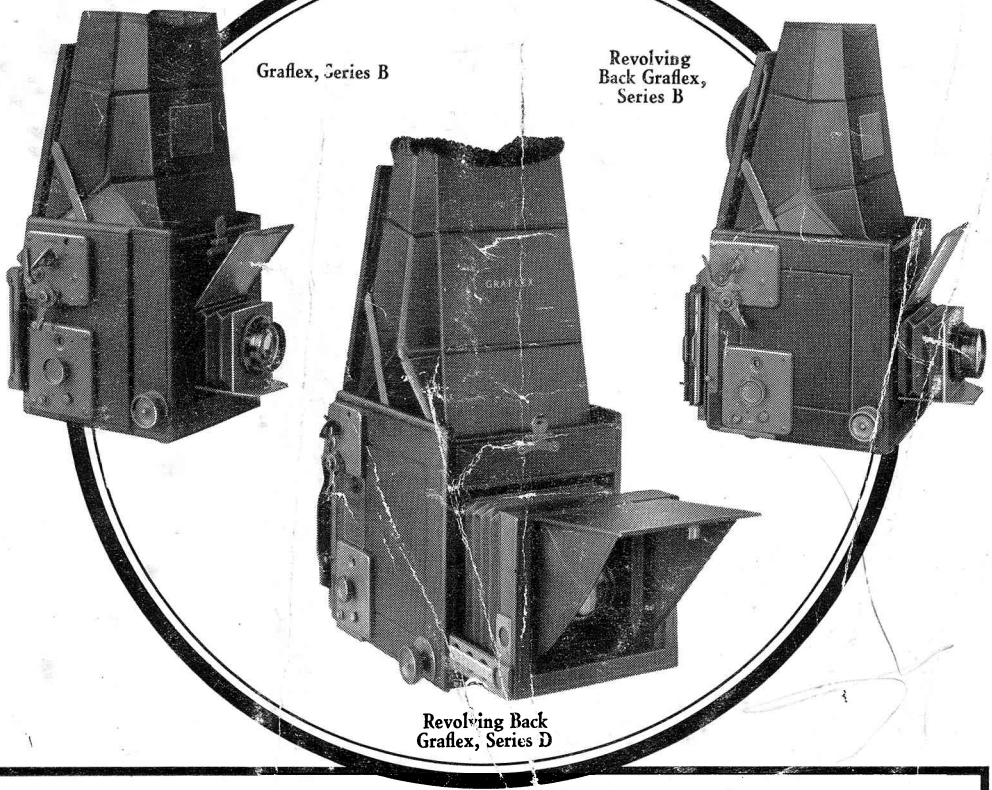
Directions for Operating

GRAFLEX, *Series B*
REVOLVING BACK GRAFLEX, *Series B*
REVOLVING BACK GRAFLEX, *Series D*



FOLMER GRAFLEX CORPORATION
ROCHESTER, N.Y.

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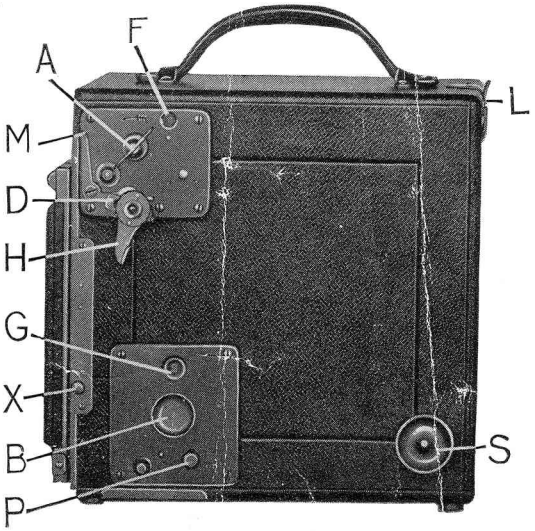

FOCUSING

Release the spring catch L, and raise the cover, which automatically extends the Focusing Hood. Press down the two side arms, locking the Focusing Hood in rigid position. Rack the lens out with the focusing pinion S, which causes the lens cover to open instantly, exposing the lens.

SETTING THE MIRROR Press the lever H down until the mirror locks in focusing position.

THE SHUTTER SPEED PLATE The metal plate, attached to the side of the camera, gives the approximate shutter speeds, in fractional parts of seconds, obtainable with the various combinations of curtain apertures and tension numbers.

THE CURTAIN APERTURES The shutter curtain contains 5 apertures ranging from full opening O to 1/8 of an inch. When the letter O appears at F, the shutter is wide open. The other apertures, 1½, ¾, ⅜ and ⅛, follow in rotation at F as key A is turned to the left.

SETTING THE SHUTTER CURTAIN Push down lever H. Slide the bar D to the left, exposing I, indicating instantaneous exposure. Wind the curtain by turning key A to the left, until the required aperture appears at F. If the curtain is set at a smaller aperture than required, release the curtain by pressing lever M to the left until the proper aperture number is registered at F. Example: If the subject requires an exposure of 1/160 of a second, register the ⅜ curtain aperture at F, and tension 3 at G.

CAUTION A safety lock prevents the rewinding of the curtain before the mirror is set in focusing position. This prevents fogging of the film, making it necessary to set the mirror with the lever H, before rewinding the shutter curtain.

REGULATING THE SHUTTER SPEED Tension or pull on the curtain is regulated by turning the milled head B to the right until the required tension number appears at G. The numbers run from 1 to 6—the highest number indicating the greatest speed. If the tension number is set at a higher tension than required, release tension of spring by sliding escapement P, up and down, until the proper tension number is registered at G.

INSTANTANEOUS EXPOSURES After the shutter has been set, and the image on the Ground Glass Focusing Screen properly focused, the exposure is made by one gentle, downward pressure of the release lever, located on the forward, left-hand side of the camera body. The pressure on the lever simultaneously releases the mirror and curtain. *Slow, instantaneous exposures* of about 1/5 second can be made with the curtain set at O (full opening), and tension No. 1. Pressure upon the shutter release

causes the mirror to rise just before the curtain drops, closing the exposing aperture.

TIME EXPOSURES Press down lever H, and slide the bar D to the right, exposing T, indicating time exposures. Wind the curtain until the letter T is registered at F. After focusing the image, *release the mirror* by pressing the shutter lever, and commence the exposure by a gentle, backward pressure on lever M. At the expiration of the required time, terminate the exposure by a second pressure on lever M.

VERTICAL AND HORIZONTAL PICTURES With the revolving back models press button X and revolve the back to vertical, horizontal, or any intermediate position. This can be done without danger of fogging the plate or film when the dark slide is drawn. With the non-revolving back models the camera must be held on its side.

DEPTH OF FOCUS

Depth of focus is the distance from the nearest to the farthest objects that appear sharp when the lens is focused on any given point.

This depth of focus depends on the focal length of the lens and the size of the stop used. The depth of focus increases as the focal length of the lens and the diameter of the stop decrease.

It is sometimes desirable to have such great depth of focus that practically all of the picture from foreground to distance will be fairly sharp. To secure such general sharpness the stop used should not be larger than *f*.8 and the lens should be focused on an object at the hyperfocal distance rather than at 100 feet or at infinity.

The hyperfocal distance is the nearest point to the camera that has satisfactory sharpness when the lens is focused on infinity. This distance varies with the size of the stop used.

By focusing an object at the hyperfocal distance of the stop used, objects from one-half this distance to infinity will be satisfactorily sharp. To secure general sharpness from approximately 22 feet to

infinity, focus on the distance shown in heavy figures, in the table, opposite the focal length of the lens, and use the stop indicated at the head of that column.

Example: For 5½ inch focus lens, focus at 46 feet, use stop *f*.11 and objects will be in focus from 23 feet to infinity.

HYPERFOCAL DISTANCES

FOCAL LENGTH OF LENS	STOP F	4.5	5.6	8	11	16	22	32
	4⅜″	71′	57′	**40′**	29′	20′	14′	10′
	5½″	112′	90′	63′	**46′**	32′	23′	16′
	6⅜″	151′	121′	85′	62′	**43′**	31′	21′
	7½″	208′	167′	117′	85′	59′	**43′**	29′
	8½″	268′	215′	151′	108′	75′	55′	**38′**
	10″	370′	297′	209′	151′	107′	76′	53′
	12″	534′	429′	301′	219′	151′	110′	76′

The nearer the point focused upon the greater the loss in depth of focus, unless the lens stop is decreased in diameter sufficiently to give the required sharpness to objects in foreground and background.

Table below shows the nearest and farthest objects in focus when lenses of different focal lengths are focused, with stop *f*.8, upon points at different distances from camera.

DEPTH OF FOCUS

FOCAL LENGTH OF LENS	Distances focused upon at Stop *f*.8	6 FT.	12 FT.	25 FT.	50 FT
	4⅜″	62″—85″	9′—17′	15′—66′	22′—Infinity
	5½″	65″—79″	10′—15′	18′—41′	28′—Infinity
	6⅜″	67″—78″	10½′—13¾′	19′—35′	31′—121′
	7½″	68½″—76″	10¾′—13½′	20½′—32′	35′—88′
	8½″	69″—75″	11′—13′	21′—30′	37½′—75′
	10″	70½″—73½″	11½′—12¾′	22½′—28′	41′—65′
	12″	71″—73″	11¾′—12½′	23′—27′	43′—60′