8. Closeups and Parallax Control

The Largest Image Size

How can I take closeups? This question is often asked by the beginner as soon as he learns his camera can be focused no closer than three feet and finds that the image taken at that distance is still too small. Therefore, by definition, a normal picture extends to the nearest focusing point of the Ikoflex. A closeup covers the extended area from the three foot distance to ten inches. Ten inches is chosen as a basic stopping point since most authorities consider this an ideal reading distance. At distances shorter than ten inches, we are in the field of macro-closeups which have limited application to your Ikoflex because its lenses are not interchangeable.

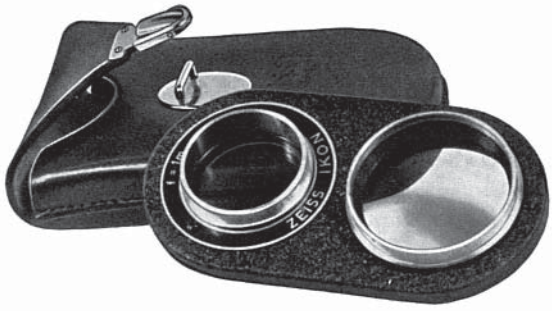
A closeup is desirable whenever you wish to fill the negative completely and so show the fullest amount of subject detail. It is wiser to make a closeup of a small subject than a great enlargement of a section of a picture of the object photographed at three feet. The closeup requires less enlarging to fill an 8 x 10 size print.

Closeup Problems

Your Ikoflex closeup problems are two in number:

1. *Focusing.* Focusing for distances of less than three feet is done with two supplementary lens one of which is fitted over the viewing lens and the other over the standard bottom (taking) lens. These lenses come in different strengths that focus to different nearer distances. The Plus 1 focuses from 40 to 21 inches; the Plus 2 from 20 to 14 inches, and the Plus 3 from 13 to 9 inches. However, converting both lenses to closeup focus is not sufficient; our closeup problem still requires one more correction—that for parallax error.

2. *Parallax Error.* Since the twin-lens reflex has two lenses, one immediately above the other, separated by about 1½ inches, the top lens must be corrected for this higher position so that it will view the same field as the bottom (taking) lenses when closeups are being made. The nearer you come, the greater is the parallax difference, since the triangle formed by both lenses to the subject is more acute. Unless this parallax is corrected, a head of a portrait may be cut right through the forehead, composition will generally be inaccurate, and the final picture effect will always be uncertain. Parallax must be corrected at the same time your top and bottom lenses are being corrected for closeup focusing.



The Ikoprox simultaneously corrects focus and parallax.

Correcting Parallax

Parallax may be corrected by two methods: by shifting the camera between viewing and taking, or by adding a correcting prism to the viewing lens.

1. *Camera shifting.* After the subject is focused for the closeup with a Plus 1, a Plus 2, or a Plus 3 lens set, the camera is lifted vertically 1½ inches before the picture is taken. This method should be used only for emergencies when two plain Plus lenses are being used. It is far inferior to the simultaneous method using the Zeiss Ikoprox.

2. *Simultaneous.* The Zeiss Ikoprox closeup unit contains two lenses which focus together. The top lens also contains a wedge-prism which simultaneously corrects for parallax through the prism's optical effect. The Ikoprox method is far superior to the others because you get exactly what you see without having to lift a camera or make any time-consuming calculations. The Ikoprox is available in a Plus 1 (40 to 21-inch) and a Plus 2 (20 to 14-inch) model. However, the Plus 2 can be slipped over the Plus 1 so that in effect a greater (13 to 9-inch) strength can be had.

The Ikoprox system makes closeup picture taking easy because you instantly see what you get.

Taking the Closeup—Step by Step Procedure

1. Measure the approximate area of your subject in height, width, and depth, and then determine the Ikoprox or Proxar power that will be needed to produce this size.

2. Determine the depth of field that will be needed for overall sharpness and then secure it by stopping down your iris.

TABLE FOR THE USE OF THE IKOPROX CLOSE-UP ATTACHMENT

	Lens setting	Distance between object and camera	Reduction 1 :	Size of picture field Width	Height
F = 1 m	inf.	3' 3¼"	13.3	2' 6" × 2'	6"
	48'	3' ½"	12.3	2' 3¾" × 2'	3¾"
	24'	2' 10½"	11.7	2' 2½" × 2'	2½"
	15'	2' 8"	10.8	2' ½" × 2'	½"
	12'	2' 6½"	10.3	1' 11¼" × 1'	11¼"
	9'	2' 4¼"	9.5	1' 9½" × 1'	9½"
	6'	2' ¾"	8.2	1' 6½" × 1'	6½"
	5'	1' 11"	7.6	1' 5¼" × 1'	5¼"
	4'	1' 9¼"	6.9	1' 3½" × 1'	3½"
	3'6"	1' 8½"	6.4	1' 2¼" × 1'	2¼"
F = 0.5 m	inf.	1' 7¾"	6.7	1' 3¼" × 1'	3¼"
	48'	1' 7"	6.4	1' 2½" × 1'	2½"
	24'	1' 6¼"	6.2	1' 2" × 1'	2"
	15'	1' 5½"	5.9	1' 1¼" × 1'	1¼"
	12'	1' 5"	5.7	1' 1" × 1'	1"
	9'	1' 4½"	5.5	1' ½" × 1'	½"
	6'	1' 3¼"	5.1	11½" ×	11½"
	5'	1' 2½"	4.8	10¾" ×	10¾"
	4'	1' 1½"	4.5	10¼" ×	10¼"
	3'6"	1' 2¼"	4.3	9¾" ×	9¾"

The distance between object and camera must be measured from the rim of the IKOPROX *to the object. For obtaining adequate depth-of-field it is advisable to stop down to f/8 or smaller.*

3. Adjust your lights so that this needed iris opening and a convenient shutter speed can be used.

4. Safe-Set the distance, then move the camera back and forth without ever touching the focusing knob, until the image is sharp on the ground glass and pleasingly composed. Then press the shutter release. The convenience of the ground glass, of course, allows you to focus at any intermediate distance should this be necessary. However, your lighting set-up must remain at one distance; a change of lamp-to-subject distance would require a change in iris opening. If the lamps are stationary, then be careful that the closeness of your body and/or camera to the subject does not block any light from the lamps.

Hints for Perfect Closeups

1. The Ikoprox or Plus lenses do not alter your exposure factor. The regular exposure read from your exposure meter is used, or your regular flashlamp opening for the close distance remains the same.

2. Since the depth of field is shallow at short focusing distances, use your ground glass for accurate focus and composition.

3. Avoid head-on pictures. Your depth of field is shallow. Compose your subject parallel to the film in order to lessen front-to-back distance. This technique is especially recommended for portraits; otherwise the mouth and nose may be distorted and out of focus.