

THE LINHOF TECHNIQUE

Data Sheet No. 6

6

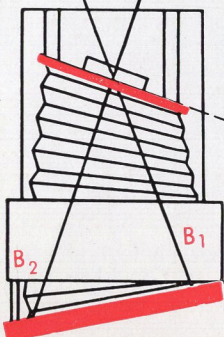
Control of Perspective with the Swing Back



Background

Subject

Foreground

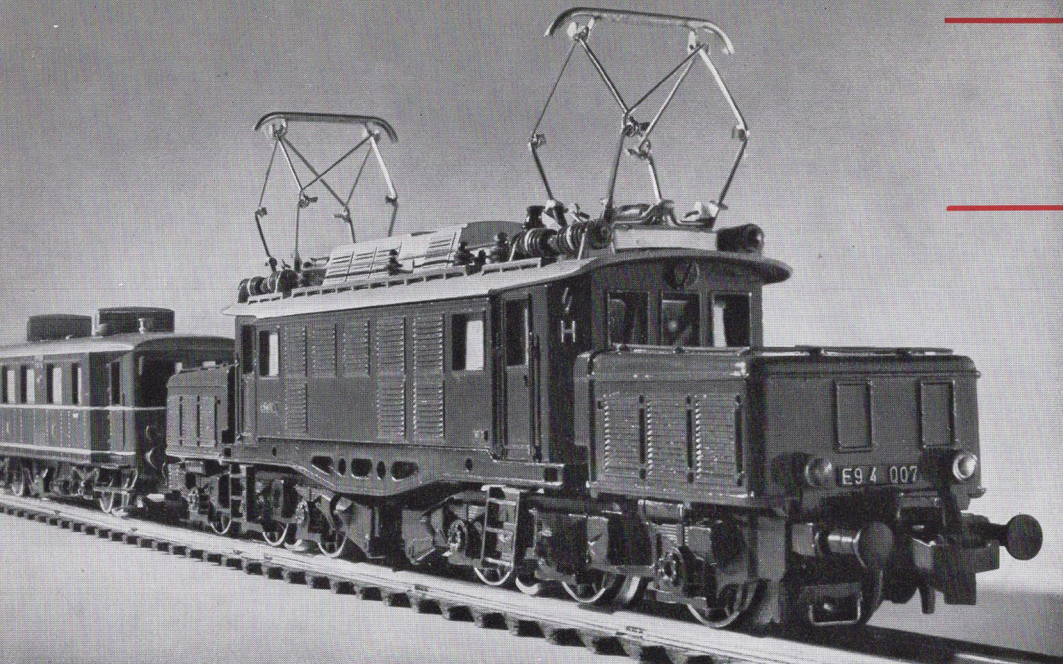


SPECIAL EFFECTS OF PERSPECTIVE,

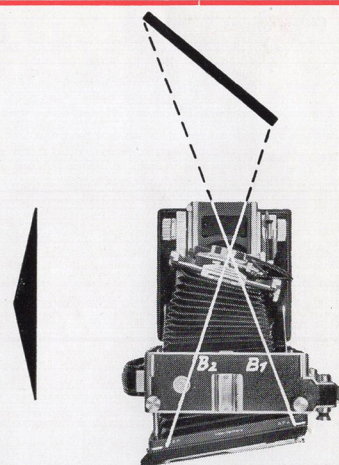
as for example intentional exaggeration (see above and on reverse page) are often successfully employed in advertising and illustrative photography.

How can such dramatic perspectives be achieved by using camera adjustments? — In cases where perspective is to be rendered exaggerated, the subject should be photographed from an oblique position. The camera back is swung out at an angle opposite to that of the subject (see diagram). The degree of adjustment depends upon the depth of the subject, i. e. on its extension towards the background, and is checked on the ground glass. The camera is properly adjusted when the part of the subject closest to the camera as well as the most distant part both appear in sharp focus. Sometimes even the maximum movement of the swing back alone is not sufficient to obtain a highly dramatic perspective with objects at a very acute angle. In such cases it is necessary to also adjust the lens standard. This is indicated in the diagram at the left. It can be seen that the subject plane and the image plane are both inclined to the lens axis. They intersect the plane through the lens at right angles to the lens axis at a common point A. The focal length of the lens used has also a considerable influence on perspective. The shorter it is, the easier it is to achieve intentional distortion with a sharp rendering of the entire subject or subjects. Wide-angle lenses are therefore especially suited for this type of work.

THIS, AND MUCH MORE CAN BE ACHIEVED WITH THE TECHNIKA

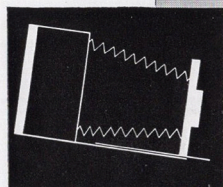


A toy train appears more attractive and quite impressive in exaggerated perspective — it looks almost like a real one. This effect is often used in modern advertising and helps to give a more favourable illustration of certain subjects.

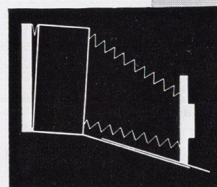


How can exaggerated perspective be explained? We know by experience: the longer the bellows extension, the greater the image size, provided of course that the focal length of the lens remains the same. Therefore, if we swing out the camera back, one side of the film plane will be farther away from the lens than the other, and hence the image size on the one side will be greater. As our diagram shows, the farthest subject will be rendered small (lens-to-film distance B_1), and the subject which is nearest to the camera is rendered proportionately larger (lens-to-film distance B_2). These different image sizes add to the effect already created by the normal perspective. In other words, we are creating exaggerated perspective. A further advantage of the camera technique described above is that the entire subject is in sharp focus (see Data Sheet No. 1).

In figure photography, especially with lenses of short focal length, a distorted perspective will result from camera positions higher or lower than waist level where the camera has to be tilted (see example on the left). To avoid this the camera back must be vertical. The lens must then be raised or lowered to accommodate the subject. To retain all-over sharpness without stopping down the lens, the lens standard should be set parallel to the camera back. In the event of extremely high or low camera positions, both the camera back and lens should be adjusted (see example on the right). Here it is essential to use a lens with sufficient coverage (see Data Sheet No. 4).



With non-adjustable camera - wrong proportions



With camera adjustments used - true proportions



In addition to information of this kind, you will find many interesting suggestions and tips in the new photographic magazine GROSSBILD-TECHNIK. Well-known specialists report on their experiences, and the illustrations include beautifully printed full colour pages. Enquiries may be addressed to: GROSSBILD-TECHNIK, English Edition, Rupert-Mayer-Straße 45, München 25, West-Germany, Price of single copies: DM 3.15 or 75 c or 5s. 3d., or equivalent, postpaid.