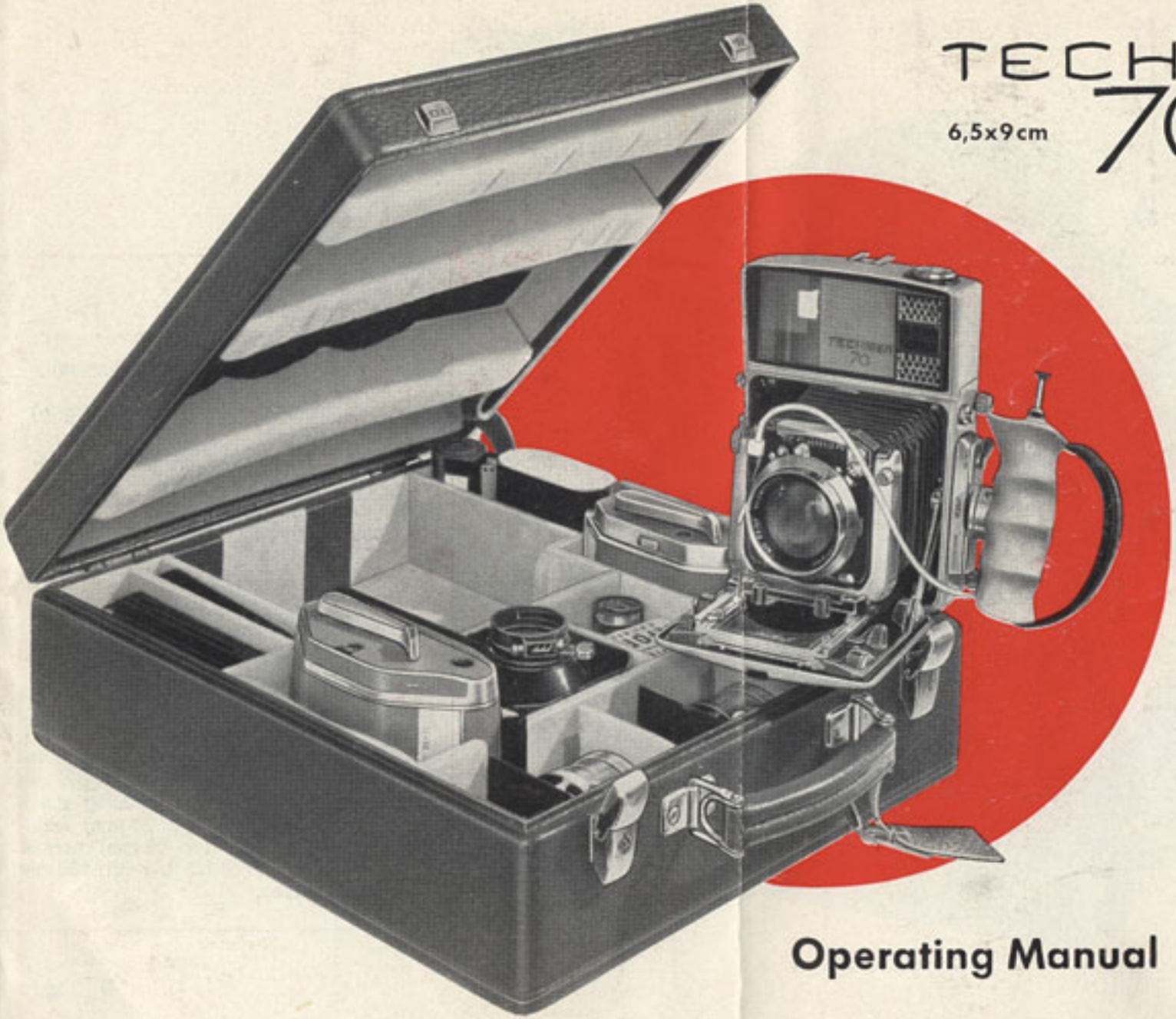
TECHNIKA 70

6,5x9cm 2¼ x 3¼ in.



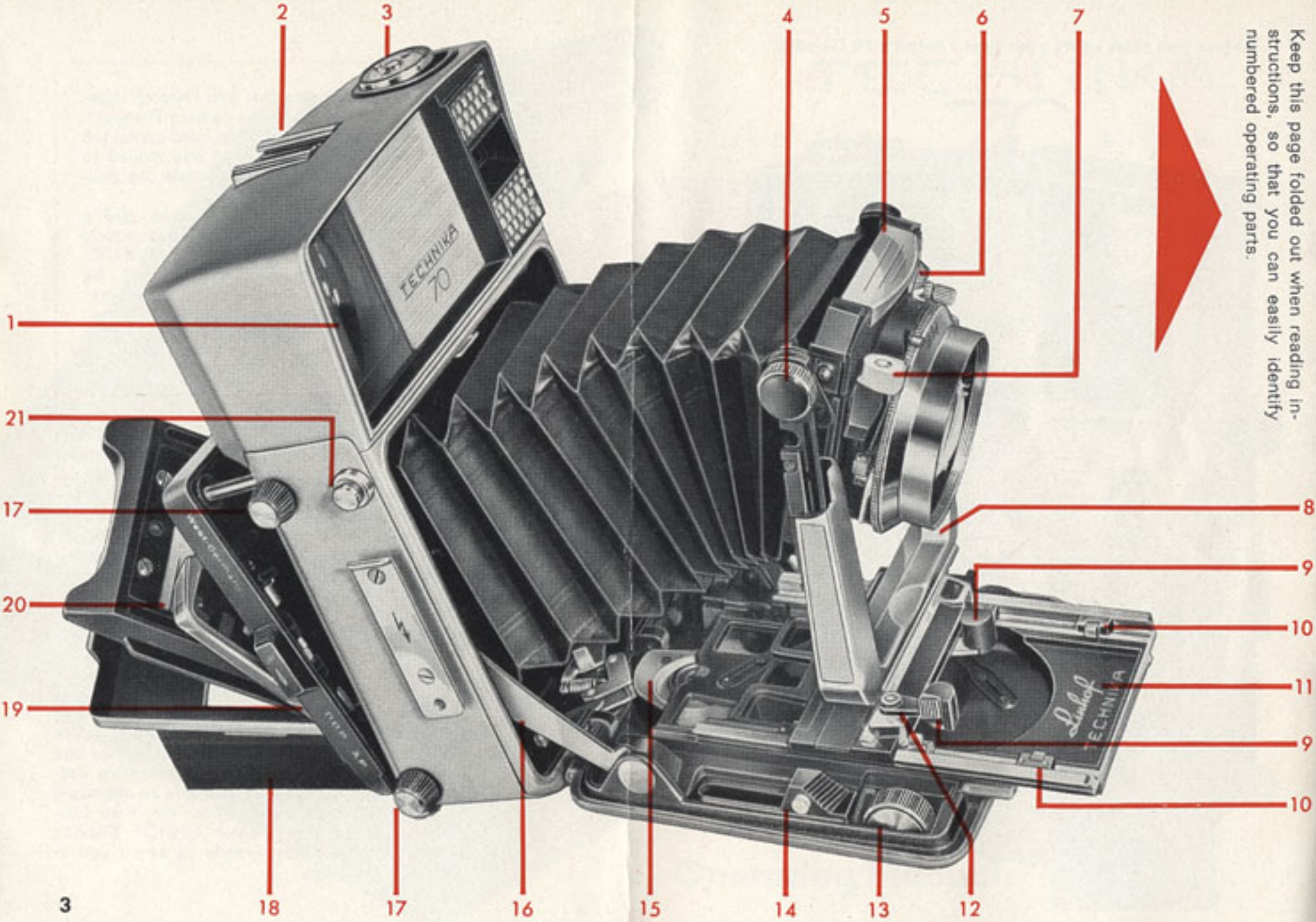
Operating Manual

Linhof

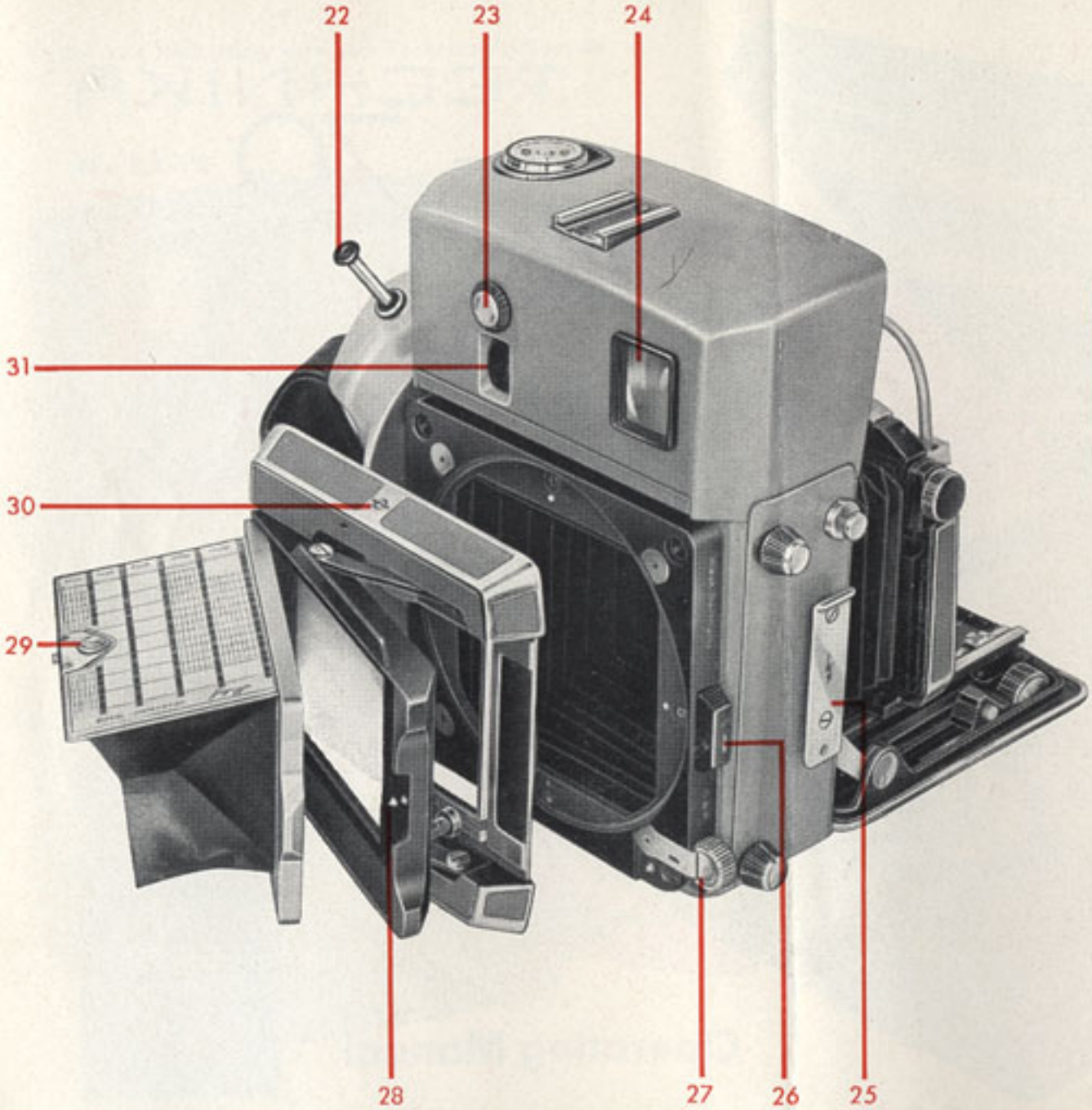
Before you start using your new Technika 70 Camera . . .

Please make sure that you receive together with your outfit the camera Passport. The guarantee registration card contained therein should be filled in and mailed to LINHOF immediately to validate the guarantee.
Upon receipt of the registration card a free sample copy to the famous quarterly magazine INTERNATIONAL PHOTO-TECHNIK (Grossbild-Technik) will be mailed to you. In addition our Customer Service Department will send you information on LINHOF equipment from time to time.

. . . please take the time to get acquainted with its many unique features and smooth operations described in the following pages. Detailed instructions are supplemented by cross-referenced, numbered illustrations with convenient, brief reviews of important operating steps. They are worth knowing! The more you know about the operation of your TECHNIKA 70, the easier and better will it fulfill your most exacting demands.
Your TECHNIKA 70 is ruggedly built in the best Linhof tradition. Yet, it is a precision instrument and you should treat it as such. Make it a habit to keep your camera free of dust, sand or spray, and to avoid rough handling. This is to your own advantage, as it will insure readiness, consistently reliable performance and lasting service. After continuous intensive use, periodic inspection and servicing is as important for your camera as it is for your car. Your LINHOF dealer or the nearest LINHOF Service Department are always ready to serve you in every way possible.



Keep this page folded out when reading instructions, so that you can easily identify numbered operating parts.



Specifications

Height: 8 1/4 in.
Width: 6 1/4 in. (without anatomical grip)
8 5/8 in. (with anatomical grip)
Depth: 3 3/4 in.
Weight: 5 1/4 lbs. (with anatomical grip; without lens)
Maximum bellows extension: 12 1/4 in.

Adjustability

Lens standard:
Vertical rise: 1 1/4 in.
Lateral shift: 1 in. to each side
Lens tilt around horizontal axis: 15° forward and 15° backward
Drop bed inclination: 15°
Tilt or swing of camera back: up to 15° to all sides

Automatic parallax correction and automatic compensation for loss of field are provided in rangefinder focusing down to 47 in. with 65 mm (or 53 mm) wide-angle and 100 mm (or 80 mm) normal lenses; down to 6 1/2 ft. with 180 mm telephoto lenses.

Operating Parts and Components.

1. Front lens of Multifocus range/viewfinder
2. Shoe for accessory finder, flash unit, etc.
3. Scale of built-in exposure meter
4. Release knob for forward or backward lens tilt
5. Locking bar for lensboard
6. Knurled knob for rising front adjustment
7. Rapid-lock cable release socket (on lensboard)
8. Lens standard
9. Pull-out grips
10. Fold-up infinity stops
11. Upper track
12. Locking lever for lateral shift of standard
13. Focusing knob
14. Selector slide for changing rangefinder coupling cam
15. Interchangeable rangefinder coupling cam disk for three lenses
16. Bed strut (two notches, not shown in illustration)
17. Locking knobs for swing frame adjustment
18. Fold-away hood for ground glass focusing
19. Swing frame
20. Revolving back frame
21. Post for carrying strap
22. Cable release plunger inserted in anatomical grip
23. Switch button for viewfinder telephoto frame
24. Eyepiece of Multifocus range/viewfinder
25. Bracket for flash unit or right hand anatomical grip
26. Release for infinity catch of swing frame
27. Release for quick-change back
28. Snap button for focusing hood frame
29. Catch button for focusing hood
30. Focal plane indicator
31. Automatic distance indicator

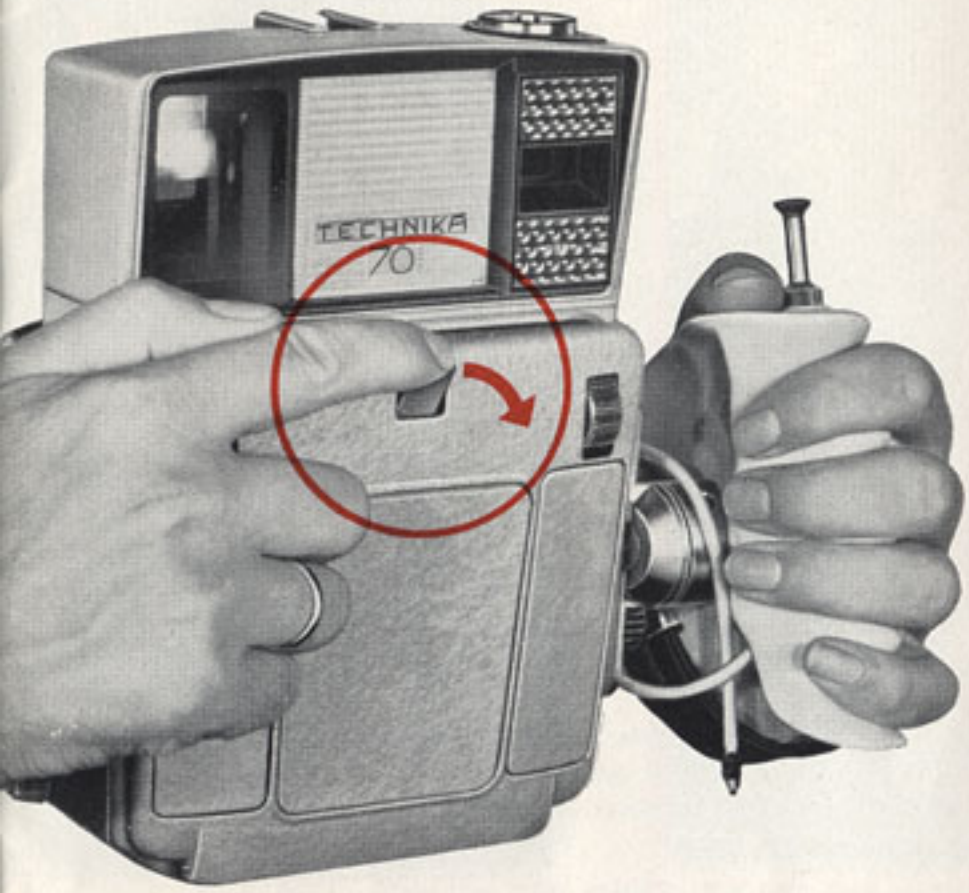
1 OPENING THE CAMERA

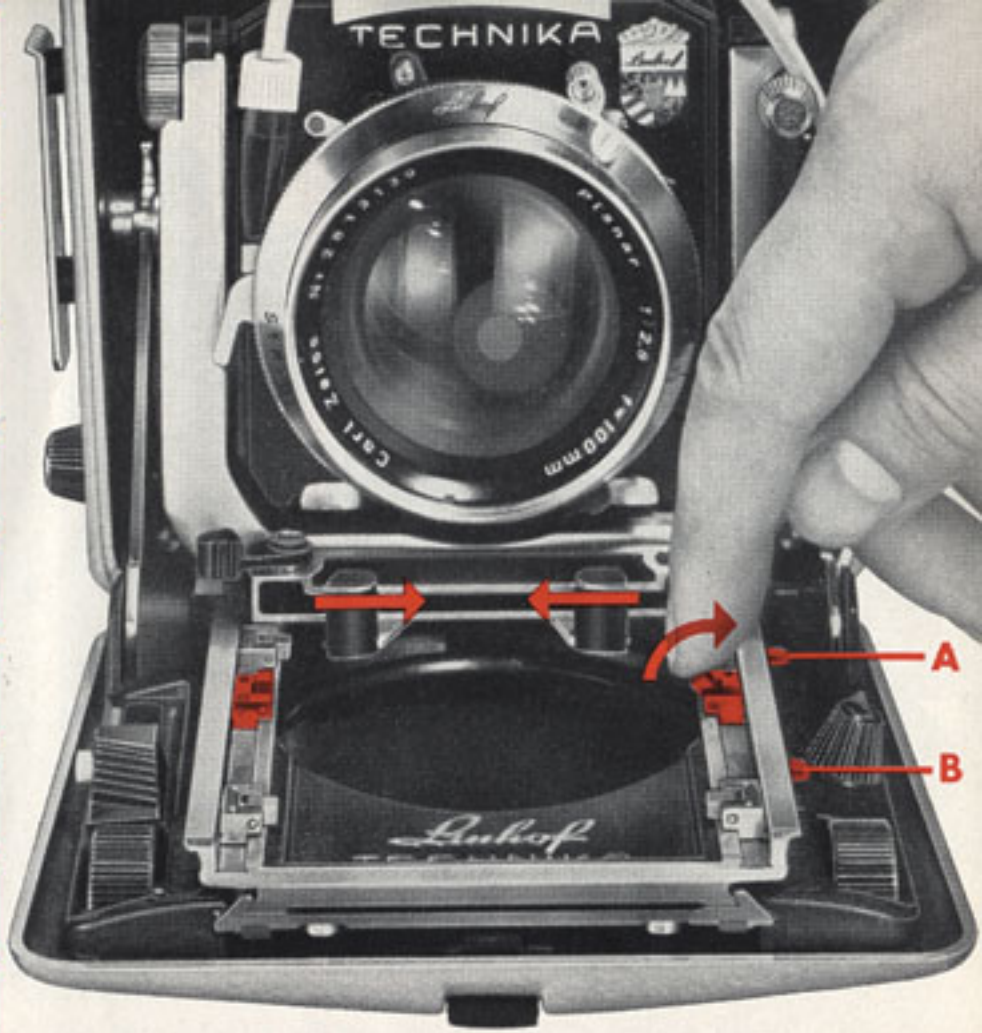
Lens, shutter and other vital operating parts of the TECHNIKA 70 are well protected while the camera is closed, during transportation or storage. To open the camera, push the drop bed release catch down and forward; let the bed drop down 90° until the bed struts (16) click into the first notch.

2 INFINITY POSITION – FOCUSING – TRIPLE EXTENSION

The upper track (11) is fitted with fold-up stops (ill. 2) which establish the infinity position for the lens standard. One pair of parallel stops is used for each lens associated with the camera. Infinity stops for different lenses have different colors for easy identification: Red is the distinguishing color of the infinity stops for the normal, black for the wide-angle and green for the telephoto lens. If more lenses are installed, additional colors are used, such as yellow for a further wide-angle lens, blue for a second telephoto lens, and so on.

In accordance with the lens you intend to use, fold up the appropriate matching pair of stops; keep all other stops folded down. Grasp the pull-out grips (9) and press them together while you draw the lens standard (8) out on the track and against the folded-up infinity stops. When you let go the pull-out grips, the lens standard is automatically clamped rigidly to the upper track. To focus on subjects closer than infinity, rotate the right or left focusing knob (13). To obtain additional bellows extension (for extreme close-ups, macro photography, etc.), first disconnect the cable release from the socket on the lensboard, and also detach it from the anatomical grip. Then hold down the track catch (A) and pull the upper track forward until it clicks into position. Use the focusing knobs (13) for fine focusing on the ground glass. Re-connect the cable release to the rapid-lock socket on the lensboard. To return the upper track to its normal position, hold down catch (B) while you slide the track back until it clicks into place.





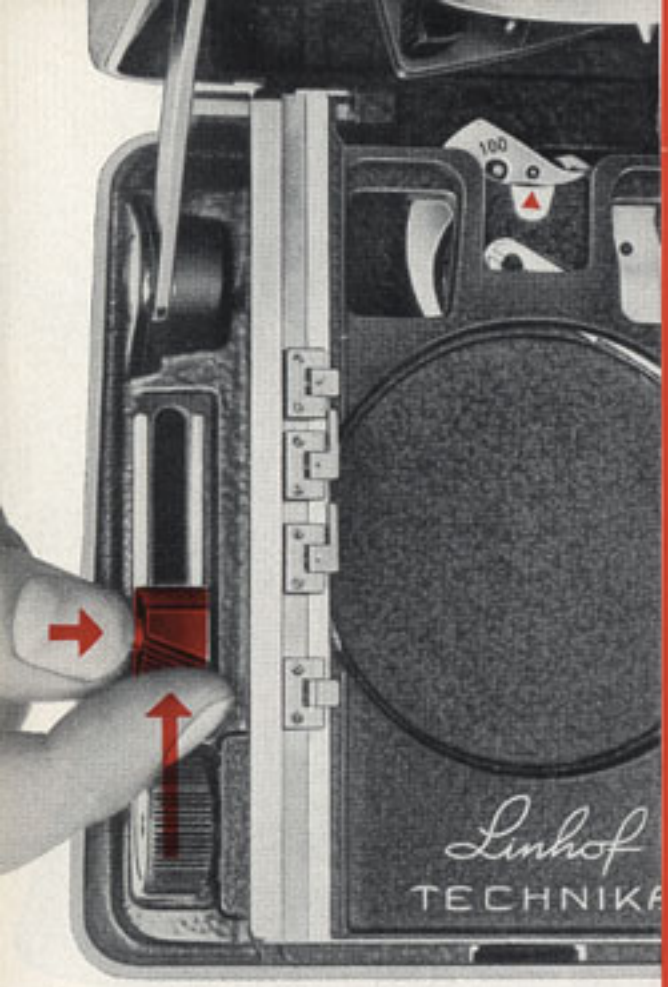
1

TO OPEN CAMERA

Push bed release down and forward – let the drop bed down 90° until it clicks into position.

2

INFINITY – FOCUSING – BELLOWS EXTENSION: Fold up infinity stops for desired focal length **only** – red = normal, black = wide-angle, green = telephoto – Draw lens standard by pull-out grips (9) out to infinity stops – Rotate knobs (13) to focus on closer subjects – For added bellows extension, hold down catch A while pulling track (11) forward – Hold down catch B when you push the track back to normal position.

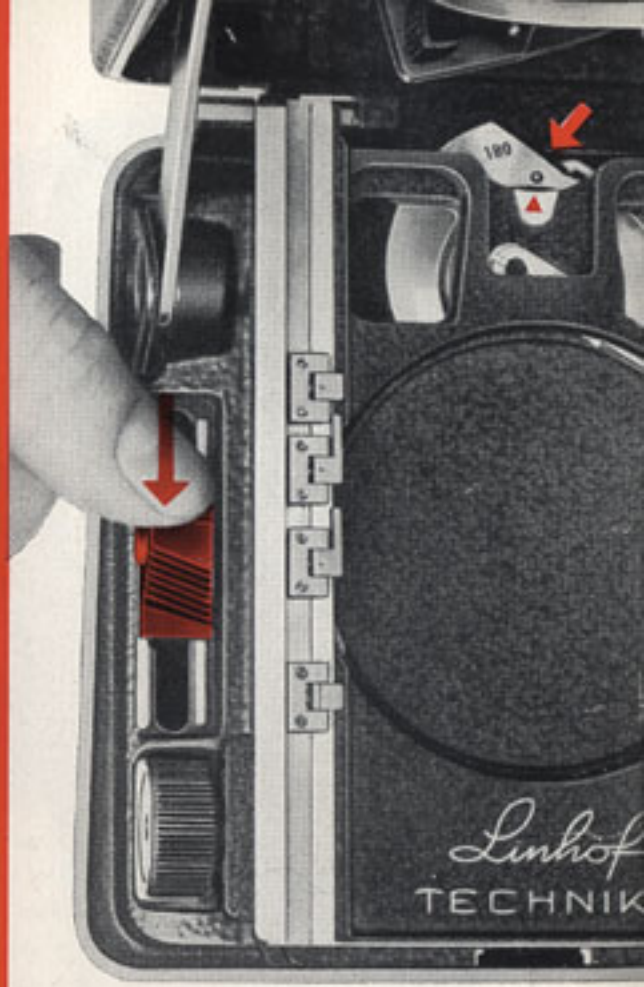


3

COUPLING CAM SELECTION FOR RANGE-FINDER FOCUSING: Push lens standard fully into camera body. Depress locking button at side of cam selector slide (short arrow) and push slide back (long arrow).

4

Move selector slide back and forth – without, however, returning fully to its starting position – until movement is automatically blocked and the index mark of the cam disk is opposite the red triangle.



5

The applicable focal length is to the left of the index mark. Move selector slide fully forward to lock. Repeat complete cycle to select another cam.

POSITIONING THE RANGEFINDER CAM

Your TECHNIKA 70 is supplied with a rangefinder coupling disk which accommodates focusing cams for up to three different lenses. If more than three lenses are used with the rangefinder, one or more additional disks are required. When focusing with the Multifocus range/viewfinder, the cam in coupled position must match the lens used. The red triangle at the end of the upper track tells you which cam is in position. The cam selector slide (14) permits easy change-over from one to another cam on the same disk:

3 Push the lens standard (8) all the way into the camera body. Depress the selector locking button in the direction of the short arrow while moving the selector slide backwards (long arrow).

4 The cam selector slide is now free to be moved back and forth to rotate the cam disk. Do not slide the selector all the way forward as it will lock in that position. Continue the back and forth movement until it is automatically blocked.

5 Now the index mark of the cam disk is aligned with the red triangle; the applicable focal length is engraved to the left of the index mark. – Finally, slide the cam selector all the way forward to engage the locking button. To select another cam on the same disk, repeat steps 3, 4 and 5. To change the complete cam disk for more than three focal lengths, see pages 28–29.

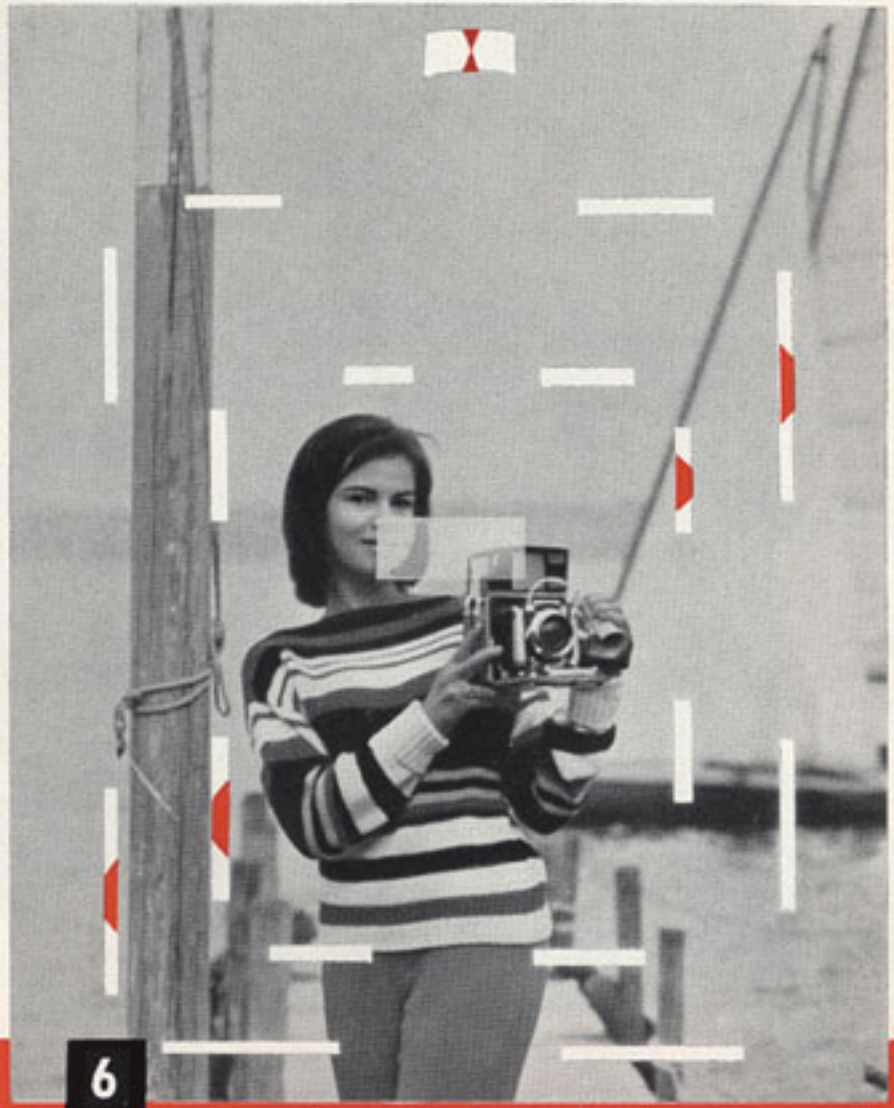
6

SHARPNESS AND COMPOSITION

You can control sharpness and composition by using either the ground glass back of your TECHNIKA 70 or the Multifocus range/viewfinder. For ground glass focusing, push the catch button (29) to open the focusing hood (18). The rangefinder image is in the center of the Multifocus viewfinder; at first you will see double images or contours, especially of vertical lines. (See above, left.) Rotate the focusing knobs (13) until the rangefinder images superimpose. (See above, right.) Rangefinder focusing – looking straight into the eyepiece – is preferably done on the important parts of the subject which must be perfectly sharp. The focused distance is also shown on the automatic distance indicator (31).

7

The image areas for the three principal focal lengths are shown within luminous frame lines in the viewfinder indicating the $2^1/_4 \times 2^3/_4$ in. (56 x 72 mm) format. The outer lines indicate the field of 65 mm (or 53 mm) lenses; the middle lines frame the image area of 100 mm (or 80 mm) lenses; the smallest frame shows the field of 180 mm lenses. (The TECHNIKA 70 is available with a viewfinder combination for 65-100-180 mm, 53-100-180 mm or 53-80-180 mm lens sets.) When you are not using the 180 mm lens, turn the button (23) to switch off the luminous telephoto frame in the viewfinder, so that you have an unobstructed view for the normal and wide-angle lenses. The finder image areas are automatically corrected for parallax and for reduction of field down to a focusing distance of 47 inches with wide-angle and normal lenses, and down to $6^1/_2$ ft. with 180 mm lenses. When you focus on still closer subjects, red signals appear in the luminous frame lines to remind you that the automatic compensating mechanism is no longer in operation, and that you must make any additional correction yourself. – **The viewfinder is designed for the vertical format. Therefore, when you use the Multifocus range/viewfinder for hand-held exposures, always make sure that the position of the camera back matches the finder. For hand-held horizontal pictures, simply turn the whole camera 90° as illustrated on page 12.** The level indicator visible near the top edge of the finder image is an important aid in avoiding converging lines when using wide-angle lenses; a level camera position is essential particularly in architectural photography. The two pointers of the indicator match when the optical axis of the lens is perfectly level, or in other words when the film plane is perfectly vertical. (See illustration at left.) IMPORTANT: All camera adjustments (tilts, swings, etc.) must remain in neutral position for use with the Multifocus finder! When your subject calls for camera adjustments, you must use the ground glass.



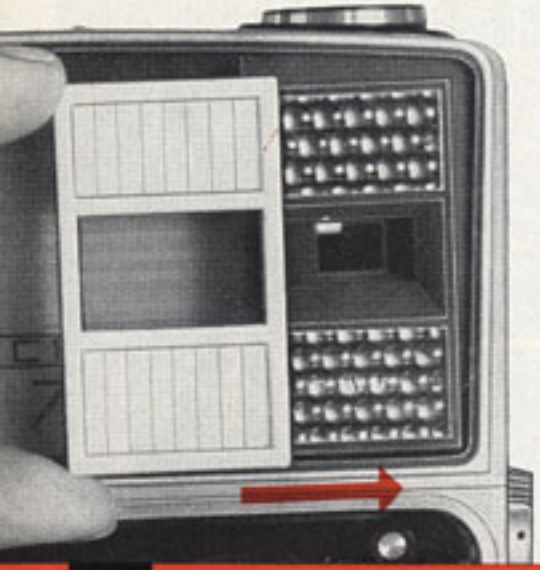
6

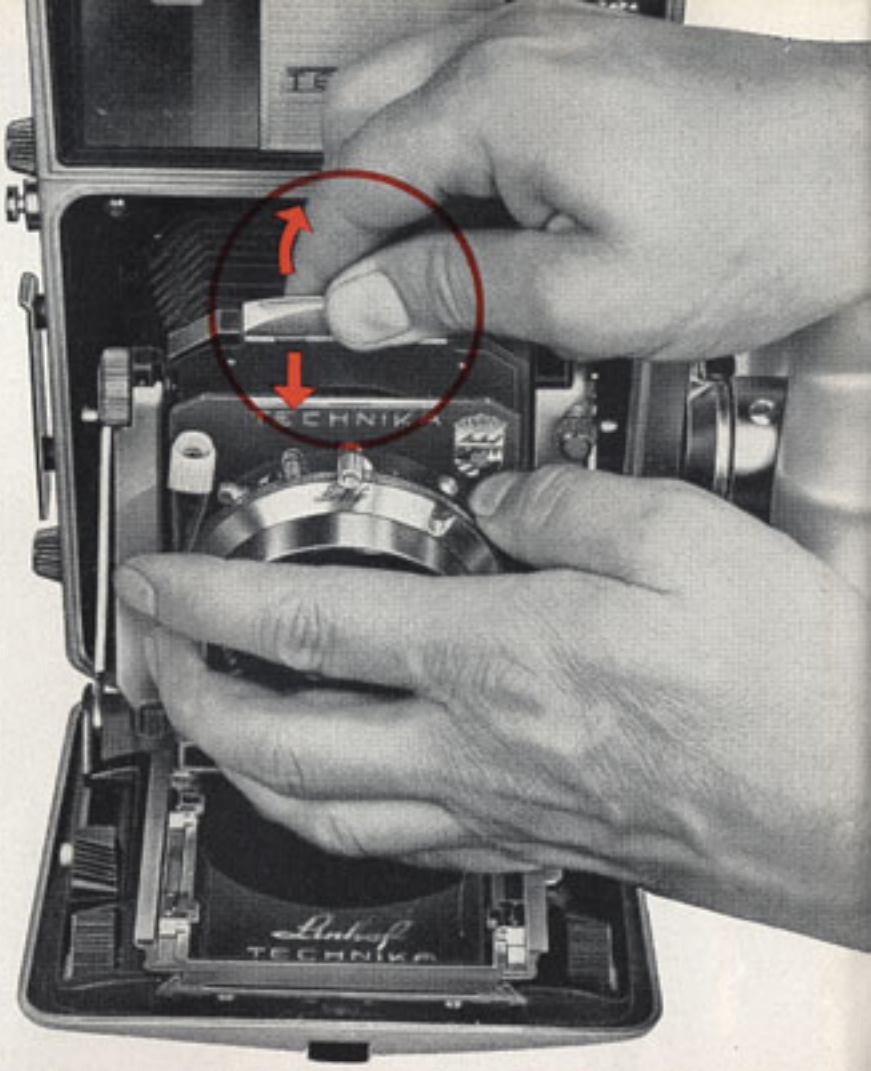
FOCUSING WITH THE MULTIFOCUS RANGE/VIEWFINDER is controlled with the rangefinder image in the center of the finder. – View subject through finder eyepiece (24). – Match double contours by operating focusing knob (13).

7

IMAGE AREA DELINEATIONS are indicated by luminous frame lines. Outer lines = 65 mm (or 53 mm); middle lines = 100 mm (or 80 mm); inner lines = 180 mm. Turn whole camera 90° for horizontal pictures. Match the level indicator pointers (top edge of finder) to level camera.

Hand-held horizontal pictures,
as per above illustration





8

EXPOSURE METER
Set film speed by turning inner disk. – Point camera towards the subject to be photographed. – Turn knurled outer ring to match red pointer with needle. – Read exposure time opposite the desired f-stop. For incident light measurement, use diffusor.

9

LENS CHANGE
Remove cable release from rapid-lock socket. Lift spring-tensioned locking bar (5). Remove lens with lensboard from the standard. Insert other lens in reverse order.

8 THE EXPOSURE METER

The built-in exposure meter of your TECHNIKA 70 will provide you with correct exposure information for the great majority of your work so that, under normal conditions, you need not carry a separate meter. The operation is quite simple:
First, rotate the inner disk of the meter until the notch is opposite the film speed used. Point the camera towards the subject and turn the knurled outer ring of the meter to match the red pointer with the needle. The meter scale will give you the exposure time for any desired f-stop. For incident light measurement – from the subject towards the planned camera position – slide the diffusor over the honeycombs of the meter.

9 LENS CHANGE

All lenses for the TECHNIKA 70 are in synchronized shutters mounted on lensboards. Therefore, to interchange "lenses", you interchange the complete lens-shutter-lensboard assembly. First, detach the cable release from the rapid-lock socket. Lift the spring-tensioned locking bar (5) at the top of the standard to release the upper edge of the lensboard. Lift out the lens assembly from the standard (8). Insert the new lens by placing the lower edge of its lensboard behind the retaining brackets of the standard; push the upper edge of the lensboard towards the standard so that it snaps under the lifted locking bar (5). Before inserting a lens, make certain that the rear lens cap has been removed. To facillitate the interchange of lenses with large rear components, raise the lens standard slightly by turning the knob (6).

WIDE-ANGLE PHOTOGRAPHY

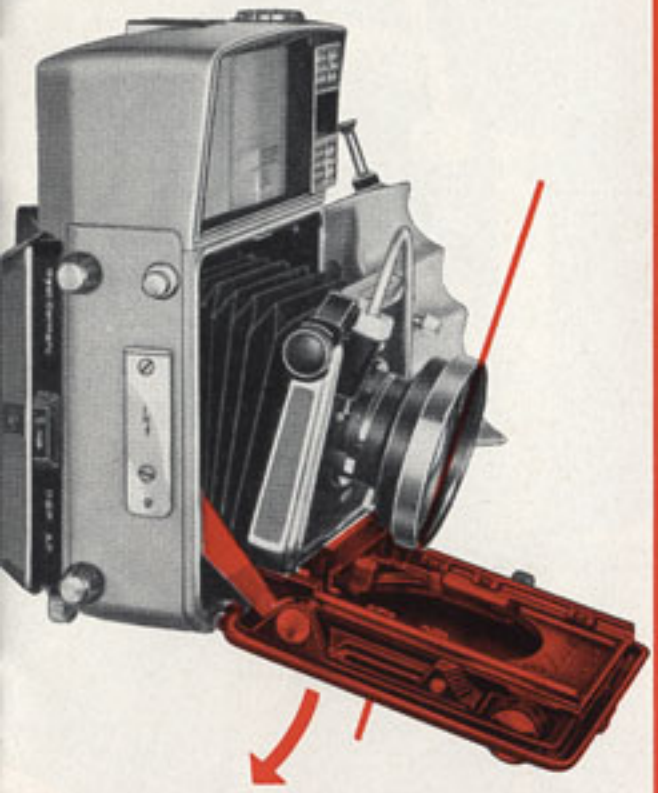
The TECHNIKA 70 permits fullest utilization of the extra large image circles of wide-angle lenses by providing a special "wide-angle position" which also avoids vignetting by the drop bed. Whenever you use a wide-angle lens, follow these steps: Pull the lens standard to the appropriate infinity stops for the lens. Now:

10 Press down on both struts (16) while you lower the drop bed 15° until it clicks into the second notches of the struts. (Not possible with large tripod top plate. – Exchange for small tripod top plate.)

11 Loosen the tilt release knob (4) and depress it while you tilt the lens standard all the way back. Retighten the knob (4) with the lens in tilted position. Now the negative plane and the lens plane are again parallel.

12 To complete the wide-angle position, depress the rear catch on the right side of the track (see arrow in illustration 12) just long enough to release the track, and slide the track towards the camera body until it clicks into position again. Perfect lens alignment is assured only when the track has snapped into this locked position – a prerequisite for using the Multifocus range/viewfinder and for absolute rigidity of the lens standard base.

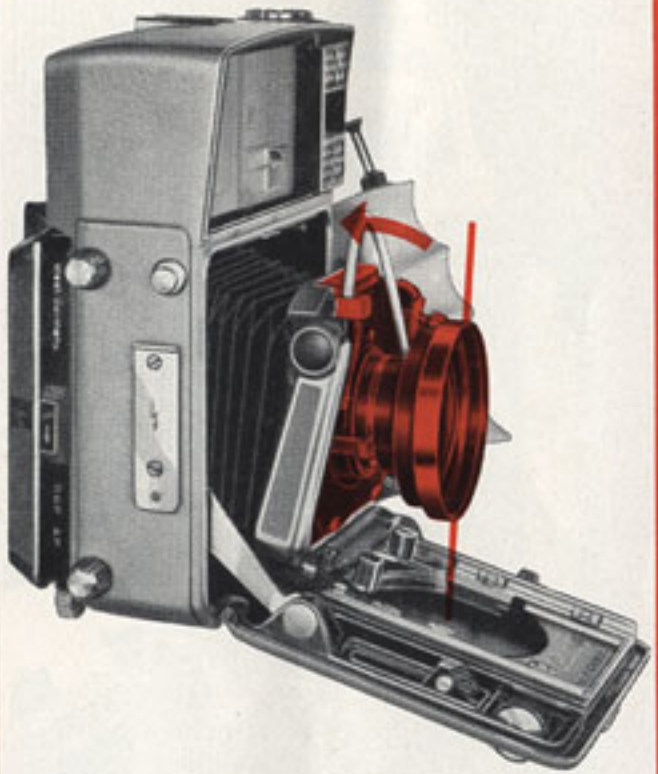
Note: To restore the camera to normal position, first depress the catch and pull the track forward until it clicks into position. Then, press down the struts to let the drop bed return to level position. Return lens standard to vertical position.



10

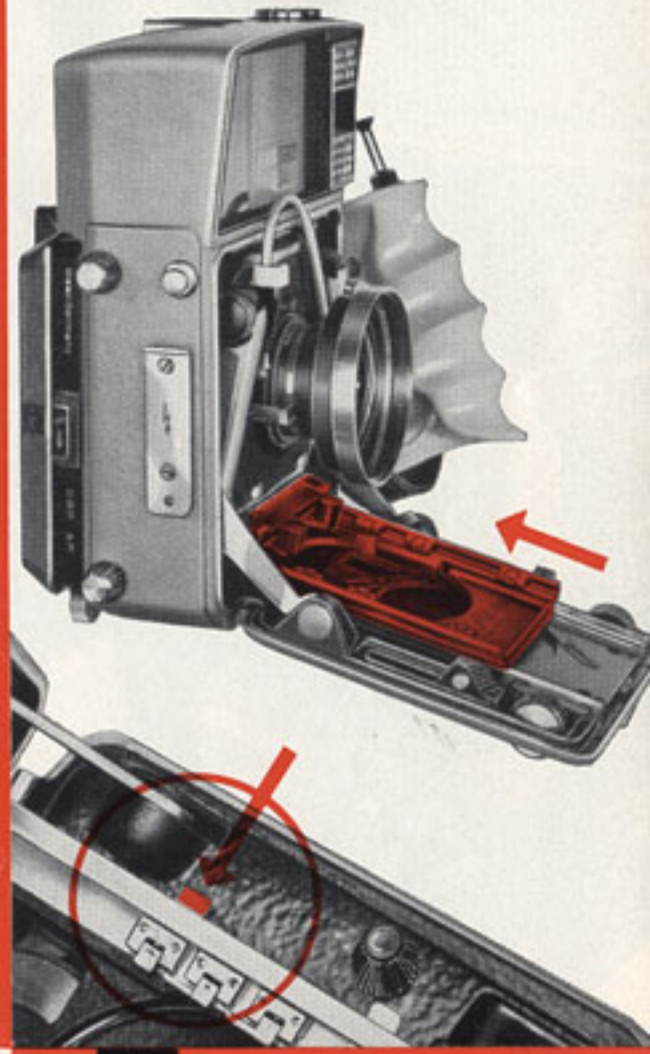
FOR WIDE-ANGLE POSITION

lower drop bed to second notches of struts. (Use small tripod top plate.)



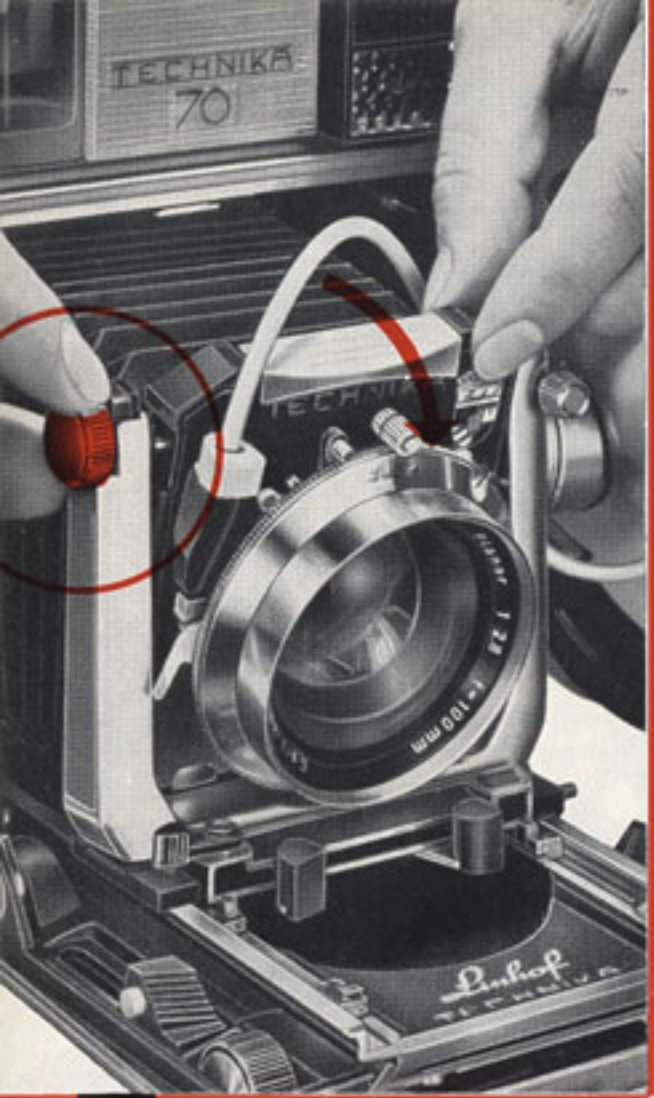
11

Loosen tilt release knob (4) and depress it while you tilt lens standard all the way back. Re-tighten knob (4) to lock standard in tilted position.



12

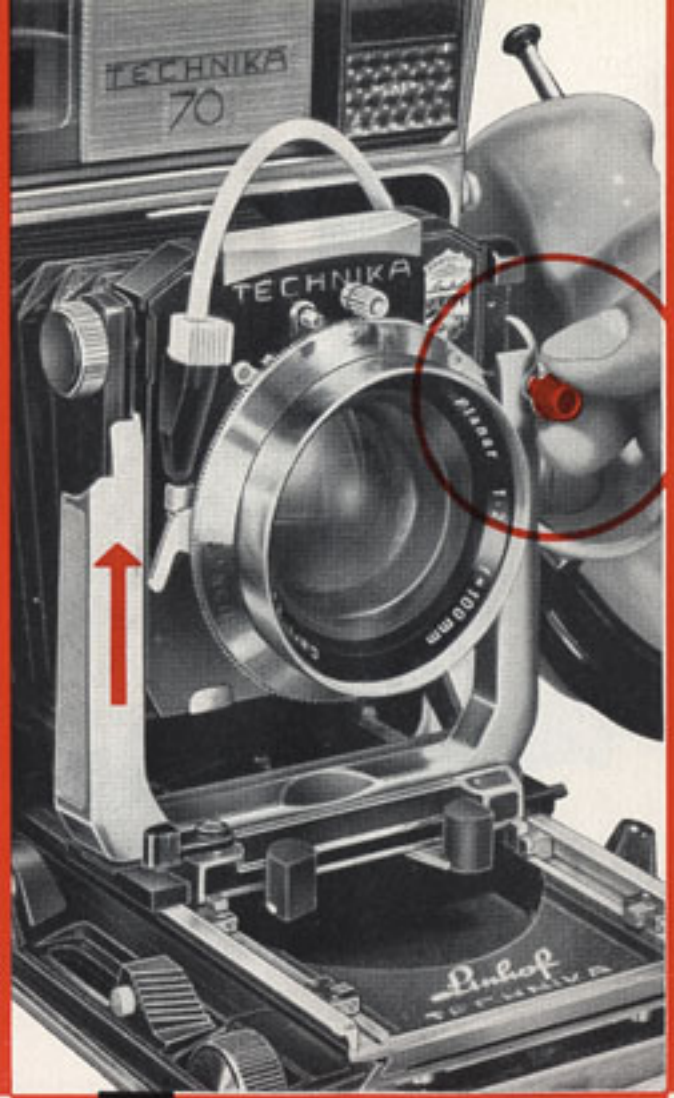
Depress catch indicated by arrow only long enough to release track; push track towards camera body until it clicks into secondary position.



13

LENS TILT ON HORIZONTAL AXIS

Loosen tilt release knob (4) and depress to tilt lens backward or forward as much as 15°. Tighten knob (4) to lock lens in desired tilted position. Also lock lens after returning to normal position.



14

VERTICAL ADJUSTMENT OF LENS (RISING FRONT)

Turn knurled knob (6) on right side of standard.

15

LATERAL SHIFT OF LENS

Turn lever (12), at left base of standard, forward. Shift lens standard (8) laterally to desired position. Push lever (12) back to lock lateral adjustment.

ADJUSTMENTS OF LENS STANDARD

13 TILT ON HORIZONTAL AXIS

Loosen the tilt release knob (4) and depress it while you tilt the lens forward or backward to any desired position up to 15°. Re-tighten the knob (4) to lock the lens in tilted position. After you have returned lens to normal position, where it clicks in automatically, secure it by tightening the knob (4).

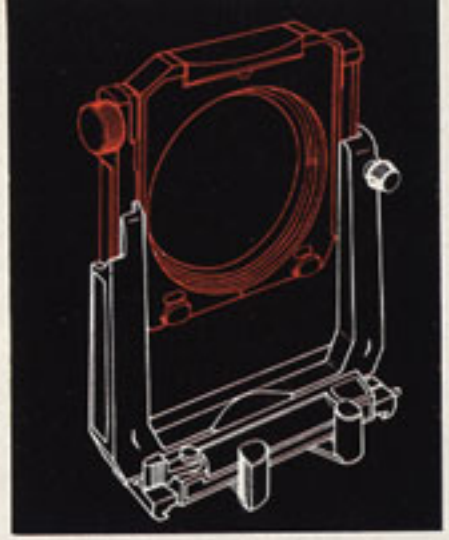
14 HEIGHT ADJUSTMENT (RISING FRONT)

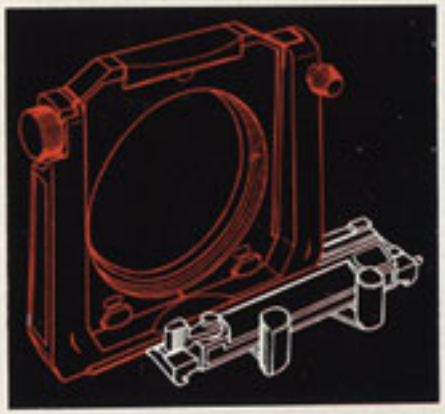
To raise the lens from its zero position, turn the knurled knob (6), at the upper right of the standard, clockwise. There is no direct provision for lowering the lens from its zero position. However, by mounting the camera with a LINHOF outrigger plate upside-down on a tripod, you can utilize the "rising front" as a fully adjustable "falling front".

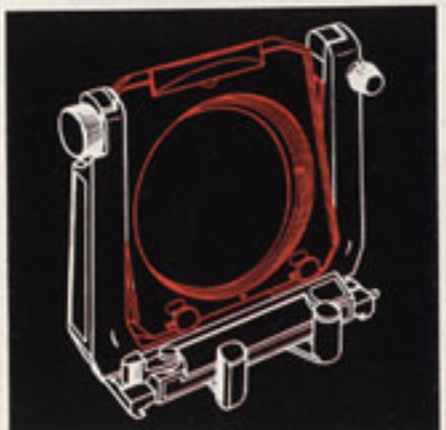
15 LATERAL SHIFT

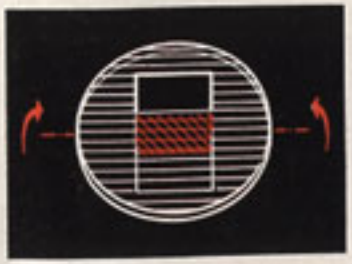
Turn the lever (12) forward to release the standard for free shifting to the left or right; push the lever back (towards the standard) to lock the shift in the desired position. Zero position of the shift is indicated by a click stop.

Whenever you use any camera adjustment, you must use the ground glass! Before closing the camera, be sure to return all camera adjustments to their zero positions.



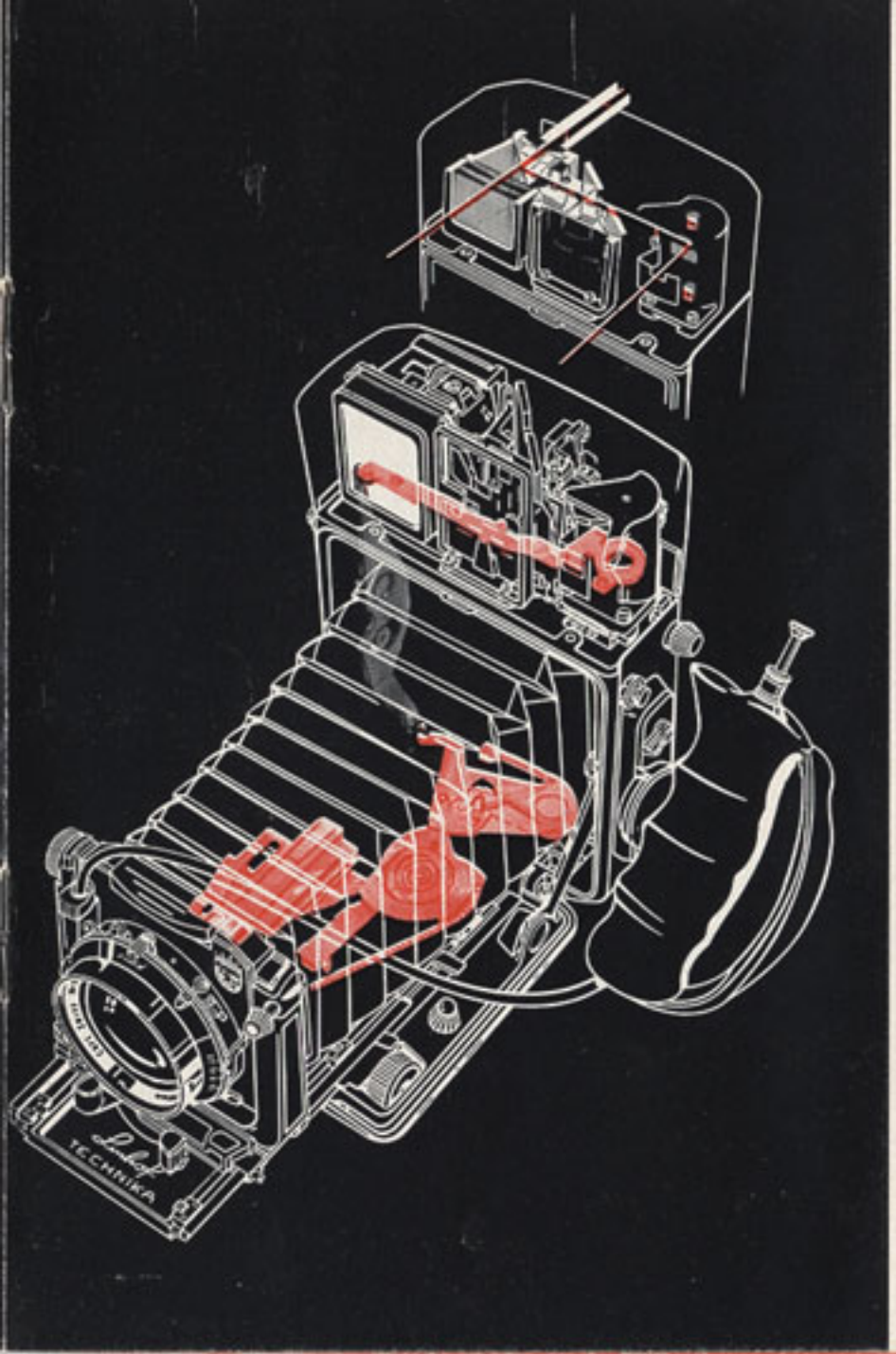






SOME FUNDAMENTALS ON LENS ADJUSTMENTS

Shifts, tilts and other adjustments of the lens standard and camera back can be controlled only by ground glass observation, while the camera must be on a sturdy tripod. Suitable lenses are a prerequisite for any lens adjustments. They must have an angular field wide enough to yield sharp images without cut-off even if the optical axis of the lens is shifted away from the center of the negative. If the lens lacks this quality, corner cut-off will result even with slight shifting. This is characteristic with most telephoto and fast normal lenses. On the other hand, lenses of the Schneider Symmar type are particularly suitable for camera adjustments. Also the 90 mm Super Angulon offers excellent adjustment possibilities in covering 2¼ x 3¼ in. and 2¼ x 2¾ in. negatives. Similarly, normal lenses of long focal length (not of telephoto construction) from about 127 mm onwards are usable for considerable adjustments on 2¼ x 3¼ in. cameras. All adjustment possibilities, regardless of the lens used, increase as the lens-to-subject distance decreases. **Parallel** movements of the lens – up, down or sideways – cause a shift of the image; they are called for when the subject is not on the camera axis, making it possible to avoid converging lines or to take frontal photographs from a lateral position. Lens **tilts** or **swings** on the horizontal or vertical axis control the distribution and position of the plane of sharp focus and, therefore, can be used to gain depth of field without the necessity of stopping down the lens. You will find detailed descriptions and practical examples of all camera adjustments in the booklet "LINHOF Technique Data Sheets" available from your dealer.



LOOKING INSIDE YOUR TECHNIKA 70.

The upper section shows you the path of the light rays through the Multifocus range/viewfinder (red lines). The light beam entering the right rangefinder window is deflected by a prism and, when focused, coincides with the left beam in the finder eyepiece to form a sharp image.

The heavy white lines represent the light rays which are directed through the finder mask to become visible in the viewfinder as reflected image delineations.

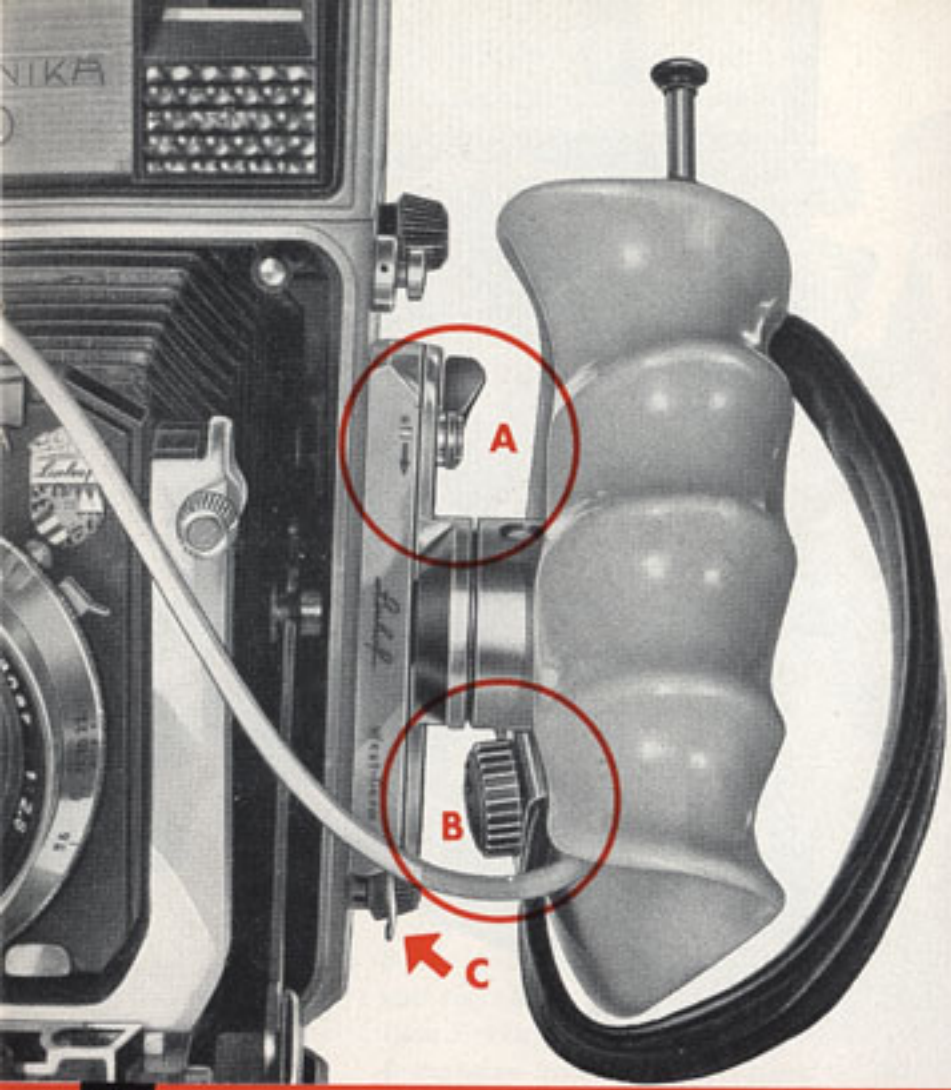
The lower section shows the intricate transfer mechanism from the cam disk into the camera body – the coupling of the rangefinder with the focusing action. The long base of the rangefinder permits critical focusing with clear differentiation even between infinity and 600 feet.

16 THE ANATOMICAL GRIP

The anatomical grip gives you the firmest possible camera hold with utmost ease of operation in hand-held photography. To attach the grip, slide it from below onto the dovetail bracket of the camera until the retaining spring (C) clicks in; lock the grip by turning lever (A). Slide your left hand, from the back of the camera, under the broad leather strap and grasp the grooved grip while placing your thumb on the cable release plunger. The leather strap supports the back of your hand; for a comfortable fit, adjust the loop of the strap after loosening the buckle knob (B). Re-tighten the knob for permanent fit. You can adjust the holding angle of the anatomical grip by turning it on its axle. – To remove the grip from the camera, first detach the cable release from the rapid-lock socket on the lensboard; turn the locking lever (A) forward and depress the retaining spring (C). You can now slide the grip downward from the dovetail bracket. To remove the cable release from the anatomical grip, simply pull it out by the plunger.

17 LOCKING THE BELLOWS EXTENSION

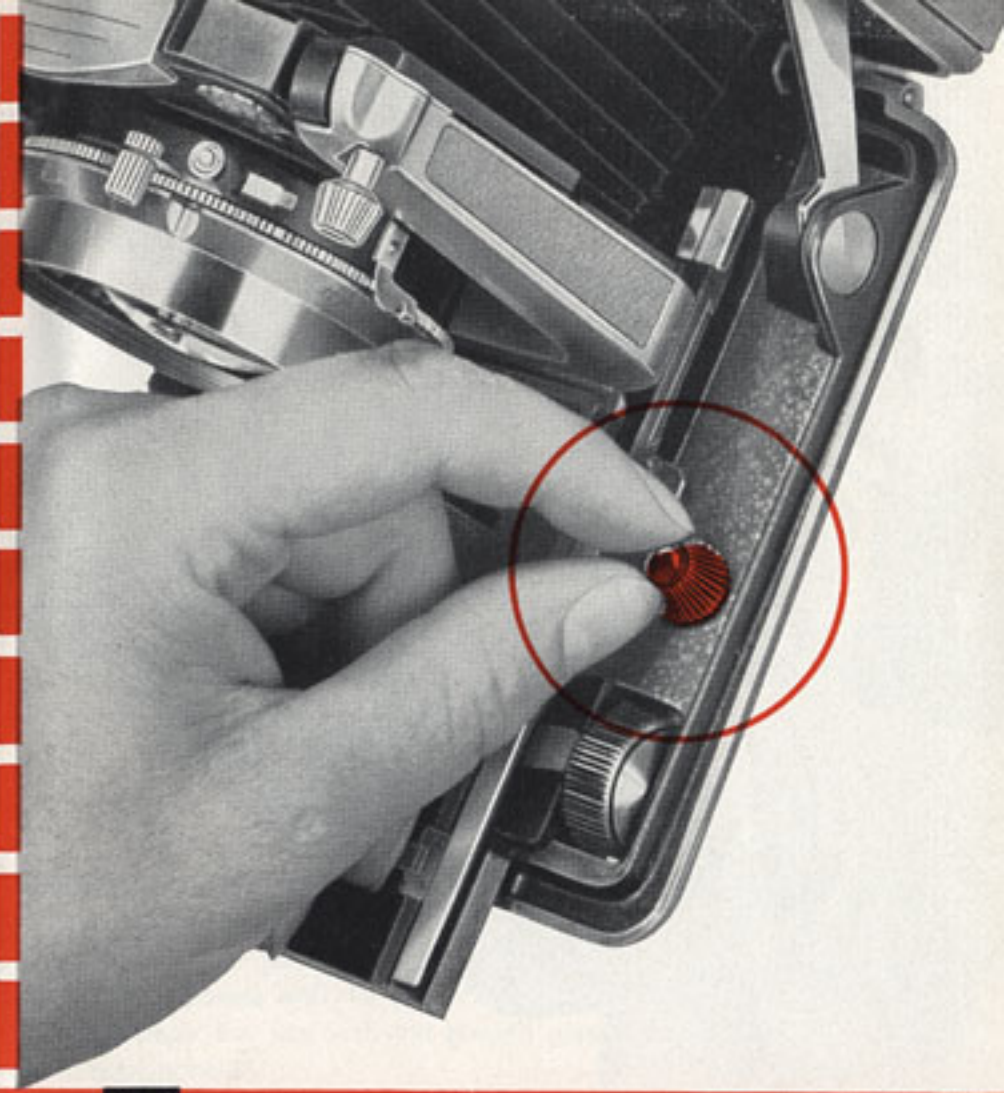
To avoid unintentional change of focus, especially when photographing downward, lock the track after focusing by turning the knurled knob on the camera bed clockwise. Thus you can use even the heaviest lenses in vertical photography without being concerned that the weight of the lens might affect the established focusing position of the track.



16

ANATOMICAL GRIP

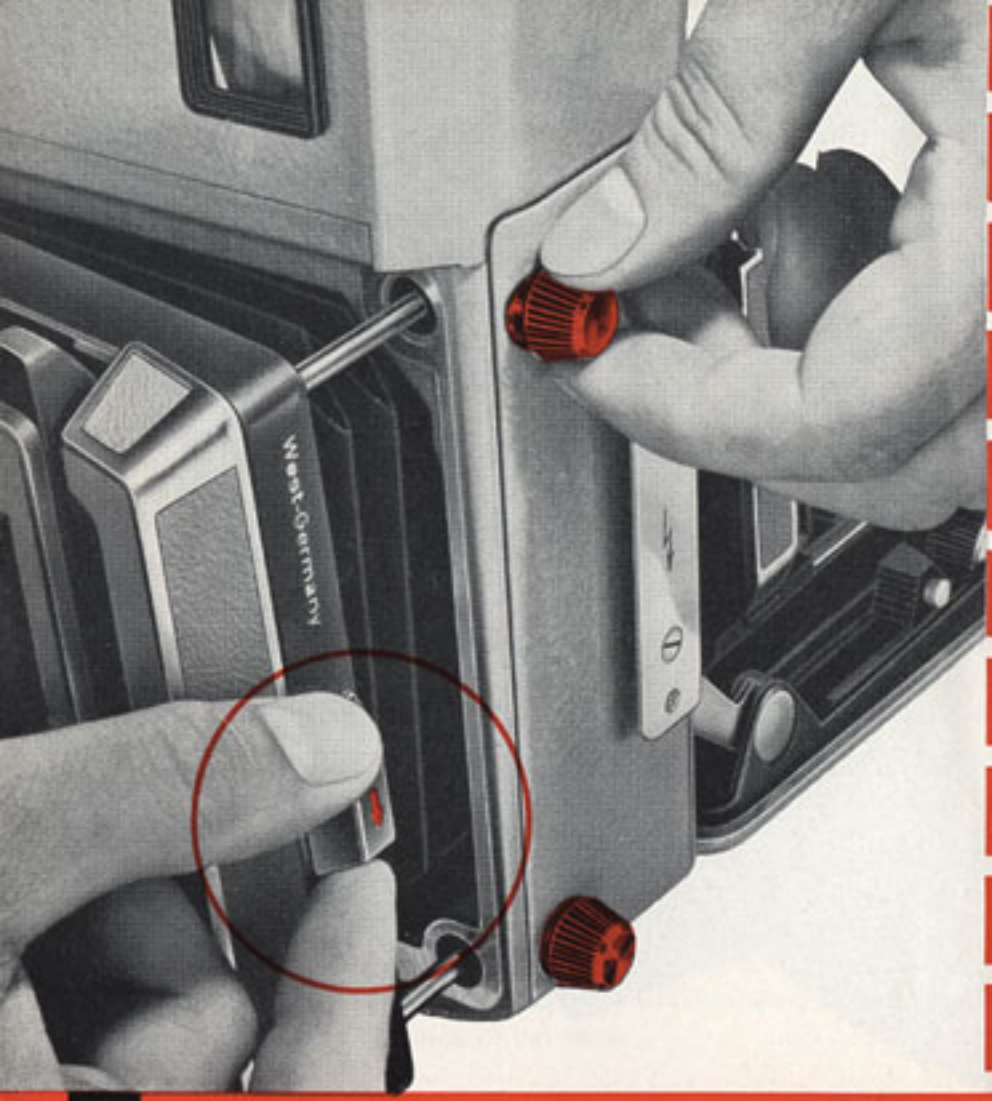
Determine the most convenient position by turning the grip on its axle. Adjust the leather strap after loosening the knurled screw B on the inside of the grip.



17

LOCKING THE TRACK (BELLOWS EXTENSION)

In vertical photography: turn the knurled knob on the camera bed clockwise.



18

OPERATION OF THE SWING FRAME

Loosen the four locking knobs (17) on the camera body. – Push down the release slides (26) on both sides of the swing frame (19) in the direction of the arrow. – Adjust swing back to desired position and lock by tightening knobs (17) again.

19

INTERCHANGE OF THE CAMERA BACK

Turn quick-change back release (27) in direction of arrow. – Lift out the ground glass back. – Attach Cine Rollex, Super Rollex or other accessory, and lock into position by a short counter-clockwise turn of quick-change lever.

18 OPERATION OF THE SWING FRAME

Loosen the four locking knobs (17). Then depress the release slides (26) on both sides of the swing frame (19) and draw the frame from its normal focal plane position. Tilt or swing the frame to the desired position and lock it in place by re-tightening the four locking knobs (17).
The adjustment of the swing frame may be used to gain increased depth of field as well as for correction of perspective. Contrary to adjustments of the lens standard, even lenses with a limited angular field may be used with back adjustments. Please refer to the booklet "LINHOF Technique Data Sheets" for practical applications of swing frame adjustments. Photography with swing frame adjustments is possible only with ground glass focusing and composition! To change from vertical to horizontal composition, simply rotate the camera back 90°.
Important Note: After completing the shooting sequence, **always** return the swing frame to its normal position, locked on the camera body, so that the focal plane is in correct position for hand-held photography with the Multifocus range/viewfinder.

19 THE QUICK-CHANGE CAMERA BACK

The TECHNIKA 70 has the exclusive LINHOF Quick-Change Back which permits instant change-over from black-and-white to color, from roll film to sheet film or pack, whenever necessary or desirable. To operate the quick-change mechanism, simply turn the quick-change release (27) 90°. By a simple turn of this lever, you can unlock or lock the ground glass back for rapid interchange with the Super Rollex for 120 roll film, Cine Rollex for 70 mm film, or the Polaroid Land camera back. For use with the ground glass, these interchangeable backs may be rotated to vertical or horizontal position.

20

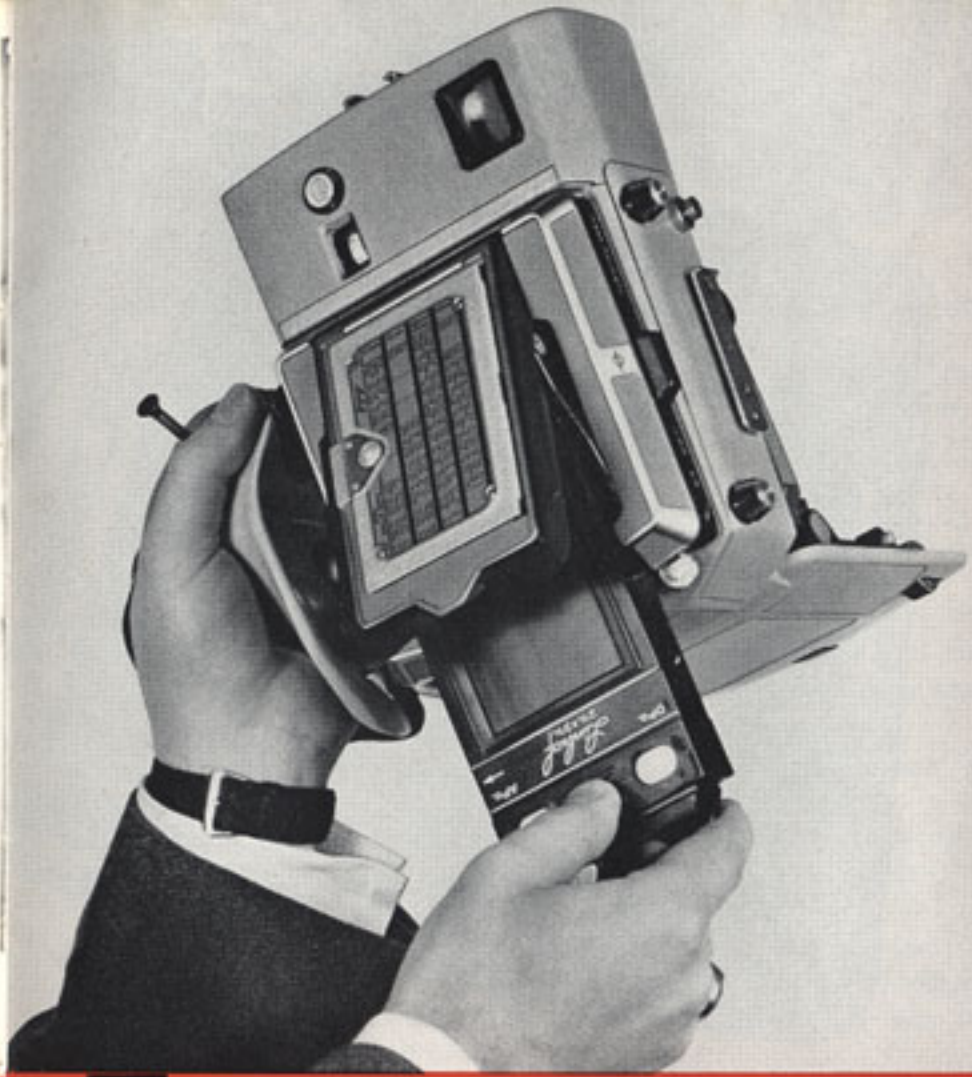
USING DOUBLE HOLDERS

LINHOF combination sheet film/plate holders 2¼ x 3¼ in. or 6½ x 9 cm or LINHOF 6½ x 9 cm Super sheet film holders, as well as other standard 2¼ x 3¼ in. double holders or film pack adapters, are inserted under the spring back between the revolving frame and the ground glass panel. For easy positioning, revolving frame should be turned around so that film holders can be inserted **from below.** (Be sure to turn the back to vertical position when you work with the Multifocus range/viewfinder.) To eliminate the possibility of disturbing camera adjustments in ground glass work, spread the spring back open with your left thumb and index finger (see illustration opposite) so that you can slide the film holder into place without resistance.

TRIPOD SOCKETS

21

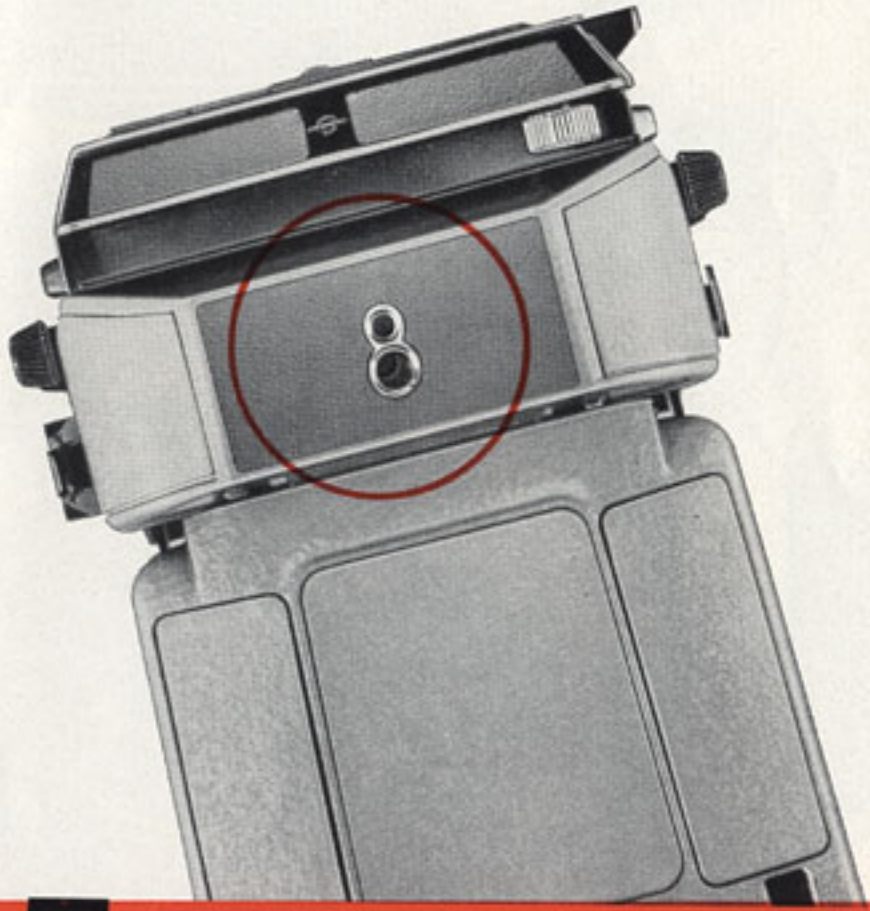
Your TECHNIKA 70 has a dual-purpose tripod socket with ⅜ in. and ¼ in. threads to fit any tripod made to the established industry standards.



20

DOUBLE HOLDERS

are inserted under the spring back between the revolving frame and the ground glass. For easy positioning, revolving frame should be turned around so that film holders can be inserted from below.



21

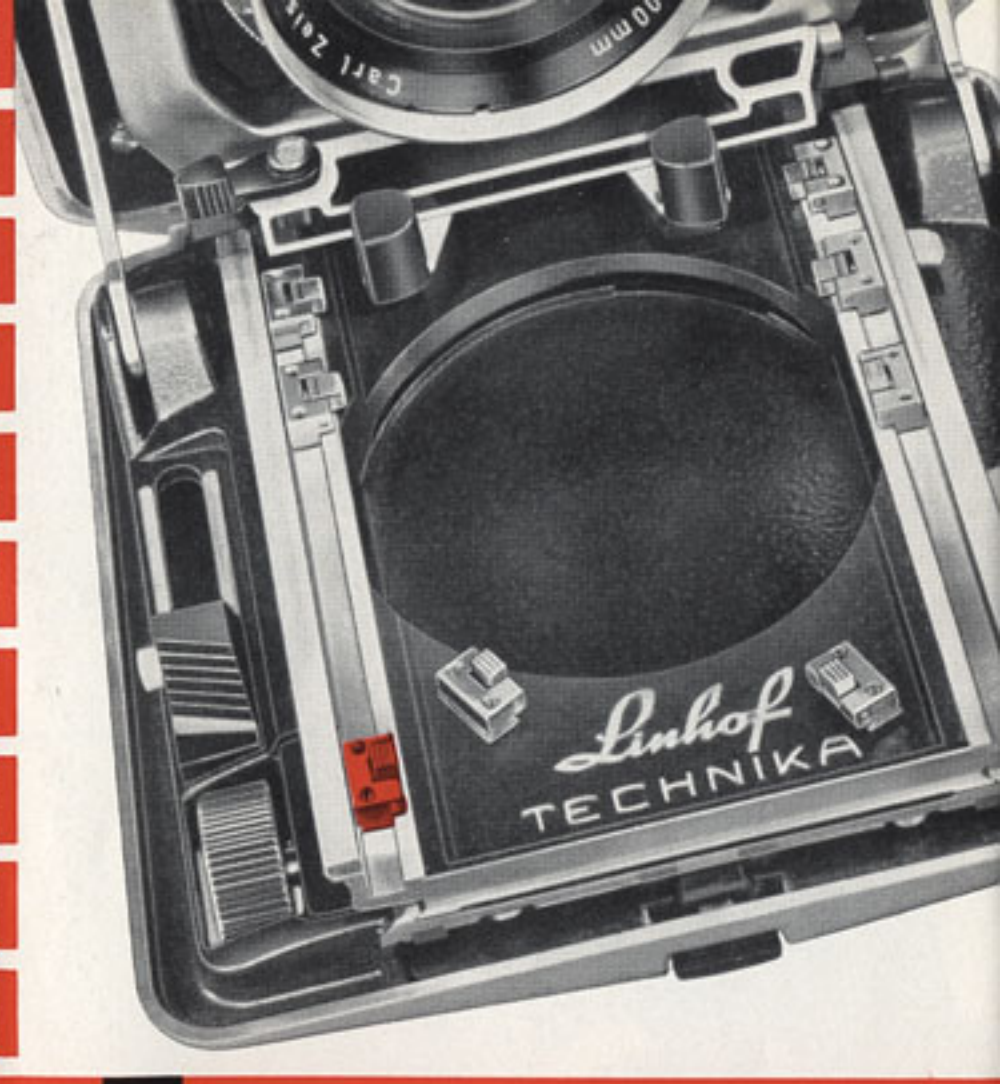
TRIPOD SOCKETS

are provided in a dual-purpose bushing with $^{3}/_{8}$ in. and $^{1}/_{4}$ in. threads.

22

TO ATTACH THE CABLE RELEASE

press the white, grooved plastic retainer and push the threaded nipple into the opening of the rapid-lock socket until it snaps into position. To remove, press back the white collar of the socket, and pull out the release nipple.



23

ADJUSTMENT OF INFINITY STOPS

for lenses purchased subsequently to be used with ground glass focusing: Focus lens on infinity by moving the lens standard (8) on upper track (11) which must be in zero position; do not use focusing knob (13). Slide a new pair of infinity stops flush against the base of the standard, and tighten in place with a suitable small instrument screwdriver.

22 THE RAPID-LOCK CABLE RELEASE SOCKET

This convenient device facilitates and speeds attachment of the cable release to the shutter of the lens. Simply push the threaded nipple of the cable release into the opening of the rapid-lock socket until it clicks into position. To detach the cable release from the shutter, press back the white collar of the socket, and pull out the cable release.

23 INSTALLATION AND ADJUSTMENT OF INFINITY STOPS

If you add any lenses after the original purchase of your TECHNIKA 70 outfit, and intend to use these lenses for ground glass focusing only, you need not send your camera to the factory or to a LINHOF Service shop. (Lenses intended for use with the Multifocus range/viewfinder must be installed and coupled by a qualified LINHOF Service Department.)

Installation and infinity setting of a new lens intended solely for ground glass operation is a relatively easy matter:

Place the upper track (11) in zero position, flush with the front of the bed rail. Insert the new lens in the standard (8). Move the lens standard along the track – do NOT use the focusing knob! – until you find the **exact** infinity position by critical ground glass observation with a focusing magnifier. A distant tower, pole or other object makes a suitable "infinity" target. After you have established the infinity position of the lens standard in this manner, slide a pair of infinity stops into the dovetail channels of the upper track, flush against the base of the lens standard. Lock the stops in place with a suitable instrument screwdriver.

If the new infinity position falls between other infinity stops already installed on the track, first remove the existing stops from only one of the track channels. Install the new infinity stop in that channel, as described above. Then, one by one, fold up the infinity stops in the other channel, pull the standard to each stop and, at each position, re-install a matching stop in the opposite channel. After you have all stops in place on the one side, proceed in the same manner on the other side.

INTERCHANGE OF TRI-CAM COUPLING DISK

If more than three lenses are to be coupled with the Multifocus range/viewfinder of the camera, an additional coupling disk, accommodating up to three more lenses, is necessary.

24

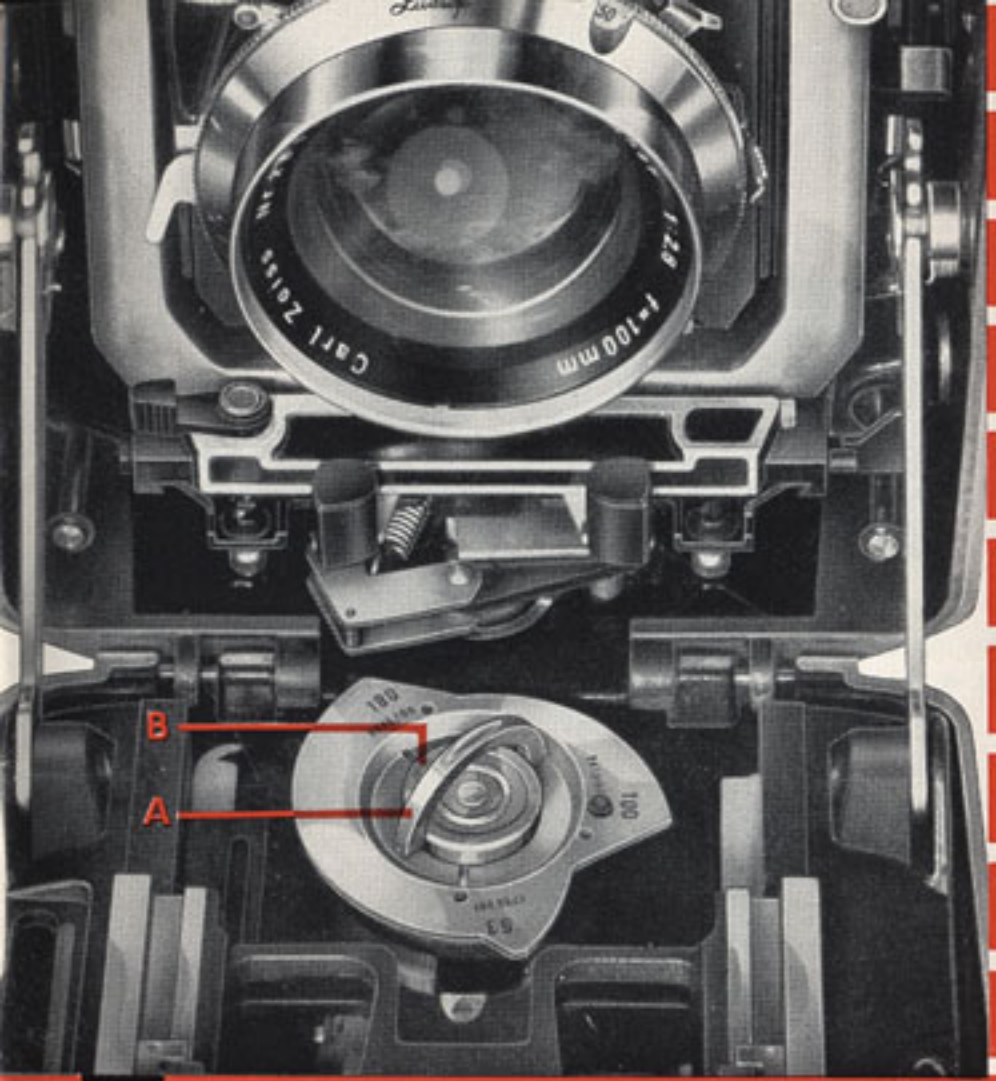
Push the lens standard (8) all the way into the camera body. Turn the focusing knob (13) to rack the upper track (11) forward. Raise up the semicircular handle (A) and turn it counterclockwise until you can lift off the retaining knob (B). You can now freely remove the tri-cam disk and put another one in its place.

25

The disk must be placed so that its registration hole engages with the pin of the notched wheel. (The relative position of the pin or the notched wheel, respectively, is unimportant.) Re-insert the retaining knob (B) and turn it clockwise until you hear a clicking sound which indicates that the cam disk is securely in place. (A built-in safety clutch prevents over-tightening.)

The selector slide for the positioning of the desired cam (see pages 8 and 9) **must be used only after the upper track (11) is returned to zero position** with the focusing knob (13) and after having moved the selector slide until the tri cam disc has completed a full cycle.

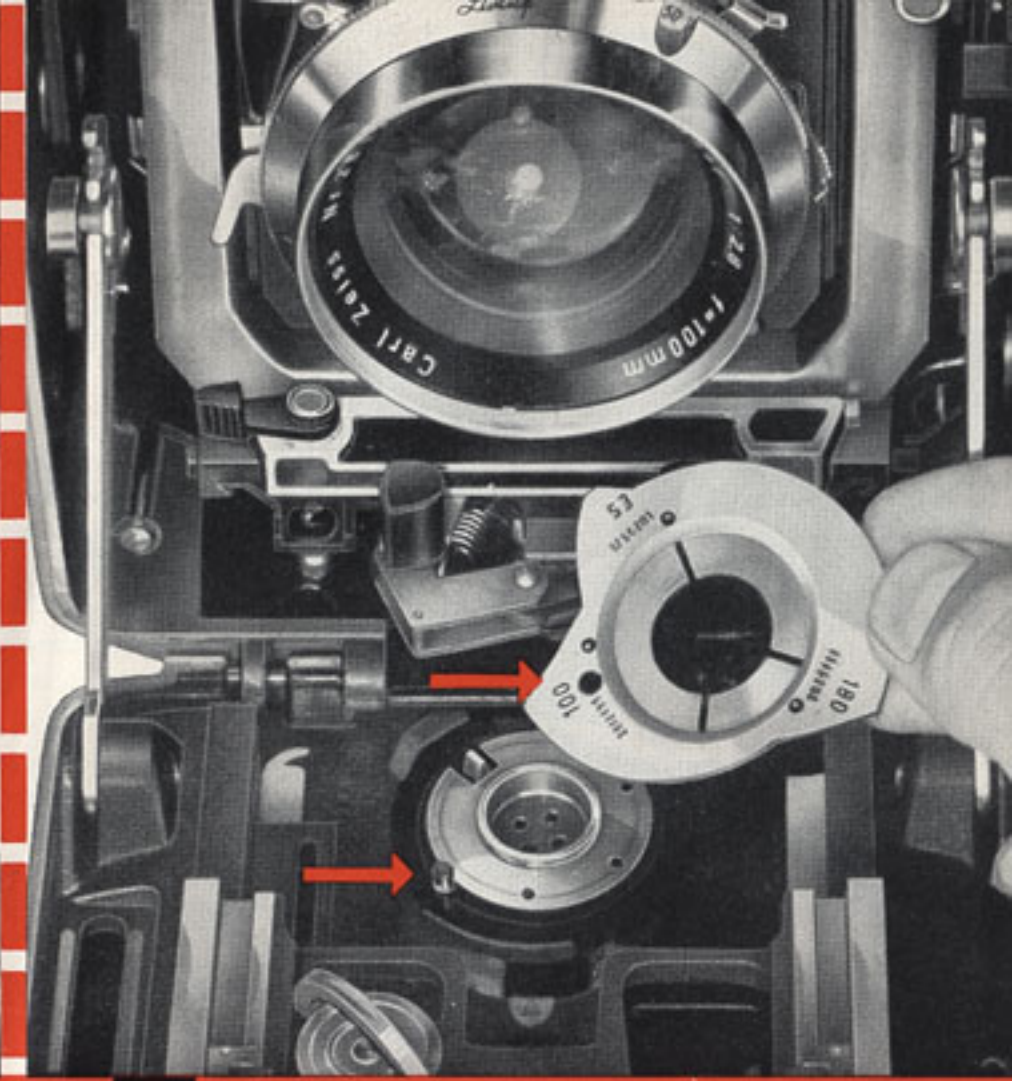
After you have selected the cam, and folded up the corresponding infinity stops, the camera is ready for operation.



24

REMOVAL OF TRI-CAM DISK

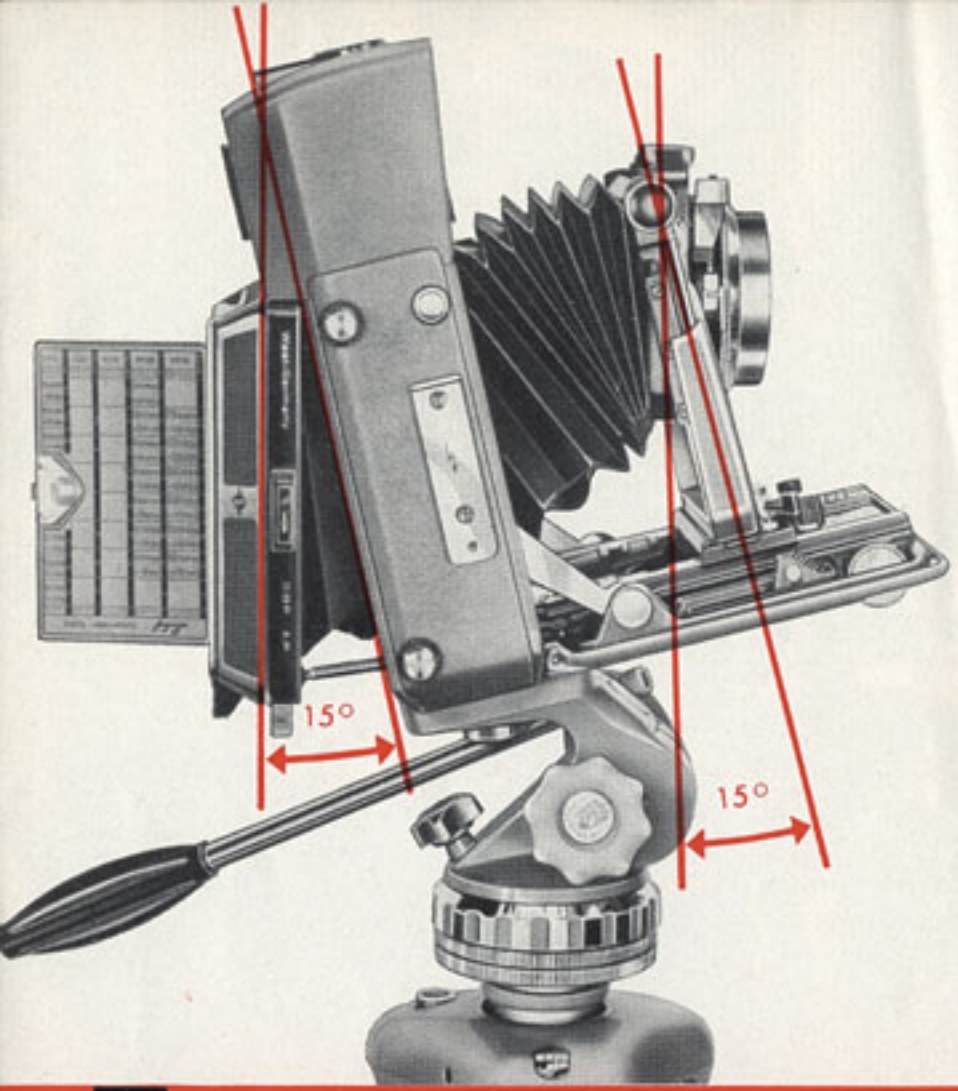
Push lens standard all the way into camera body. – Rack out upper track. – Unscrew retaining knob (B) by handle (A). – Lift out the cam disk.



25

INSERTION OF TRI-CAM DISK

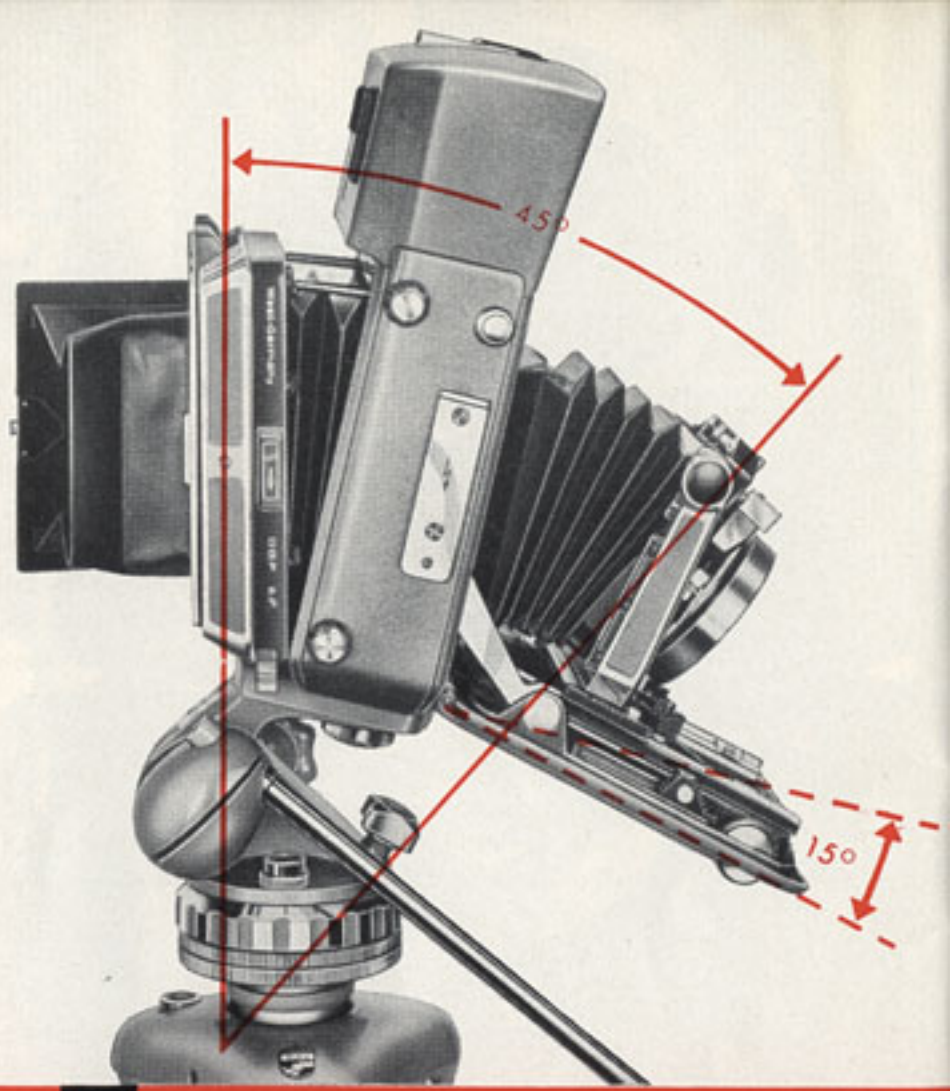
Insert cam disk so that registration hole engages pin of notched wheel. – Replace and tighten retaining knob (B) until clicking sound indicates firm seating. – **Return upper track to zero position.** – Move selector slide until tri cam disk has completed a full cycle. Select desired cam. (See pages 8 and 9.)



26

CORRECTION OF PERSPECTIVE

can be controlled by appropriate adjustment of the swing frame (19). Lens plane must be parallel to adjusted negative plane! – Swing frame and lens standard are parallel when both are tilted all the way in the same direction.



27

POSITION AND DISTRIBUTION OF SHARPNESS

(depth of field) can also be controlled with the back swung out in the direction opposite from that of the subject plane, or by swinging the lens in the same direction as the subject plane. A combination of both adjustments results in an extreme gain of depth-of-field for objects located at an angle in front of the camera.

THE PRACTICE OF CAMERA MOVEMENTS

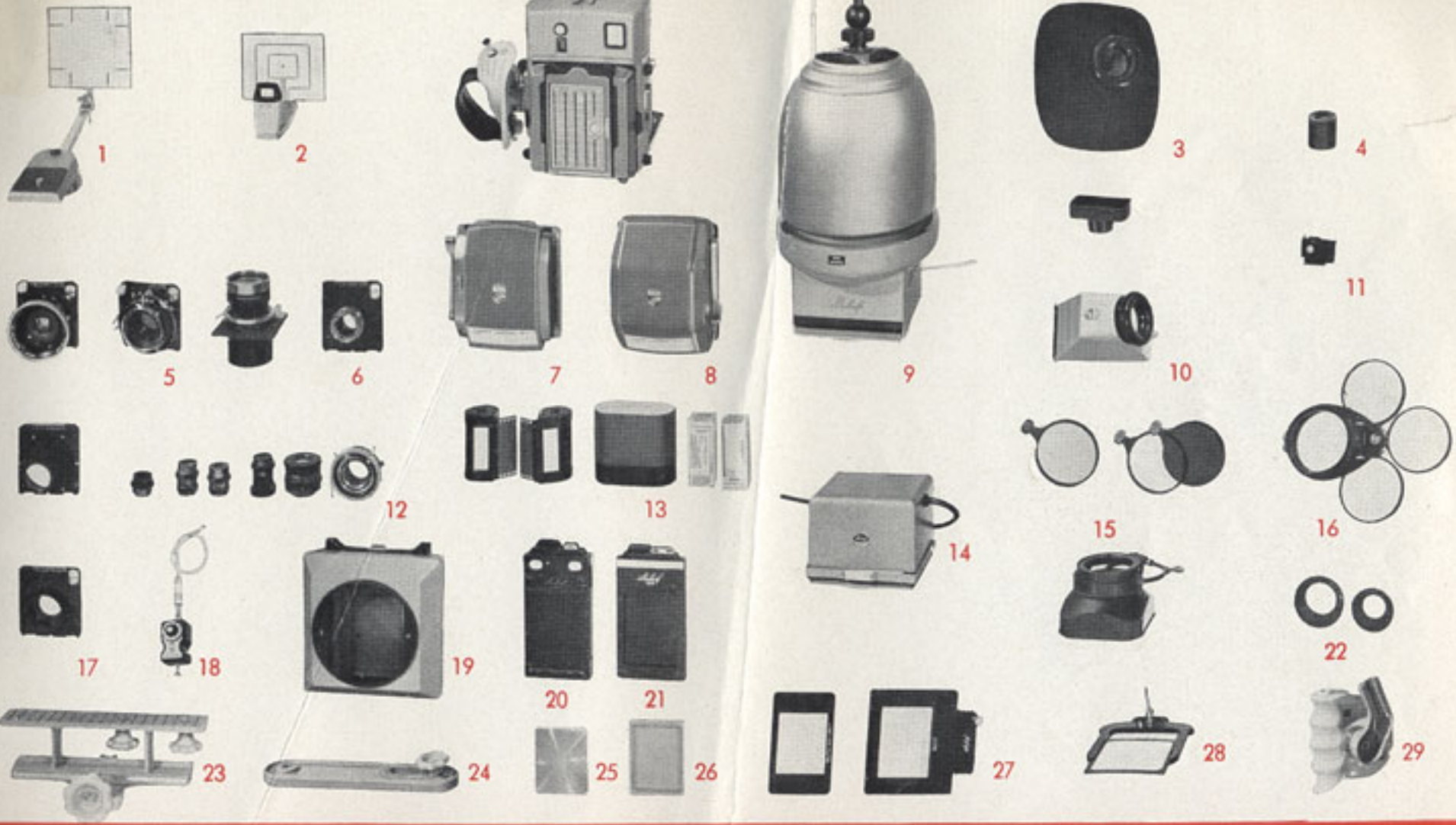
is described, in great detail, in the "LINHOF Technique Data Sheets" and in the book **"LINHOF Practice"**. You may use camera adjustments advantageously in many ways. With their help, you can control perspective and thus avoid wrong proportions or converging lines, as in architectural photography. On the other hand, you can achieve unusual effects of elongation, foreshortening or similar perspective distortions. Also, you can utilize camera movements to cope with awkward problems, such as frontal views from a lateral standpoint if prevailing conditions leave you no alternate camera position. You can even obtain a combined frontal, side and top view of an object, to mention only one more of the many possibilities.

However, you can also use camera movements to gain considerably increased depth of field when, otherwise, the smallest f-stop of a lens would be insufficient, or when you must use a larger f-stop for short exposure times of moving objects. By using the full extent of front and back tilts, including the drop of the camera bed, (Not possible with large top plate. Exchange with small tripod top plate.) you can obtain a maximum angle of 45° between the negative and the lens plane to bring even extremely difficult problems under control.

The ingenious design and greatly expanded adjustment capabilities of the TECHNIKA 70 make it possible now more than ever to exploit the special advantages of the 2¼ x 3¼ in. format.

ACCESSORIES FOR TECHNIKA 70

1. Close-up Focal Frame Finder
2. Sportsfinder
3. Focusing Bellows
4. Focusing magnifier, 8 x
5. Technikon Lens Set
6. Componon
7. Super Rollex Back for 10 exposures
8. Cine Rollex Back for up to 53 exposures 56 x 72 mm
9. Condenser Enlarger Head
10. Reversal Mirror Attachment
11. Spirit level with Groundglass Adapter
12. Conical Macro Tube with macro lenses
13. 70 mm Cartridge with box
14. Cold Light Enlarger Head
15. Lens Shade / Filter Holder with slip-in filters
16. Color Separation Filter Holder for color projection printing
17. Microscope Adapter
18. Prontor Ultra-Selftimer
19. Adapter Back 6,5 x 9 / 9 x 12 (in preparation)
20. LINHOF Cutfilm / Plate Holder 6,5 x 9 cm
    (also available for $2^1/_4 \times 3^1/_4$ in.)
21. Super Cutfilm Holder 6,5 x 9 cm
22. Screw-in Lens shades
23. Focusing Slide for macro and stereo photography
24. Outrigger Plate
25. Ektalite Field Lens
26. Ground Glass 6,5 x 9 / $2^1/_4 \times 3^1/_4$ in.
27. Negative Carrier and format mask for enlarger head
28. Gelatine Filter Holder
29. Anatomical Grip, right



With the TECHNIKA 70 you have at your command the complete LINHOF system of accessories which permits you to utilize your outfit economically for a great variety of specialized purposes. Appropriate accessories enable you to use your camera as an enlarger or, with the Polaroid Land camera back, for "pictures-in-a-moment", to mention only two examples. The LINHOF system increases the scope of your TECHNIKA 70 – take full advantage of its immense potential!

LENSES FOR TECHNIKA 70

Description	Focal Length	Lens Speed	Shutter Size
WIDE ANGLE LENSES			
Technika Biogon* (Zeiss)	45 mm.	f/4.5	MXCRO
Technika Biogon (Zeiss)	53 mm.	f/4.5	MXCRO
Technika Super Angulon	53 mm.	f/4	MXCRO
Wide Angle Technikon	58 mm.	f/5.6	MXVCROO
Technika Super Angulon	65 mm.	f/8	MXVCROO
Technika Super Angulon	75 mm.	f/8	MXCRO
Technika Super Angulon	90 mm.	f/8	MXVCROO
NORMAL LENSES			
Technika Planar* (Zeiss)	80 mm.	f/2.8	MXCRI
Technika Xenotar*	80 mm.	f/2.8	MXCRI
Normal Technikon	100 mm.	f/2.8	MXCRI
Technika Planar (Zeiss)	100 mm.	f/2.8	MXCRI
Technika Tessar	100 mm.	f/3.5	MXCRO
Technika Xenar	100 mm.	f/3.5	MXCRO
Technika Xenotar	100 mm.	f/2.8	MXCRI
Technika Apo Lanthar	100 mm.	f/4.5	MXCRO
Technika Symmar	100 mm.	f/5.6	MXVCROO

* only for use with the 2¼ x 2¾ in. (56 x 72 mm) format.

Description	Focal Length	Lens Speed	Shutter Size
LONG FOCUS NORMAL LENSES			
Technika Press Xenar	127 mm.	f/4.7	MXCRO
Technika Planar (Zeiss)	135 mm.	f/3.5	MXCRI
Technika Xenotar	135 mm.	f/3.5	MXCRI
Technika Symmar	135 mm.	f/5.6	MXCRO
Technika Apo Lanthar	150 mm.	f/4.5	MXCRI
Technika Heliar	150 mm.	f/4.5	MXCRI
Technika Xenar	150 mm.	f/4.5	MXCRI
Technika Symmar	150 mm.	f/5.6	MXCRI
Technika Symmar	180 mm.	f/5.6	MXCRI
TELEPHOTO LENSES			
Technika Sonnar (Zeiss)	180 mm.	f/4.8	MXCRO
Tele Technikon	180 mm.	f/4.5	MXCRI
Technika Tele Arton	180 mm.	f/4	MXCRI
Technika Tele Arton	180 mm.	f/5.5	MXCRO
Technika Tele Arton	240 mm.	f/5.5	MXCRI
Technika Telomar	180 mm.	f/5.5	MXCRO
Technika Telomar	240 mm.	f/5.5	MXCRI
Technika Tele Xenar	360 mm.	f/5.5	EX-III/7

Linhof NIKOLAUS KARPF KG. · PRÄZISIONS-KAMERA-WERKE · 8 MÜNCHEN 25

Printed in Germany 6608/2 e