

THE KIN-DAR CORPORATION

SOUTH MILWAUKEE, WISCONSIN



TELEPHONE SO 2-4507

INSTRUCTIONS FOR MOUNTING and OPERATING

The KIN-DAR Hypo-Stereo Attachment on the Exakta VX

The KIN-DAR Hypo-Stereo Attachment is for taking stereo pictures at distances of approximately 9 inches and closer. It is for use with the Model VX Exakta 35 mm. camera. Both pictures of the stereo pair are taken upon each conventional 8 perforation film space, so that the same number of stereo slides will be obtained from a roll of film as 2 x 2 slides. Also, if desired, stereos and 2 x 2's may be intermixed.

The attachment will fit any Exakta Model V or VX that has the outside bayonet type lens flange. Late model VX cameras have this flange, and Model V and early Model VX cameras may be fitted with it by the KIN-DAR Corporation; The Stereo Lab., P. O. Box 37, Boulder, Colorado, or by any qualified camera service shop. Genuine factory flanges, made by Exakta, are used. They have the external flange lips in addition to the regular internal ones which are used to attach most lenses. Lenses which are used with the old flange will fit the new one equally well.

The Hypo-Stereo Attachment is bayoneted onto the camera in the same way as the Exakta lenses, using the red dots, and rotating to the right until it locks in place. CAUTION: The reflex mirror must be in the tripped or "up" position when attaching or removing the attachment, to avoid damage to the dividing septum.

When fitting the attachment to the camera for the first time, it may be necessary to make the following adjustments:

1. The attachment should fit the flange with a smooth, snug feel. If it does not, remove it and spring the external lips of the flange back slightly by carefully pushing against them with a blunt object at the points where they are slitted.
2. With the attachment on the camera, check it for looseness by attempting to rotate it without unlocking it. If there is any play, remove the unit and with a screw driver, bend the spring tab to be found on the upper edge of lens mounting plate very slightly in the outward direction. Try it for fit and if necessary, repeat until the unit attaches easily but with no looseness.

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3. As with any stereo camera, it is essential that both images of the pair are in vertical alignment on the film. Each KIN-DAR Hypo-Stereo Attachment is carefully fitted to an Exakta camera at the factory and will probably need no further leveling adjustment, but it is advisable to check it. To do this, place the camera upon a tripod or other very rigid support, focussed upon a point near the center of the picture. With a ground glass, measure the distance to this same point from the edge of the film track in both of the apertures. If it is not the same, remove the unit and rotate the lens mounting plate slightly to make it the same. This plate is held by three screws in slotted holes.

CAUTION: Do not use a line to check this adjustment. Use a point. Use of a line requires the camera to be precisely level.

After making the leveling adjustment, check the septum for centering and straightness, shifting it if necessary.

After making the above initial fitting adjustments, the attachment will always fit properly after being removed and re-attached. Both front and rear caps have been provided to keep it clean and safe from mechanical injury when off the camera.

Before removing the attachment, be sure the camera is tripped to avoid damage to the dividing septum and the reflex mirror. The camera may be tripped without exposing the film either by setting the diaphragm ring as far as it will go past $f/45$, or by putting on the front lens cap. The camera can be recocked without transporting the film by turning the shutter speed dial to the left of the viewfinder.

The Hypo Stereo Attachment may be used with either the waist level or the penta prism finders. However, it is most effectively used with the latter. In either case, the finder should be removed and the viewfinder mask which is provided should be slipped into place beneath it. This mask gives the precise center and framing of one of the pictures of the stereo pair.

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THE KIN-DAR HYPO-STEREO ATTACHMENT GUARANTEE

Your Kin-Dar Hypo-Stereo Attachment is fully guaranteed for one year from date of purchase against defective workmanship and materials when purchased from an authorized Kin-Dar dealer. If defects in material or workmanship develop during the guarantee period, it will be repaired or replaced (our option) without charge.

This guarantee does not cover damage caused by accident, misuse, mishandling, wear, repairs by unauthorized persons or establishments, or any other reason beyond our control.

NOTE: GUARANTEE NOT IN FORCE UNTIL YOU HAVE MAILED REGISTRATION CARD PROPERLY FILLED OUT.

THE KIN-DAR CORPORATION

908 Sherman Avenue

South Milwaukee, Wisconsin

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GENERAL INFORMATION

The KIN-DAR Hypo Stereo Attachment

The KIN-DAR Hypo Stereo Attachment is most effective when used hand held. In this way full advantage is taken of its flexibility and easy operation.

Use of flash, either electronic or bulb, is usually necessary since existing light will seldom be intense enough to permit the use of small enough stops to obtain the desired depth of field.

The attachment is provided with automatic stops so that the framing and focusing may be done with the lenses wide open. When the camera is tripped, they automatically stop down to the pre-determined opening for which the knurled ring is set. With the camera cocked, they are opened by pressing the button on the top of the attachment.

Because it would be quite difficult to manipulate a focusing adjustment at such short distances with the required precision, the attachment is designed to be used at fixed distances. The working distance is varied by the use of achromatic supplementary lenses, which are screwed into the threaded front of the attachment and into each other if more than one is used.

The field sizes and working distances are as follows:

<u>Lenses</u>	<u>Approximate Working Distance</u>	<u>Approximate Field Size</u>
No Supplementary Lens	9"	3 3/4" x 5"
One 300 mm Supplementary	5 1/2"	2 1/8" x 2 3/4"
Two 300 mm Supplementary Lenses	4"	1 1/2" x 2"
Three 300 mm Supplementary Lenses	3 5/8"	1 1/4" x 1 5/8"

The field size desired is decided upon and the proper lens combination attached. Then the camera, hand held, is moved into the proper position of framing and focus, and tripped.

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MOUNTING SERVICE FOR SLIDES MADE WITH THE KIN-DAR HYPO-STEREO ATTACHMENT

It is not necessary to purchase special stereo film for use with the KIN-DAR Hypo-Stereo Attachment. Standard 20 exposure rolls are the most convenient and should be developed uncut and sent to the following address for mounting:

The Stereo Lab.
P. O. Box 37
Boulder, Colorado

The costs for mounting are as follows:

Mounting in Emde aluminum mounts and frames	15¢ each
Mounting in Emde aluminum mounts and glass covered	50¢ each

Remittance should be sent with the film. Colorado residents please include 2% sales tax.

Slides are returned by first class or fourth class mail. If faster service is desired, include postage for air mail or special delivery.

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With sincere thanks to Hubert A. Reeves for this splendid article:

"KINDAR VARIABLE FOCUS ATTACHMENT"

"The base of this system is a Proxivar variable and continuous close-up lens with a range from plus one to plus nine diopters (Sold by Spiratone). As all Kindar users know, the device has a fixed focus of approximately $8\frac{1}{2}$ " without the use of supplementary lenses. Adding plus diopters decreases this distance depending upon the number of plus diopters used, and conversely adding minus diopters increases the focus distance.

Use of the Proxivar with the Kindar gives a subject to lens distance which can be varied continuously from about 7" to 2". This is fine for extreme close-ups that it seemed a shame that it could not be used to extend as well as contract the normal focusing distance of the Kindar. After scratching my brain over this problem for sometime I finally came up with the answer which was actually relatively simple. I reasoned that if plus lenses can be combined to increase the diopter rating and similarly minus lenses can also be combined ($(+1) + (+2) = +3$ or $(-1) + (-2) = -3$) then why couldn't plus and minus diopters be added algebraically? Thus $(+1) + (-3) = -2$. I experimented by inserting a filter adapter between the Kindar and the Proxivar and then trying various minus diopter lenses. It worked! I finally settled on a minus four to be permanently installed between the Kindar and Proxivar. With this arrangement I can now focus continuously from approximately 20" to $2\frac{1}{2}$ ", or to express it in diopters, I can now vary my supplementary diopters from $(+1) + (-4) = -3$ to $(+9) = (-4) = +5$.

This variable diopter power and focus is a tremendous advantage in 3-D nature photography where in so many instances, time is of the essence. Even in taking pictures of flowers and other inanimate objects it is possible to maneuver until the frame is filled to your satisfaction, whereas the use of fixed diopter values as often as not results in unsatisfactory framing."

HUBERT A. REEVES

We believe that all of our members will find the above article of special interest to them and we greatly appreciate Hubert Reeves for contributing his findings for the benefit of all members.