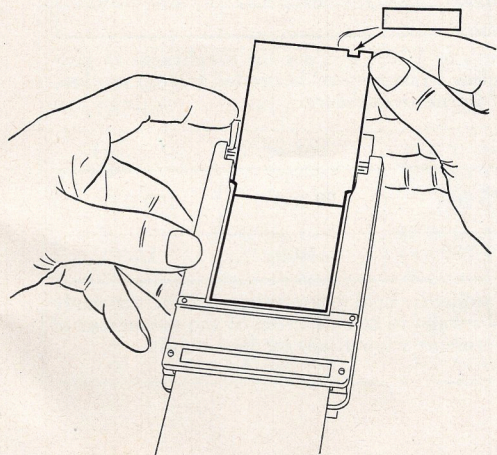
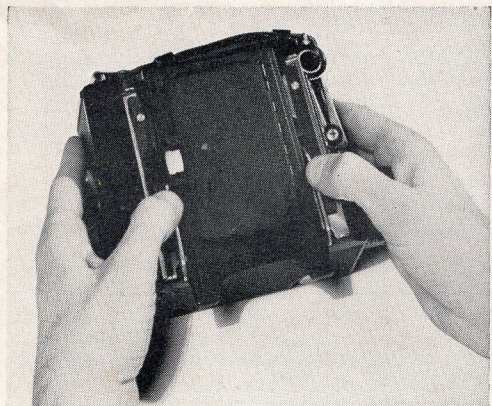


## GROUND GLASS FOCUSING

This allows you to check the composition and sharpness of image exactly as it will appear on the film.

*To use.* Press in on the hood release latch at the bottom center to open the viewing hood. Set the shutter at "Time" and open. Turn the focusing knob until the image seen is sharp. To remove the hood for close examination of the corners of the ground glass, press outward on the hood release clip at either side and lift the hood off. To close the viewing hood, press inward on the side wings, pull the lower flap up, fold flat, and pull the top down to lock.





**GRAFLOK BACK**—This permits the use of all GRAPHIC film attachments such as GRAPHIC film holders, film pack adapters, Grafmatic film holders, and the GRAPHIC roll film holder, as well as the Graflarger back, for converting the camera into an enlarger.

*To use:* Open the top and bottom slide locks by moving to the right. Pull the focusing panel back and slide a GRAPHIC receptacle into place. The focusing panel is removed to permit the use of the thicker accessories such as the roll film holder.

*To remove panel:* Open the slide locks. Press inward on the knurled edges of the panel arms at top and bottom and *slide* the assembly to the right, where it may be lifted off. The roll holder or film pack adapter or Grafmatic magazine may now be fitted and locked in place with the slide locks. NOTE: The film pack adapter and Grafmatic film holder can also be locked in place even when the panel is still on the camera.

## GRAPHIC FILM HOLDERS

Accept 2 cut sheet films, one in each side. The handle of the dark slide is coded, bright side with raised dots outward, indicates unexposed film; the black side outward, indicates exposed film.

*To load.* Pull the slide and open the end flap (see illustration). In total darkness, slide the film into the slots formed by the metal flanges on 3 sides of the film septum. Handle the film by the edges only, keeping the film code notch in the upper right corner as shown.



## SUGGESTED BASIC EXPOSURE GUIDE

Always refer to the film manufacturer's tables or a good exposure meter for more specific data. Use the diaphragm openings given at right with a shutter speed of 1/50th, with film such as Ansco Plenachrome, Ansco Supreme and Kodak Verichrome and Kodak Plus X.

Use a shutter speed of 1/100th with films such as Ansco Superpan Press and Kodak Super XX film.

## STOPPING ACTION

Whenever possible shoot toward or away from the subject, or at an angle of 45° to it, never at right angles to its direction of travel unless it moves slowly or you are some distance from it.

## SUGGESTED "STOP ACTION" TABLE

Subjects moving at ten miles per hour at 45° angle to the camera:

|                                    | <i>Bright areas<br/>snow, beach,<br/>etc.</i> | <i>Average scenes<br/>Light and dark<br/>areas but with<br/>principal<br/>subjects in open</i> | <i>Dark areas or<br/>subject matter</i> |
|------------------------------------|---|--|---|
| Bright<br>(sharp shadows)          | <i>f/16</i>                                   | <i>f/11</i>  | <i>f/8</i>                              |
| Hazy<br>(fuzzy shadow lines)       | <i>f/11</i>                                   | <i>f/8</i>   | <i>f/5.6</i>                            |
| Dull<br>(bright but<br>no shadows) | <i>f/8</i>                                    | <i>f/5.6</i>   | <i>f/4 (use f/4.5)</i>                  |
| Cloudy<br>(heavy clouds)           | <i>f/5.6</i>                                  | <i>f/4 (use f/4.5)</i>   | use flash                               |

Use a shutter speed of 1/50th or 1/100, and set the diaphragm to give you the right exposure—unless a faster speed is needed to stop motion, or a slower speed is needed for more exposure.

| Distance camera<br>to subject | 25 feet | 50 feet | 100 feet |
|-------------------------------|---------|---------|----------|
| Shutter Speed                 | 1/200   | 1/100   | 1/50     |

For more rapidly moving subjects, hold the camera against the body and "pan" by turning at the waist in the direction of the movement of the subject. Be sure to experiment a few times for best results.



## DEPTH OF FIELD AND ITS SIGNIFICANCE

Depth of Field is the term used to designate distance between the nearest and farthest objects from the camera which appear to be satisfactorily sharp on the ground glass of the camera, and as a result in the finished contact print.

Depth of Field is dependent upon the following variables:

- (a) Focal length of the lens.
- (b) Diaphragm opening.
- (c) Distance from the lens to the object focused upon.
- (d) The distance from which the finished print is viewed.
- (e) The viewer's standard of permissible degree of sharpness.

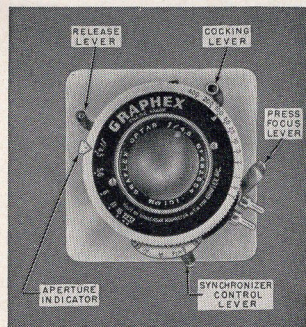
Other variables remaining constant, it follows that:

- (a) The shorter the focal length of the lens, the greater the depth of field.
- (b) The smaller the diaphragm opening, the greater the depth of field.
- (c) The greater the distance to the object being focused upon, the greater the depth of field.
- (d) The greater the distance from which the finished print is viewed, the greater the apparent depth of field.
- (e) The usual standard of acceptable sharpness is the reproduction in the contact print of a small point in the subject by means of a "circle of confusion" or disc not more than .01" in diameter.

**DEPTH OF FIELD—103mm f4.5 LENSES**

| <i>for 2 1/4 x 3 1/4 Camera</i> |                |                |                | <i>1/500" Circle of Confusion</i> |                |                |
|---------------------------------|----------------|----------------|----------------|-----------------------------------|----------------|----------------|
| DISTANCE                        | f4.5           | f5.6           | f8.0           | f11.0                             | f16.           | f22.           |
| Inf.                            | 152' to Inf.   | 121' to Inf.   | 85.6' to Inf.  | 60.6' to Inf.                     | 47.8' to Inf.  | 30.3' to Inf.  |
| 100'                            | 60.4' to 290.' | 54.9' to Inf.  | 46.2' to Inf.  | 37.8' to Inf.                     | 32.4' to Inf.  | 23.3' to Inf.  |
| 50'                             | 37.7' to 74.2' | 35.5' to 84.8' | 31.6' to 119.' | 27.5' to 278.'                    | 24.5' to Inf.  | 18.9' to Inf.  |
| 25'                             | 21.5' to 29.8' | 20.8' to 31.4' | 19.4' to 35.1' | 17.8' to 42.2'                    | 16.5' to 51.6' | 13.8' to 135.' |
| 15'                             | 13.7' to 16.6' | 13.4' to 17.1' | 12.8' to 18.1' | 12.1' to 19.8'                    | 11.5' to 21.6' | 10.1' to 29.1' |
| 10'                             | 9.4' to 10.7'  | 9.3' to 10.9'  | 9.0' to 11.3'  | 8.6' to 11.9'                     | 8.3' to 12.5'  | 7.6' to 14.7'  |
| 8'                              | 7.6' to 8.4'   | 7.5' to 8.5'   | 7.3' to 8.8'   | 7.1' to 9.2'                      | 6.9' to 9.5'   | 6.4' to 10.7'  |
| 6'                              | 5.8' to 6.2'   | 5.7' to 6.3'   | 5.6' to 6.4'   | 5.5' to 6.6'                      | 5.4' to 6.8'   | 5.1' to 7.4'   |
| 4'                              | 3.9' to 4.1'   | 3.9' to 4.1'   | 3.8' to 4.2'   | 3.8' to 4.3'                      | 3.7' to 4.3'   | 3.6' to 4.6'   |





## GRAPHEX SYNCHRONIZED SHUTTER

### *Selecting Speeds:*

Turn the outer knurled ring until desired number is opposite pointer on the front of the shutter. (Additional pressure is required in turning to 1/400 to overcome resistance of the booster spring).

### *Setting Synchronizer Adjustment:*

Move synchronizer control lever to position recommended by the lamp manufacturer's flash tables. Double "M" setting: for faster (black) speeds, use white "M" position, for slower (red) speeds, use corresponding red "M". For gas-filled type "F" lamps or high speed electronic flash not operated by a relay, use "X-F" setting. Place in the "OFF" position if flash is not being used.

### *To Operate:*

Set synchronizer control lever if flash is being used. Set shutter speed ring and aperture indicator (diaphragm control) lever for the exposure required. (Use film exposure guide or a meter for best results). Cock the shutter. Hold the camera steady and carefully squeeze downward on the shutter release lever with the forefinger to make the exposure. For convenience in opening the shutter for ground-glass focusing, the "press focus" lever may be used. Cock the shutter in the normal way, depress the "press focus" lever until the shutter leaves open. To close, move the "press focus lever" forward and upward. Trip the shutter as above. This shutter may be operated by an external solenoid, if desired.

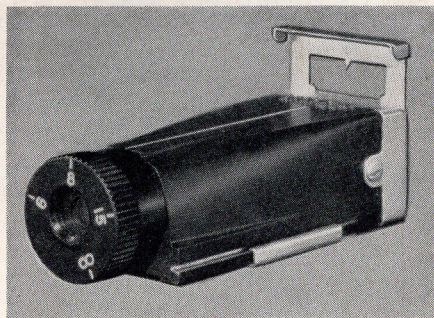






## OPTICAL VIEWFINDER

This has interchangeable masks indicating the field included by various lenses, and it can be used to determine accurately the amount of subject matter to appear on the film. The No. 2 mask is for a 103mm lens and a No. 6 mask is for a 25cm GRAFLEX Tele-Optar lens. To center the image properly, be sure to turn the parallax dial at the rear to correspond with the distance to the subject. Other masks are available.

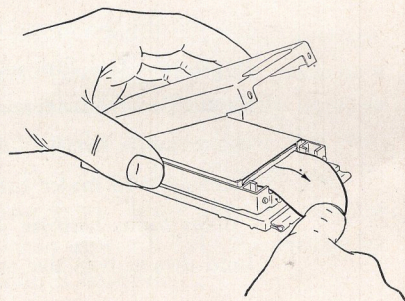


## RANGEFINDER

This is an accessory useful for accurate focusing of the lens. Look through the rear window and turn the focusing knob (controlling the position of the lens) until *both* images of same subject coincide. The lens will then be in focus on that subject. The Rangefinder is available through your GRAFLEX Dealer.

## GRAPHIC FILM PACK ADAPTER

This accepts film pack. Each pack contains twelve pieces of film, which may be loaded into the adapter and unloaded in subdued light. *To load*—open the pack adapter cover by pressing inward on *both* release buttons at the end. Insert the pack with the opening toward the dark slide. Straighten out the paper tabs and close the back of the adapter (see illustration). Be sure that both catches lock. With dark slide in place, pull out and tear off the safety tab before making the first exposure.





## GRAPHIC ROLL HOLDER

Designed for No. 120 size film spool, it uses black and white or color film. For loading, see its special instruction folder.

## GRAFMATIC FILM HOLDER

Compact, convenient means of operating with several sheets of cut film. Magazine holds six films and may be used with either black and white or color. For loading and operating, see the special instruction folder which accompanies each holder.

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The GRAFLEX Technical Service Department will be pleased to answer questions relating to your GRAPHIC Camera and help you solve photographic problems. When writing to this Department, be sure to refer to the camera serial number and if possible, send in negatives with exposure data.

The registration card packed with your camera when it left the factory should be filled out completely and mailed promptly. It will help us to give you more complete service.

For your convenience GRAFLEX maintains completely equipped authorized service facilities in the cities noted below:

### **GRAFLEX, INC.**

*MAIN OFFICE AND FACTORIES: ROCHESTER 8, N. Y., U. S. A.*

*Western Division*

3045 Wilshire Blvd., Los Angeles 5, Calif.

*New York Sales and Service*

Suite 922, 50 Rockefeller Plaza, New York 20, N. Y.

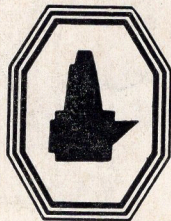
*Canadian Service Facilities*

Photometric, Ltd., 83A Yonge St., Toronto 1, Ont., Canada



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