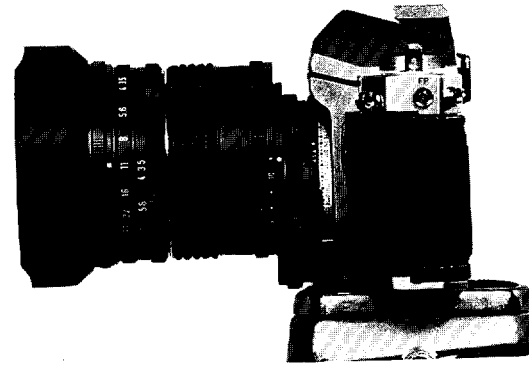
ASAHI
PENTAX

SMC PENTAX SHIFT 28mm f/3.5

Your SMC Pentax Shift 28mm f/3.5 lens is of great value in architectural, scenic, and general purpose photography because of its large 75° field of view and ability to correct converging lines by making them perpendicular. More importantly, however, it is a creative tool offering the photographer a choice of correcting, "overcorrecting," or not correcting the subject in order to produce the most pleasing, striking, or dramatic effect. Moreover, the shift capability of your lens makes it possible to create panoramics by joining together two perfectly matching photographs.



MOUNTING TO CAMERA

To properly mount the Shift 28mm lens to your Pentax K camera, grasp the lens securely by the Lens Mount Grip, match red alignment dots of the camera and lens mounts, and rotate lens slightly in a clockwise direction until it locks into place with a click. If the lens is not properly centered after it has been mounted to the camera body, grasp the Depth of Field Collar and rotate the lens until the diamond-shaped red index mark of the Depth of Field Scale and red dot on the lens mount are aligned. Initially, the Shift Ring should be set to zero millimeters shift; if it is not, rotate the Shift Ring until "0" (zero) is aligned with the white Shift Alignment Dot beneath the Shift Scale.

THE PRESET AND APERTURE RINGS

The preset and aperture rings are used as follows. First, set the Preset Ring to the desired F-number (e.g. f/16) while keeping the Aperture Ring at f/3.5 for bright viewing. Next, after focusing and composing, rotate the Aperture Ring clockwise until it stops (it will automatically stop at the same position as the Preset Ring). Finally, make a stop-down exposure measurement and take the picture.

USING THE LENS

When the Shift Ring is set to "0" (zero), the lens will function as any other 28mm wide-angle lens. That is, if the lens is not perpendicular to the subject but faces upward (as when photographing a tall building in relatively close proximity), lines will converge at the top. Conversely, when the lens faces downward (as when photographing from the top of a tall building), lines will converge at the bottom. Similarly, when the camera is level, lines will converge to the right or left in accordance with the direction the lens is moved off a perpendicular axis from the subject.

I CORRECTING FOR CONVERGING LINES

Whenever desiring to correct for converging lines, the lens must be shifted in the direction in which the lines converge. For example, if the lines appear to converge at the top when photographing a tall building, proceed as follows when the camera is held vertically.

1. While looking through the viewfinder, slowly rotate the Shift Ring counterclockwise (it has click-stops at one-millimeter intervals). As the Shift Ring is rotated, the lens will move (shift) upward and the image in the viewfinder will simultaneously move downward.

2. Recenter the image in the viewfinder and it will be found that the lines no longer converge to the same extent.

3. Continue shifting the lens and recentering the image until the lines appear perpendicular.

When the camera is held horizontally, first grasp the Depth of Field Collar and rotate the lens clockwise 90° (3 click-stops). After this is done, the lens will shift upward as the Shift Ring is rotated. To correct for lines converging at the top, follow the three steps indicated above.

Notes:

(1) The lens can be rotated 360° (with click-stops at 30° intervals) to provide upward and downward shifts, or shifts in two directions at once (such as upward and to the right).

(2) Grasp the Depth of Field Collar when rotating the lens.

(3) The lens can be rotated either before or after shifting.

(4) As exposure will vary in accordance with the extent and direction of the shift, exposure measurement should not be conducted until after completion of the shift.

(5) On most occasions, use of a tripod is not required. However, one is recommended for highly critical architectural photography.

(6) The apertures of f/8 and f/11 are recommended for optimum sharpness when shifting the lens.

II EMPHASIZING AND "OVERCORRECTING"

Thus far it has been seen that when the lens is not perpendicular to the subject, but faces upward, lines will converge at the top, and at such a time the converging lines can be corrected by shifting the lens upward (i.e. in the direction in which the lines converge). However, in the above case, one can shift the lens in the opposite direction (downward) in order to emphasize or exaggerate the degree in which the lines converge. In this manner, one can utilize a "reverse shift" to apparently increase the height of a tall building, or the length of a model's legs, for example. Moreover, if a 6mm upward shift is required to make the converging lines of a building perpendicular, continuing to shift the lens to its maximum limit of 11mm will cause the lines to converge in the opposite direction (downward). In this way, one can "overcorrect" to create a new perspective. Thus, your SMC Pentax Shift 28mm wide-angle lens offers you the option of correcting "overcorrecting", emphasizing, or not correcting in order to achieve the effect you desire.

III PANORAMICS

Sweeping panoramics in which the total angle of view is approximately equal to that of a 15mm ultra wide-angle lens (110°) are easily created with the SMC Pentax Shift 28mm lens. The general procedure is outlined below.

1. Your Pentax K camera is securely mounted to a tripod.

2. Sweeping panoramics appear attractive when made in the horizontal format and ordinarily appear strange in the vertical format; for this reason, the camera is mounted to the tripod horizontally.

3. The lens is shifted completely (11mm) to the left, and the first exposure is made.

4. The lens is rotated 180° so that the 11mm shift is on the right, and the second exposure is made.

5. Prints are made from the two negatives, and the portions which overlap are removed, forming two perfectly matching photographs which are joined together to make one panoramic view.

Notes:

(1) The camera must be perfectly level if converging lines are deemed undesirable.

(2) Rotating of the lens and advancing of the film should be carried out as gently as possible to ascertain that the camera does not move, for movement of the camera will result in mismatching of the two photographs.

IV FILTERS

The SMC Pentax Shift 28mm lens has three built-in filters which are simply "dialed" into place by rotating the Filter Ring. Filter factors are as follows:

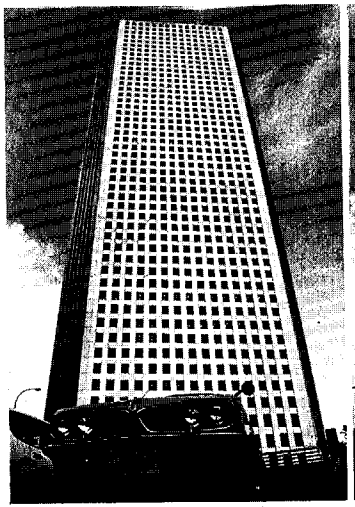
Y45 (Y2), 2X; Skylight, 1X (no factor); 056 (02), 3X. Filter factors need not be considered when using the built-in exposure meter of your Pentax K camera.

Both the yellow and orange filters are used to increase contrast with black and white film. When a darkening of the sky is desired without darkening of greenery, the yellow filter should be used. The yellow filter may also be used with color infrared film, and both the yellow and orange filters may be used for creative effects with color film. When natural color is desired, the skylight filter is used. The SMC Pentax Shift 28mm lens is also provided with a Gelatin Filter Clip at the rear of the lens, so that gelatin filters may also be used.

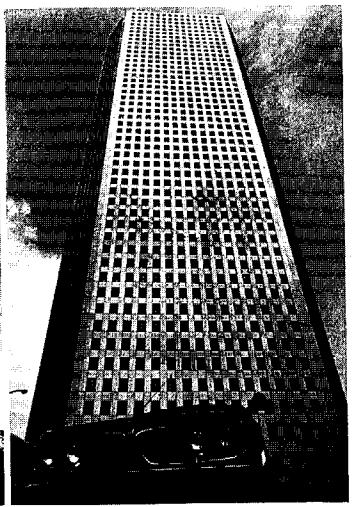
ected (without shift)

Corrected (with moderate shift)

Overcorrected (with maximum shift)



Uncorrected (without shift)



Emphasized (reverse shift)

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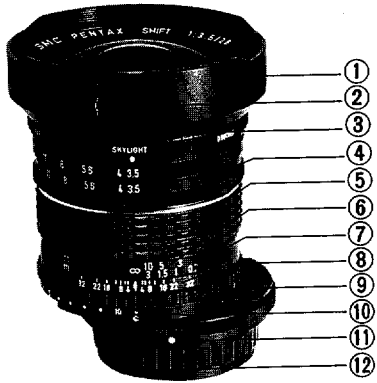

1. Lens Hood
2. Filter Ring
3. Preset Ring
4. Aperture Ring
5. Focusing Ring
6. Distance Scale
7. Depth of Field Collar
8. Depth of Field Scale
9. Shift Ring
10. Shift Scale
11. Shift Alignment Dot
12. Lens Mount Grip

Printed in Japan