



SUPER SPEED AND SUPER GRAPHIC CAMERAS



SUPER GRAPHIC AND SUPER SPEED GRAPHIC MANUAL

The Super Graphic and Super Speed Graphic, today's most modern 4 x 5 cameras, boast many new features in addition to those now found in Graflex-made press cameras. The following pages will review basic operation, but even more important, they will explain as fully as possible the purpose and use of the new features.

To "get the most for your money," be sure you study the instructions thoroughly. A fine camera, like any piece of precision equipment, cannot be operated at its best unless its advantages are understood.

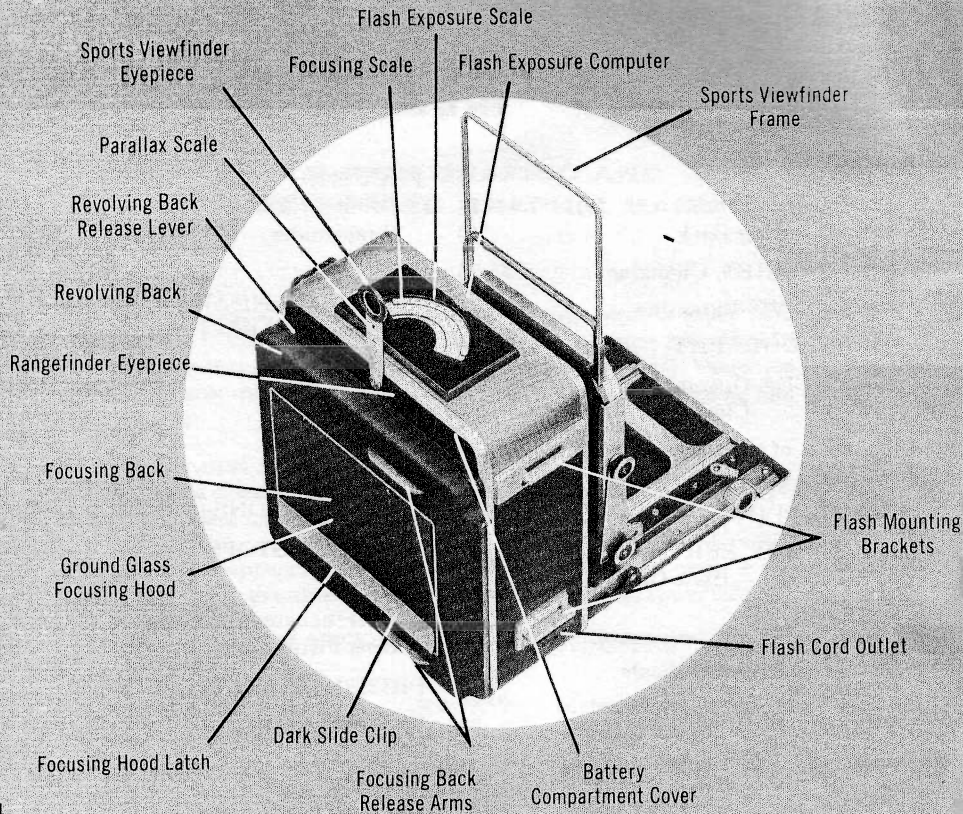
A bibliography appears on page 30 for those wishing to make a more thorough study of lighting, exposure, and other areas of photographic information.

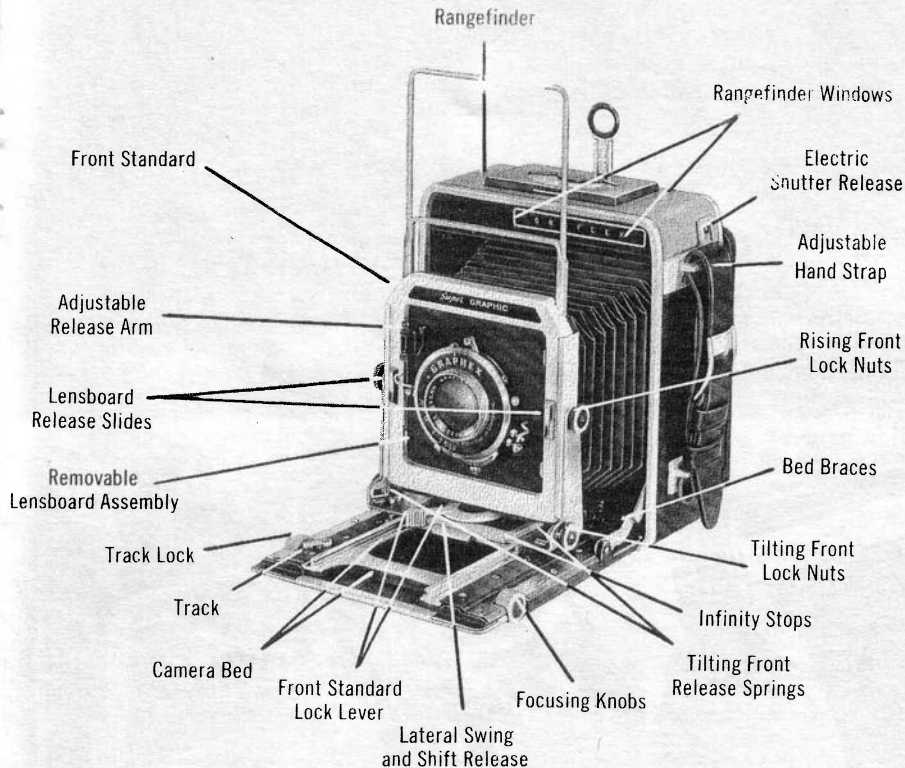
Note: All instructions apply to both the Super Speed and the Super Graphic Cameras.

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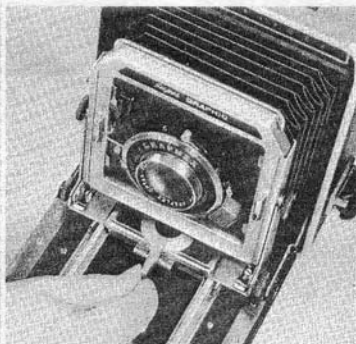


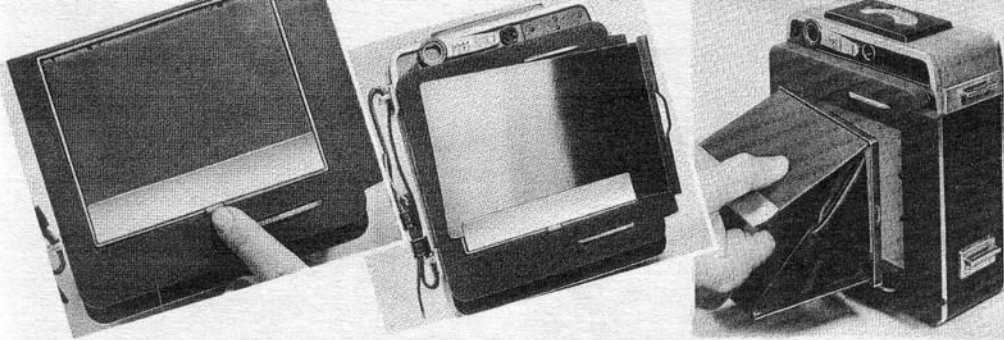


ENING THE CAMERA

Roll up either or both of the knurled *focusing knobs* on the face of the *bed*.

2. Pull down the *bed* until it locks in a horizontal position.
3. Rack the track back to its stop, swing the *front standard lock* lever out straight and pull outward on the track to the *infinity stops*; these *stops* are hinged and should be in an upright position. Fold the infinity stops
- downward to move the front standard beyond the normal working position. See page 9 about *infinity stops* for multiple lens use.
4. Be sure to relock the *front standard*.
5. Lift the *sports viewfinder frame* by pinching inward against the side of the coiled wire frame and pulling upward as far as possible. Swing the *sports viewfinder eyepiece* to an upright position and adjust parallax for 6', 8', and 15', or infinity.

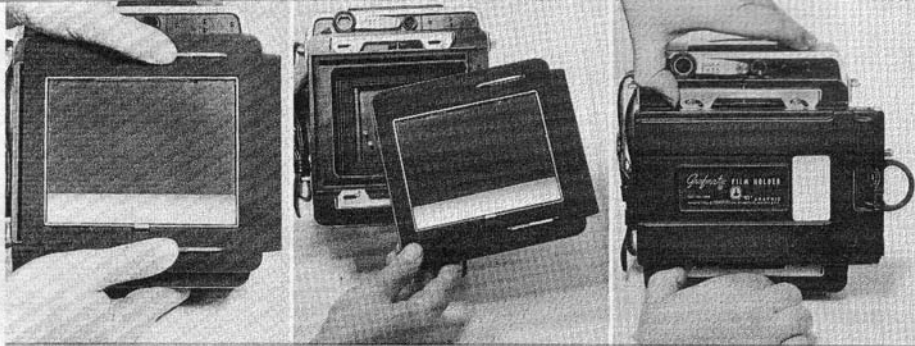




GROUND GLASS FOCUSING

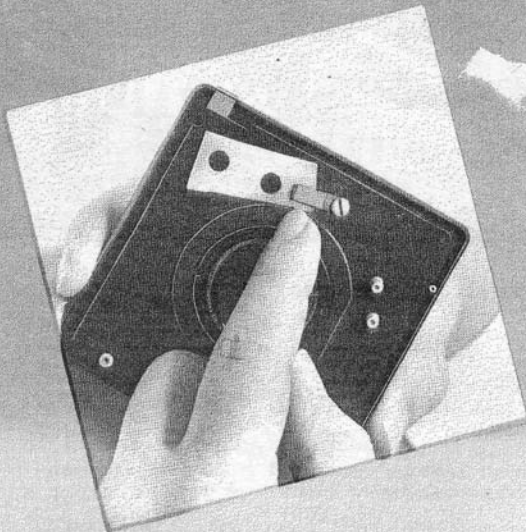
Ground glass focusing is recommended for all critical photography, since it allows checking sharpness of focus, depth of field, composition and shape of the image as it is to be recorded on the film. The ground glass must be used whenever the front is tilted, shifted or swung from the normal position. The *focusing back* of the Super Graphic Camera has an Ektalite field lens under the ground glass for a brighter image.

1. Press down the latch to open the *focusing hood*.
2. To close the hood, first swing the bottom panel upward, and then the top downward until it latches.
3. To remove the focusing hood (*allowing the use of a magnifying glass over the entire ground glass area*), open the hood and pull outward on the top or bottom panel.
4. To reattach the hood, close it and press into the recess, making sure that the catches on both sides engage.
5. The dark slide clip extends all the way across the lower edge of the hood.



FOCUSING BACK

1. To remove the *focusing back*, press inward on the knurled edges of both *focusing back release arms*. —Slide across camera about $\frac{1}{4}$ " and lift off. Accessories such as the Graphic Roll Holders, Graphic Polaroid Back, etc., can now be attached and held in place by the *slide locks*.
2. Release the *slide locks* by pressing to the left. By pressing the slide locks firmly to the right, any attachment can be held solidly in position.
3. To reattach the focusing back, release the slide locks. Place the back approximately in the normal position and slide it $\frac{1}{4}$ " to engage the release arms, and it will snap into place.



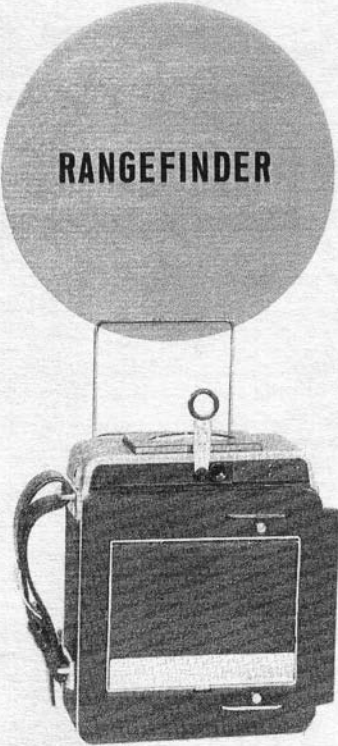
INFINITY STOPS

A set of *infinity stops* must be located to match the focal length of each lens used on the camera.

NOTE: Because of the variations between lenses and the precision curve of the interchangeable matching cams of the rangefinder, true focus for infinity and other distances can best be established only by being able to rack forward for *all distances*.

LENS FITTING SERVICES

Lens and shutter combinations can be mounted on Super Graphic lensboard assemblies by your local Service Dealer, or Graflex Service Center. We recommend that all lenses be measured optically for exact focal length, so that a matching *rangefinder cam* can be supplied with each lens. Be sure to identify and record each lens, matching cam, and set of infinity stops for future reference.



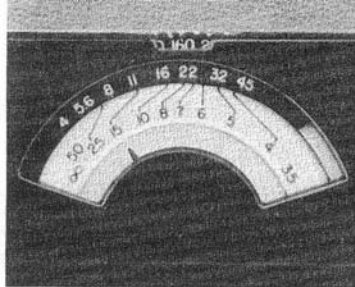
RANGEFINDER

OF THE **SUPER GRAPHIC**

TO USE: 1. Open camera as directed on page 6.

2. Set the front standard against the infinity stops. Look into the rangefinder eyepiece and rack the track forward until the image of your subject as seen in the center of the field exactly coincides with the larger stationary image.

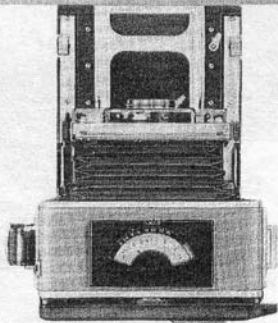
The rangefinder is an integral part of the camera body and functions with interchangeable cams, each made to match a specific lens. With the proper cam in position, the rangefinder and focusing scale pointer will indicate true focus of the lens (unless the front standard adjustment, pages 20-26, are used). Cams for the Graphic Rangefinder on the Pacemaker Graphic "45" cameras *cannot* be used in the rangefinder of the Super Graphic or vice versa.



TO CHANGE THE RANGEFINDER CAM:

1. Open the camera, but *do not* pull the front standard forward.
2. Rack the track forward about 2".
3. Swing forward the pivoted metal cover from under the rangefinder.
4. To remove the cam, pull the free end forward and out.
5. To fit cam into the rangefinder, hold it with the long, smooth edge facing the front of the camera. Slide the narrower end of the cam into the slot of the tube and under the rangefinder follower arm. Compression of the spring in the tube will hold the **cam** in place against the plunger. If the slot appears to be filled (by a plunger moving in from the right as seen in the picture), slide the point of the cam between the cap on the spring and the plunger. Push the plunger over, or tip the camera upright and tap lightly. This will open a space for insertion of the cam.
6. Close the metal cover; rack the track back as far as it will go; pull the front standard out to the infinity stops for which this rangefinder cam has just been inserted. The Super Graphic Rangefinder and focusing scale pointer will operate in synchronization with the focusing of the lens.
7. The Super Graphic Rangefinder will synchronize with all properly fitted lenses from wide angle to long focus telephoto, providing the matching cam is used in each instance.

SCALE FOCUSING

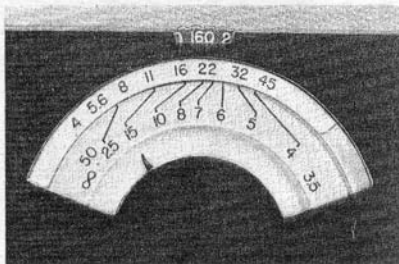


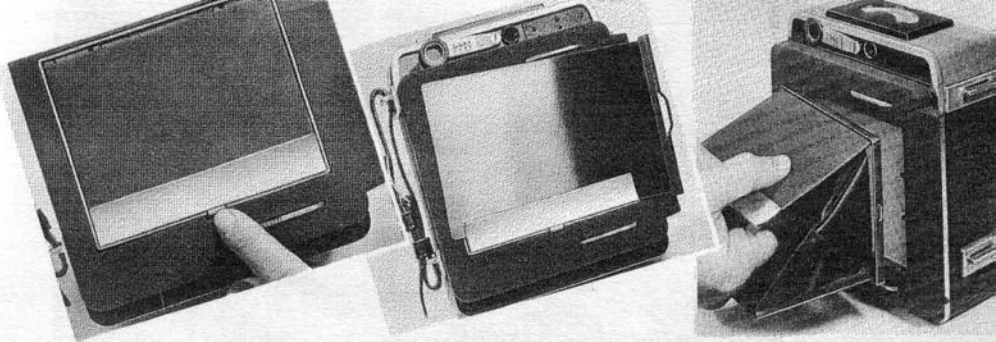
The *focusing scale pointer* on the top of the Super Graphic is controlled by the rangefinder cam. No setting or other adjustment is necessary once the correct cam has been inserted into the rangefinder. See page 14. *Be sure to use the proper set of infinity stops.*

FLASH EXPOSURE COMPUTOR

The adjustable *flash exposure scale* combined with the *focusing scale* on the top of the camera automatically indicates the correct diaphragm opening for normal exposures.

1. From your own experience or data supplied with the film and/or flash being used, select the guide number to produce the type of exposure you prefer.
2. Center this number in the front opening of the plate on top of the camera.
3. Focus the camera with the rangefinder or ground glass. The *focusing scale pointer* will indicate the distance to the subject and from this figure the index line leads to the correct diaphragm opening.

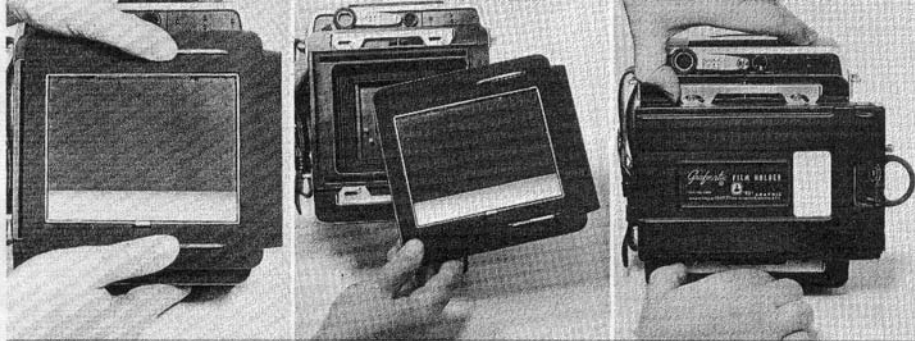




GROUND GLASS FOCUSING

Ground glass focusing is recommended for all critical photography, since it allows checking sharpness of focus, depth of field, composition and shape of the image as it is to be recorded on the film. The ground glass must be used whenever the front is tilted, shifted or swung from the normal position. The *focusing back* of the Super Graphic Camera has an Ektalite field lens under the ground glass for a brighter image.

1. Press down the latch to open the *focusing hood*.
2. To close the hood, first swing the bottom panel upward, and then the top downward until it latches.
3. To remove the focusing hood (*allowing the use of a magnifying glass over the entire ground glass area*), open the hood and pull outward on the top or bottom panel.
4. To reattach the hood, close it and press into the recess, making sure that the catches on both sides engage.
5. The dark slide clip extends all the way across the lower edge of the hood.



FOCUSING BACK

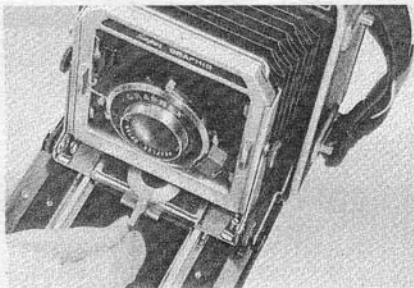
1. To remove the *focusing back*, press inward on the knurled edges of both *focusing back release arms*. —Slide across camera about $\frac{1}{4}$ " and lift off. Accessories such as the Graphic Roll Holders, Graphic Polaroid Back, etc., can now be attached and held in place by the *slide locks*.
2. Release the *slide locks* by pressing to the left. By pressing the slide locks firmly to the right, any attachment can be held solidly in position.
3. To reattach the focusing back, release the slide locks. Place the back approximately in the normal position and slide it $\frac{1}{4}$ " to engage the release arms, and it will snap into place.

REVOLVING BACK

The *revolving back* allows vertical and horizontal pictures to be made without readjustment of the camera or lens. The back rotates full circle and remains light-tight in any position for both right hand and left hand operation.

1. To revolve the back, press the release at the top left corner of the camera body and turn the back. The release will automatically catch when the back is in the horizontal or vertical position.





BELLOWS EXTENSION

Double bellows extension of the Super Graphic permits use of telephoto lenses up to 15" in focal length, and also permits 1:1 copying with 162mm and shorter lenses.

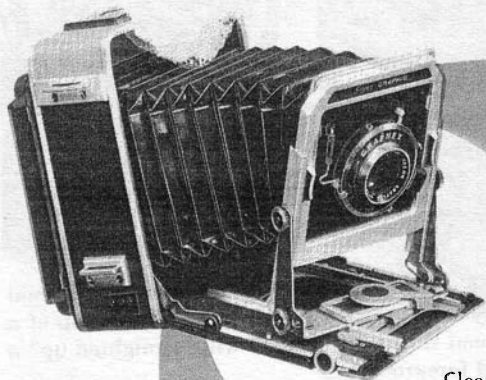
1. To extend bellows, tip the *infinity stops* down, release the *front standard lock*, pull forward and relock. Rack *track* forward as needed.
2. Unless using front adjustments, use care to make sure that the *front standard* is square with the *track*. (Lens-board parallel to the film plane.)

When the lens is closer than $3\frac{1}{2}$ upon subjects necessary to recalculate the f-number in order to determine correct exposure.

1. Divide the marked focal length of the lens into the *bellows extension* you are using to determine the "bellows extension factor."
2. Opposite the "bellows extension factor" on the chart below you can locate the ratio of the image size between the image and the object you are photographing.
3. Use the *exposure factor* to determine the correct exposure just as you would use a *filter factor*. If the factor is 4, increase your exposure two full stops beyond normal.

EXAMPLE: Normal focal length equals 152mm (6"). "Bellows extension factor" for close-up equals 304mm (12"); $12 \div 6 =$ "bellows extension factor" of 2, which in turn requires "exposure factor" of 4; assuming a normal aperture of $f/22$ for the photo, you would use $f/11$ and get a correctly exposed negative image the same size (1:1) as the original object.

Bellows Extension Factor	Ratio of Image to Object Size	Exposure Factor
1.125	1:8	1:25
1.25	1:4	1:5
1.5	1:2	2:25
1.75	1:1.5	3:0
2.0	1:1	4:0



FRONT STANDARD ADJUSTMENT

Your Super Graphic has 4 important adjustments to raise, shift, swing and tilt the lens and shutter. Each movement may be used independently, or with the others. Watch the ground glass image for the improvement or correction that each movement contributes to the appearance of the image. All focusing and composing must be done on the ground glass. Remember that some lenses, notably short focal length lenses, may not adequately cover the entire 4x5 negative with a

Clear, sharp image when moved or swung from the normal position.

It is generally desirable to keep the back of the camera parallel to the subject, unless special effects are desired. The area which will be included in sharp focus (depth of field) will be generally parallel to the lensboard. Turning the lens toward a plane at an angle to the camera will bring more of that subject into sharp focus on the film. Note that the subject matter not included in this plane or area may not come into sharp focus, even though closing the diaphragm will help somewhat.

RISING

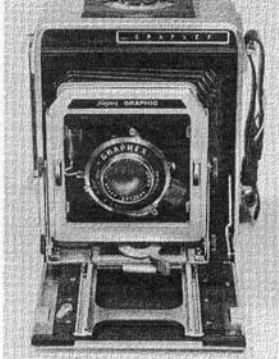
FRONT



The rising front of the Super Graphic permits raising the lens above its normal position and is useful for vertically centering the image. Bringing the top of a building into the picture area without tilting the camera will “straighten up” a tall building and remove unwanted foreground.

1. Loosen both rising front lock nuts. Compose and focus your picture on the ground glass—lift the lensboard frame as needed.
2. Tighten the rising front lock nuts before taking the picture.

NOTE: Short focal length lenses may not cover the entire negative, inclusive of the corners when they are raised, tilted or otherwise shifted from the normal position.



SIDE

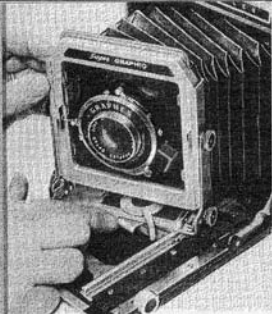
SHIFTING

FRONT

The side shift permits laterally centering the image without swinging the camera, which changes perspective and may cause undesirable distortion.

1. Release the front standard lock.
2. To shift the front standard sideways, press down the lateral shift release and slide the front standard left or right as desired, while observing the effect on the ground glass image.
3. When the adjustments are about as you want them by ground glass inspection, tighten the front standard lock slightly, recheck the adjustments and then lock each securely.

LATERAL



SWING

This permits the lens to be turned toward the plane of a subject on the same level as the camera. It is useful to bring into sharp focus an object such as the entire side of a long building extending at an angle away from the camera.

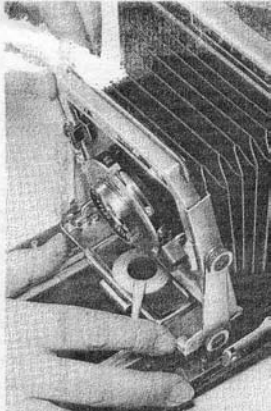
1. Release the front standard lock.
2. Fold the infinity stops down.
3. Depress the lateral shift release on that side of the release which will be under the forward swing of the front standard, and swing the front standard as desired while watching the appearance of the image on the ground glass of the camera.
4. When sharpness and composition are correct, tighten the front standard lock slightly, make a final check of the ground glass and adjustments and lock all securely.

TILTING FRONT

The tilting front changes the location of the plane of sharp focus and is thus often considered to provide control over depth of field. The plane affected will lie above or below the camera. It is useful for photographing a ceiling, a floor area from a balcony, or a stairway.

The tilting front can be used for additional applications as described under the heading "Drop Bed."

1. Loosen the tilting front lock nuts.
2. Tilt the lensboard backward (outwards at the bottom) as desired while checking the appearance of the image on the ground glass. Use this adjustment when the subject matter lies above the camera.
3. To tilt the top of the lensboard forward, press down on both tilting front release springs and press the lensboard in at the bottom and out at the top. Check the appearance of the image on the ground glass as you do this. Use this adjustment when the subject matter slopes away from, or lies below the lens.
4. Tighten the lock nuts securely before taking the pictures.



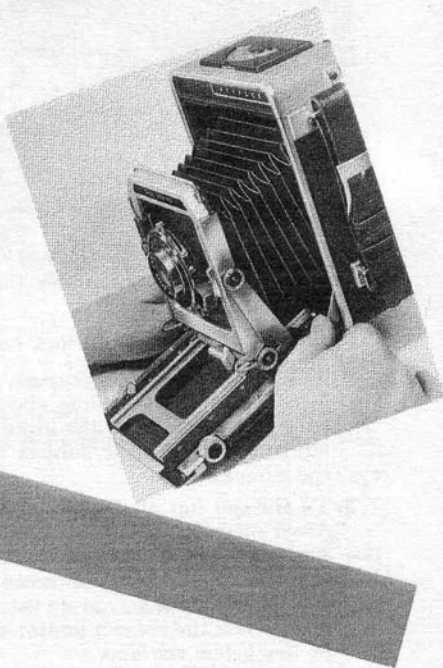
DROP BED

The Drop Bed of the Super Graphic camera is used for two important functions:

- a. To lower the lensboard—the opposite effect of “rising front.”
- b. To eliminate “cut-off” when some wide angle lenses are used, particularly when the back is in a vertical position.

Sometimes the subject matter lies below the level of the camera and it is desirable to shift the lens downward.

1. Press downward with your thumbs on the serrated (knurled) areas of both bed braces and the bed will snap into the dropped position.
2. Loosen the tilting front lock nuts slightly and tilt the lensboard backward at the top as far as possible.
3. Loosen the rising front lock nuts. Raise the lensboard as necessary, to bring the image into proper alignment and perspective.
4. Check sharpness of the image and tighten all lock nuts.

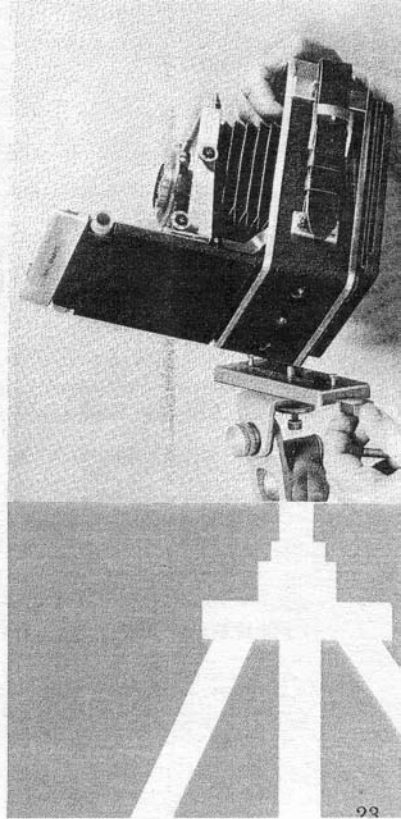


PRESSLOK TRIPOD MOUNT

The Super Graphic has a standard tripod socket in the bottom of the camera body. In addition, it has a pair of keyhole sockets for use with the Presslok Tripod Mount, Cat. No. 4595.

Attach the Presslok Mount to the tripod with the tripod screw. Now for fast, easy mounting of the Super Graphic:

1. Squeeze together the two lock levers on the side of the mount.
2. Locate the Super Graphic so that the two movable posts of the Presslok mount can be inserted into the keyhole sockets of the camera.
3. When the levers are released, the camera will be locked securely to the tripod.
4. To remove camera, squeeze the two lock levers together and lift off.



ELECTRIC SHUTTER TRIPPING SYSTEM BUILT-IN SOLENOID

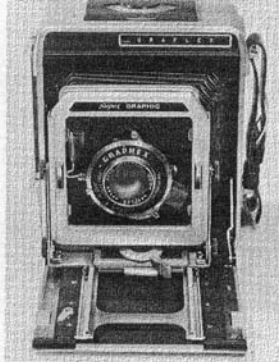
Concealed in the frame beneath the lens-board is a heavy duty solenoid for tripping the shutter. When the electric shutter tripping button on the camera is pressed, the solenoid depresses the mechanical link built into every Super Graphic lensboard assembly, and trips the shutter.

NOTE: The built-in solenoid is for tripping the shutter only, and *not* intended for synchronization with bulbs.



INSERTING BATTERIES IN CAMERA

Two 22½ volt flat type* batteries power the BC (Battery Capacitor) circuit built into the Super Graphic. When an interval exceeding 5-8 seconds is required before the shutter can be retripped, the batteries should be replaced.



SIDE

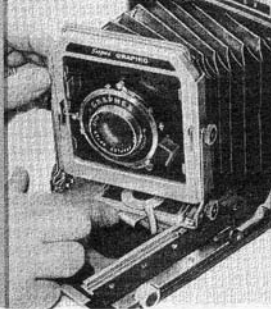
SHIFTING

FRONT

The side shift permits laterally centering the image without swinging the camera, which changes perspective and may cause undesirable distortion.

1. Release the front standard lock.
2. To shift the front standard sideways, press down the lateral shift release and slide the front standard left or right as desired, while observing the effect on the ground glass image.
3. When the adjustments are about as you want them by ground glass inspection, tighten the front standard lock slightly, recheck the adjustments and then lock each securely.

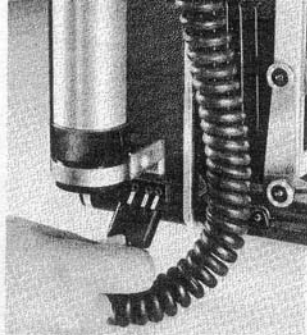
LATERAL



SWING

This permits the lens to be turned toward the plane of a subject on the same level as the camera. It is useful to bring into sharp focus an object such as the entire side of a long building extending at an angle away from the camera.

1. Release the front standard lock.
2. Fold the infinity stops down.
3. Depress the lateral shift release on that side of the release which will be under the forward swing of the front standard, and swing the front standard as desired while watching the appearance of the image on the ground glass of the camera.
4. When sharpness and composition are correct, tighten the front standard lock slightly, make a final check of the ground glass and adjustments and lock all securely.



USING FLASH BULBS IN GRAFLITE

Because of the special BC circuit within the camera, the following instructions apply when the Y cord is used with the standard Graflite battery case. (If the Graflite battery case is to be connected with standard Graflite cords, to the solenoid or contact posts on the shutter, follow the instructions in the Graflite manual.)

1. Fit the 3-pin polarized plug on the Y cord into the flash cord outlet with the wide spacing between the posts to the rear as shown.
2. Insert the 2 plugs identified as REMOTE and SHUTTER into their respective outlets in the Graflite battery case.
3. SET THE GRAFLITE SELECTOR SWITCH AT NO. 1.
4. Set the shutter sync lever for flash bulbs (see pages 10 through 13).
5. The shutter and flash may be tripped by pressing either
 - a. The switch on the Graflite battery case, or
 - b. the electric shutter tripping button on the camera.
6. Extensions may be plugged into the EXTENSION outlet. Only a remote control cord may be plugged into the SOLENOID outlet.

STROBOFLASH AND OTHER ELECTRONIC FLASH

The simplest method of using electronic flash is to mount the lamp head on the Stroboflash mounting tube, or Graflite battery case. Then use the electronic flash cord, Cat. No. 2801, which fits the 3-prong flash cord outlet in the camera.

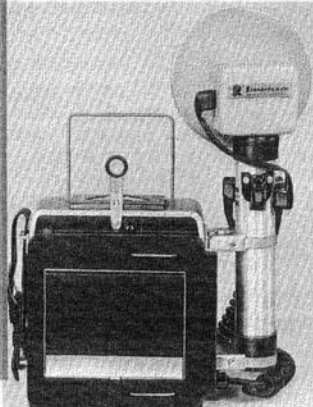
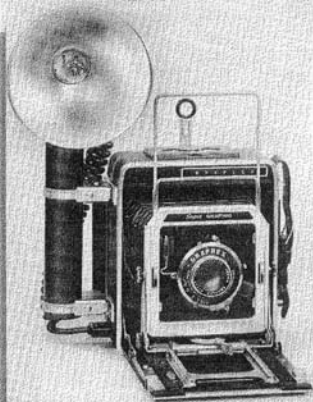
1. Connect the cord to the camera.
2. Set the synchronizer control lever of the shutter at X. (X shutters are automatically adjusted.)
3. Trip the shutter by using the electric shutter tripping button on the Super Graphic camera. It will trip the flash.

An alternative arrangement requires the use of a Graflite battery case and the Y cord connection described on the previous page for flash bulbs. A special jumper cord, Cat. No. 2805, can then connect the EXTENSION outlet with the trip receptacle in the Stroboflash lamp head†. With this arrangement the flash and shutter may be tripped by either the electric shutter tripping button of the camera, or the Graflite battery case switch.*

NOTE: Do not attempt to attach the Y cord directly to the trip receptacle in the Stroboflash lamp head.

†Attach jumper cord exactly as shown

*Batteries must be in battery case



CARE OF YOUR CAMERA

You have purchased a fine camera, carefully designed, produced and tested. It should give you long and most satisfactory service. Protect it from dust and dirt and avoid rough handling; and if possible, keep the camera closed and in the carrying case when it is not in use.

Do not attempt to make any repairs to the shutter and never oil a camera shutter. If it needs attention, turn it over to a competent camera mechanic. Remember that, on general principles, it is a good idea to have the complete camera checked over every few years to keep it in tip top shape. Be sure to keep the contact springs on the inside of the lensboard frame and the corresponding points on the back of the lensboard assembly free from dust and dirt, so that the built-in electrical system of the camera will function properly.

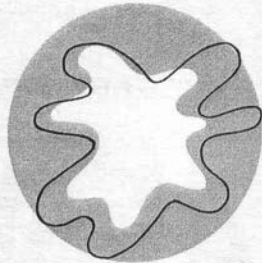
The surface of the lens has received a special hard coating, which will reduce internal reflections and help you make better negatives. Clean the lens carefully, with smooth, easy motions using a camel's hair brush or lens tissue. Moisten the tissue with a drop or two of lens cleaner, but do not apply the cleaner to the surface of the lens.

Your Graflex Dealer is ready to be of service in discussing your camera and its use, and over-the-counter discussions of your pictures will be very helpful to you. The Graflex Consumer Correspondence Department is also at your service to assist you in getting the most out of your Super Graphic Camera. Do not hesitate to write about any photographic problems which you may have. Should such questions relate to the making of pictures, be sure to send in your negatives and such exposure data as you may have available.

PHOTOGRAPHIC BOOKS

AUTHOR

Advanced Flash Photography	Arnold
Basic Photo Series	Adams
Bigger & Better, The Book of Enlarging	Nibbelink
Color—How to See and Use It	Bond
Commercial Photography	Keppler
Feininger on Photography	Feininger
Focal Encyclopedia	
Kodachrome and Ektachrome From All Angles	Bond
Lenses in Photography	Kingslake
Mortenson on the Negative	Mortenson
The New Guide to Better Photography	Abbott
Photo Lab Index	Lester and Carroll
Photography, Its Materials and Processes	Neblette
Photography, Theory and Practice	Clerc
Speed Graphic Guide	Tydings
Strobe, the Lively Light	Luray
Theory of the Photographic Process	Mees



FACTORY SERVICE

Graflex Service Departments are located at the addresses given on the back cover. Each is equipped to inspect, clean and adjust all Graflex products and fit accessories and special lenses. While correspondence should be addressed to the Service Department nearest you, your Graflex Dealer will be glad to take care of the details of packing and shipping equipment for attention. He may also be able to provide such services so that the camera need not be sent away.