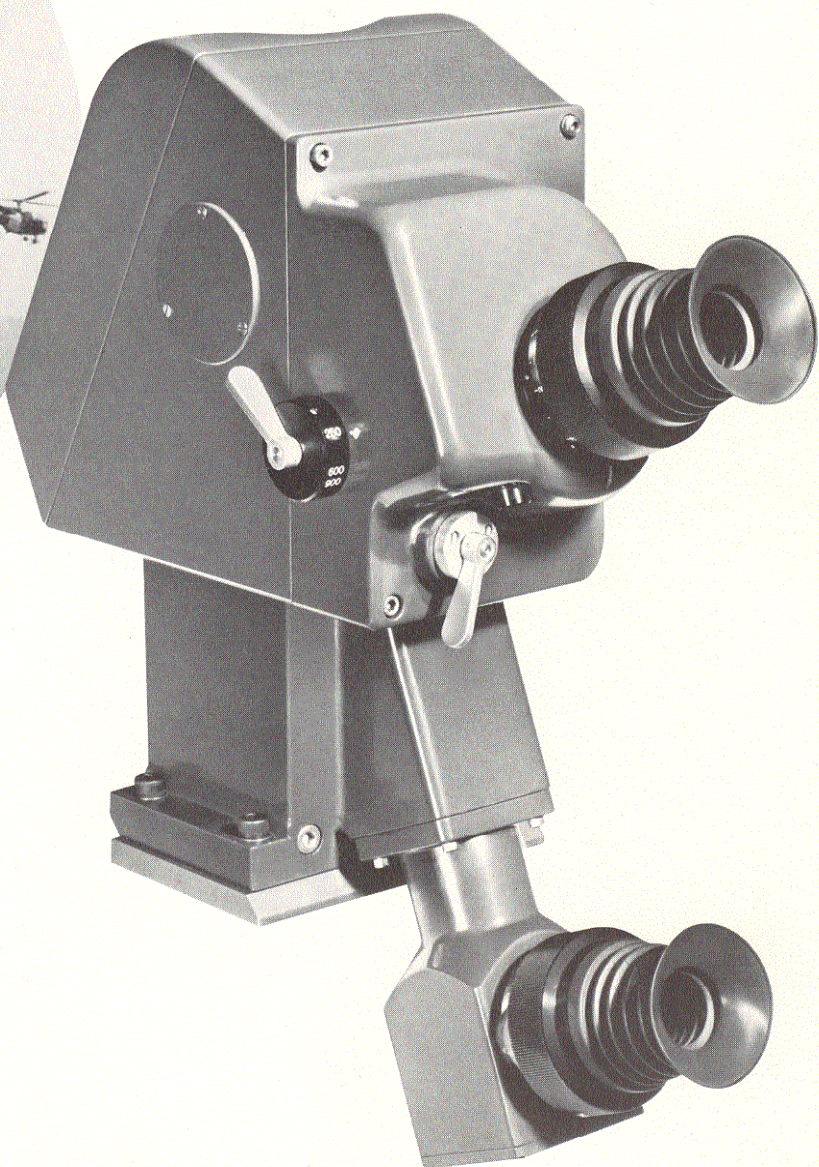




Kern Block Sight FERO-Z 13



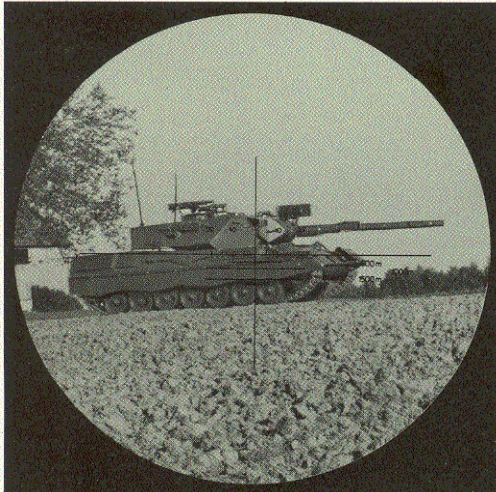
Kern Block Sight FERO-Z 13: A Top-line Optical Product of Proven Quality that Conforms to Stringent Military Requirements.

Instrument Description

The Block Sight FERO-Z 13 is an optical aiming device for use on 25 mm cannon. As a combined sighting telescope, it is equally suitable for the engagement of ground and air targets.

Engagement of Ground Targets

For infantry applications, the magnification and light gathering power of the optical system simplifies firing at poorly visible targets.



Graticule for Ground Target Engagement

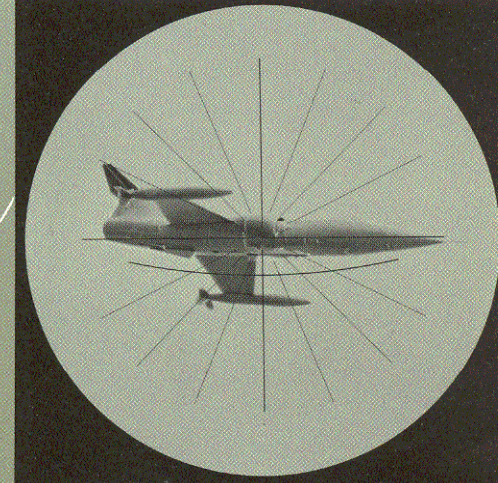
The graticule of the ground target sight consists of simple cross wires with lead marks for firing distances of 500, 1000 and 1500 m. The horizontal axis has mil graduation.

Graticule for Air Target Engagement

The graticule of the air target sight consists of a system of fixed flight direction lines together with a lead line that is functional related to flying speed and barrel elevation. This principle provides a simple sight image and optimum sighting accuracy for aimed firing bursts at approaching air craft.

Engagement of Air Targets

In anti-aircraft applications, the most important aspects are the sighting of approaching aircraft and their engagement with aimed bursts. The gunner's task is simplified; hit probabilities increase as a result of a simple, clear sight image and the consideration of possible sighting point corrections.



Kern Block Sight FERO-Z 13: Perfected Technology down to the Last Detail

A Block Sight that can take Rough Handling

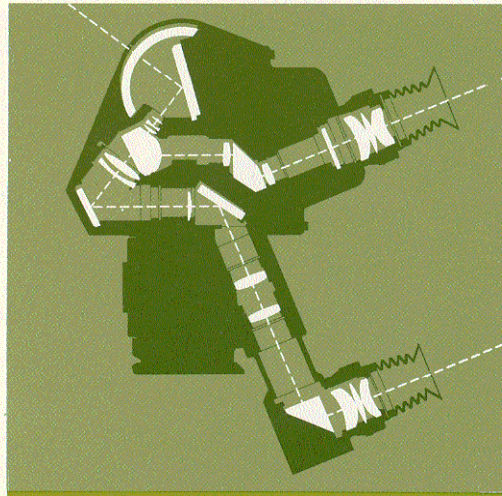
The rugged, bullet-proof design guarantees a long service life even when in continuous use under the roughest conditions. The compact design thoroughly protects all important function elements. The optical performance and the operational readiness of the block sight are not affected by unfavorable service and maintenance conditions.

Ergonomic Shape

The extremely compact design results in a light, handy block sight that features ergonomically-designed, easily manipulated operating elements.

Brilliant Optical Performance

Outstanding image sharpness and contrast, resolution capabilities that exceed those of the human eye together with optimized color correction ensure a brilliant image giving a plastic impression.

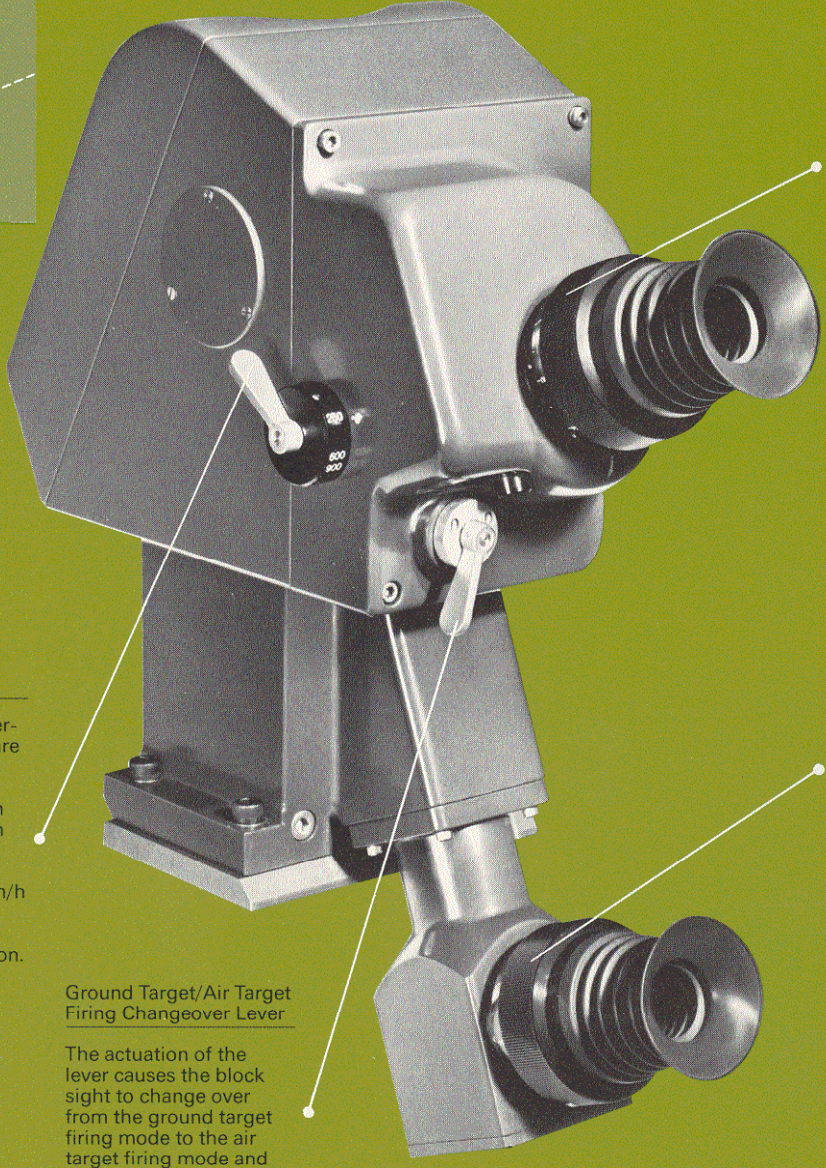


High-precision Optical System

The partly combined optical paths for the ground and air target telescopes allow the use of individual gratitudes and favorable optical values for both sights. Kern uses top-quality materials for all optical and mechanical components. Together with proven design, manufacturing and quality assurance methods, this results in block sights of the highest precision.

Flying Speed Change- over Lever

The flying speeds determined by the gunner are preselected on the changeover lever and fixed by a detent. With the speed settings 0 in the case of a dive approach, 250 km/h, 600 km/h and 900 km/h the lead curve moves downwards with increasing barrel elevation.



Air Target Ocular

With the air target ocular, the target image appears 1.5 times magnified in the ocular image plane. The ocular can be adjusted by ± 3 diopters to compensate for subjective ametropia.

Ground Target Ocular

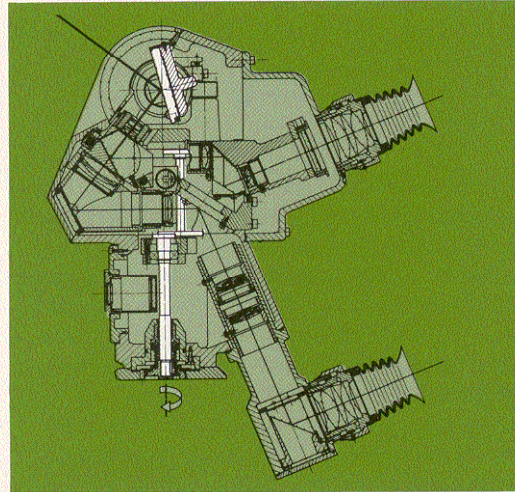
With the ground target ocular, the target image is observed at a magnification of 5 times in the ocular image plane. The ocular can be adjusted by ± 3 diopters to compensate for subjective ametropia.

Ground Target/Air Target Firing Changeover Lever

The actuation of the lever causes the block sight to change over from the ground target firing mode to the air target firing mode and vice versa. The optical data and graticule image are changed each time.

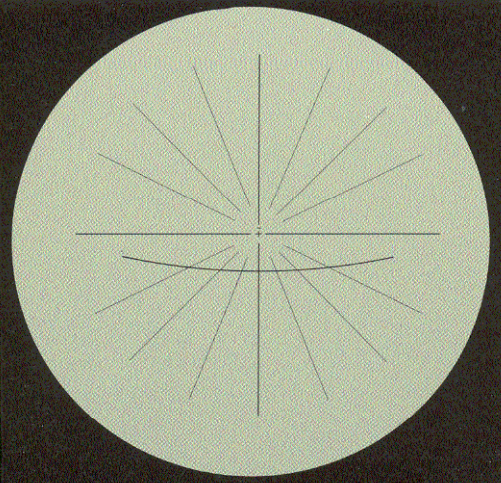
Deflection Mirror Elevation Drive

When the elevation mechanism is actuated, the rotary motion is transmitted via a high-precision gearwheel drive to the deflection mirror. The gearwheel drive guarantees consistent agreement accuracy between optical and barrel axis.



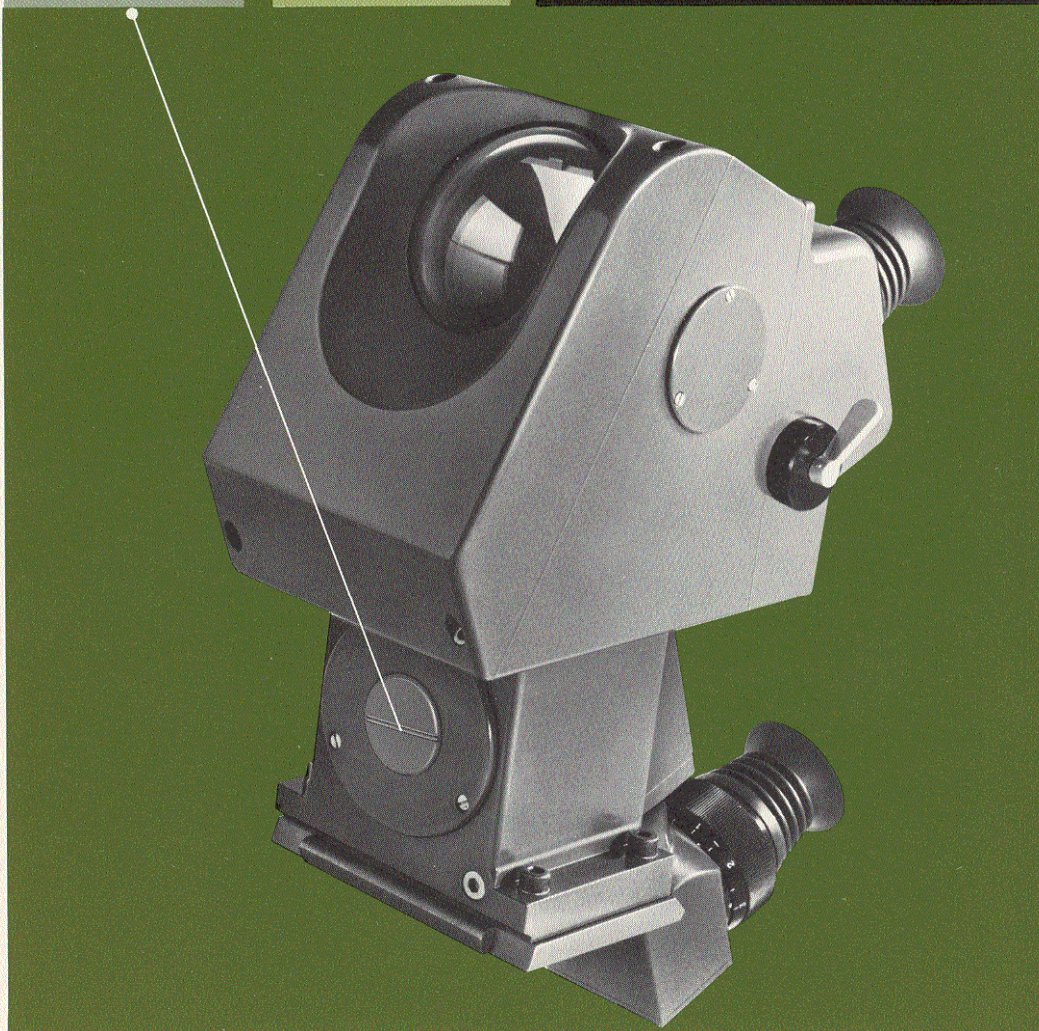
Lead Curve

The lead curve moves as a function barrel elevation and flying speed. The movement is produced by an accurately manufactured control cam. The control cam allows for the variable parameters of differing flight situation as well as for ballistic values. The approximately elliptical lead curve is computed from the variable parameters of differing flight situations.



Desiccant Cartridge

The easily exchangeable desiccant cartridge is screwed into a flange and prevents condensation inside the instrument.



Coated Optics

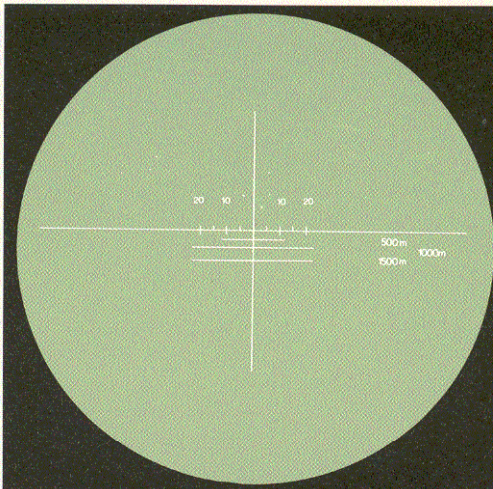
Weather-proof, anti-reflection coating on all optical components guarantees an absolute minimum of light loss which results in optimized twilight performance.

Ruggedized, Dustproof, Water-resistant

Dependable in any environmental conditions.

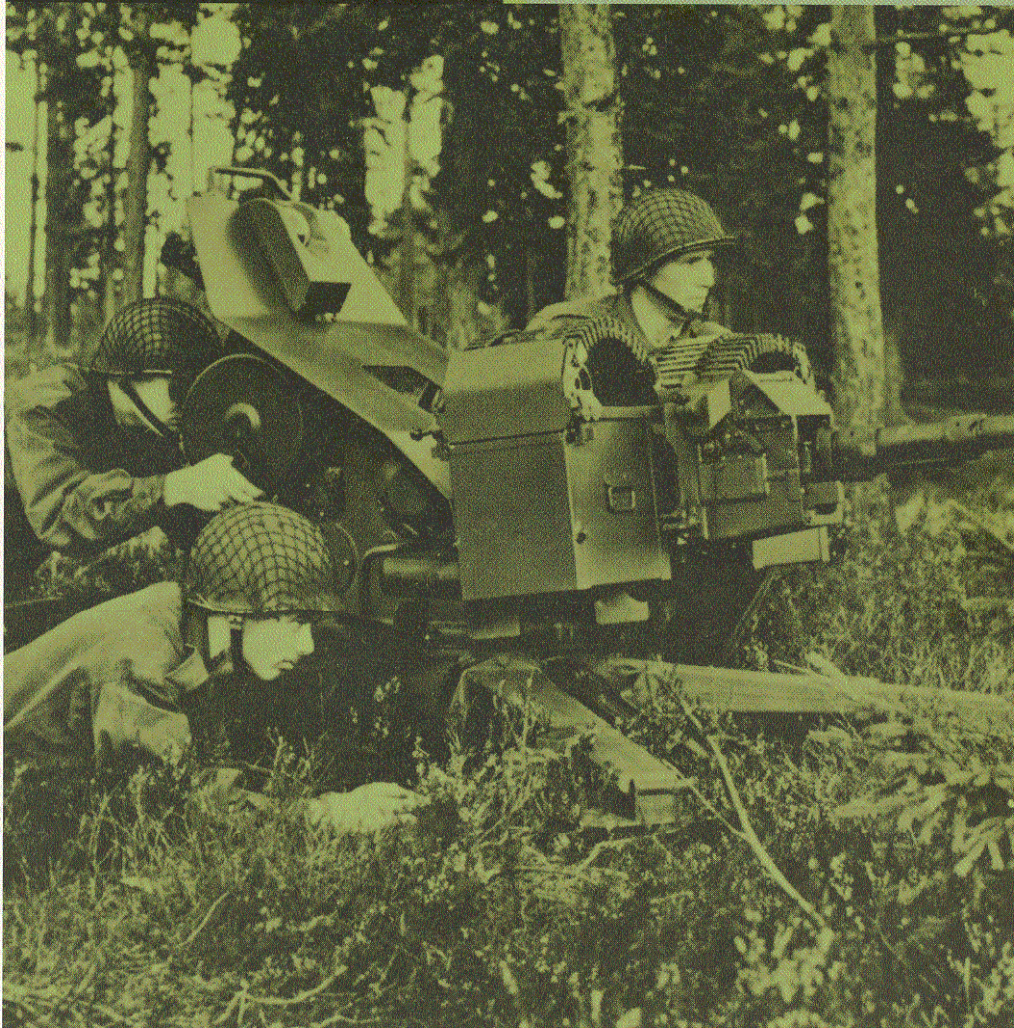
Maintenance and Service Compatibility

The block sight consists of individual modules. These can be rapidly and easily removed and replaced to guarantee efficient maintenance.



Graticule Illumination

The graticule of the ground target sight can be illuminated by means of an attachable illumination device. The operational availability of the block sight is guaranteed under both twilight and night conditions.



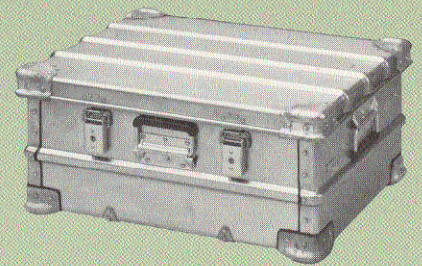
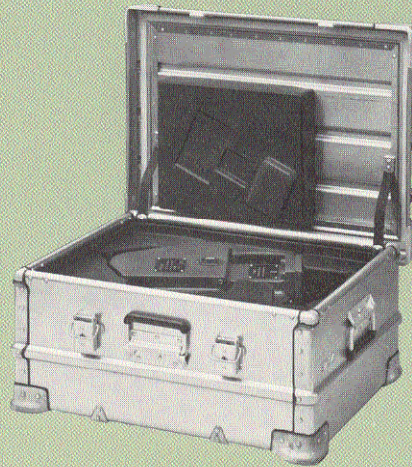
Kern Block Sight FERO-Z 13: A Kern Quality Optical Product

Whenever the latest technologies are applied to the design of military optical instruments, Kern is at the forefront – and has been for decades. In the future, Kern will continue to incorporate scientific knowledge and technical progress in development of new and improvement of existing products while taking into account the individual needs and requirements of the user community.

Kern & Co. Ltd.
**Mechanical, Optical and Electronic
Precision Instruments**
CH-5001 Aarau, Switzerland
Telephone (064) 25 1111

Container

The Block Sight FERO-Z 13 is packed into an impact-resistant metal case together with a roll-up tool pouch and the illumination device.



Technical Data

	Ground target telescope	Air target telescope
Magnification	5 x	1.5 x
Entrance pupil diameter	35 mm	10.5 mm
Exit pupil diameter	7 mm	7 mm
Distance of exit pupil	32.5 mm	32.5 mm
Field of view at 1000 m	200 m	700 m
Field of view in degrees	11.3°	39.4°
Diopter adjustment range	± 3 diopters	± 3 diopters
Parallax-free adjustment at	∞	∞
Elevation range	-10° to +80°	-10° to +80°
Operating temperature range	-40 °C to +60 °C	
Storage temperature range	-54 °C to +60 °C	
FERO-Z 13 weight	approx. 18 kg	
Container weight	approx. 11.7 kg	
Total weight	approx. 29.7 kg	
Approx. dimensions of FERO-Z 13:		
Overall height	463 mm	
Overall width	183 mm	
Overall length	395 mm	
Approx. dimensions of container:		
Height	287 mm	
Width	605 mm	
Length	464 mm	