

For our day-to-day vision, our pupils make sure that the right amount of light gets through. The ring of the iris contracts in bright light conditions, and when it gets darker, the pupils get bigger. This takes place a thousand times a day, all our lives, open or shut as required.

This biological mechanism is sufficient for us to deal with most tasks. A young eye can contract to around 2 mm, enabling its owner to still read under very bright lighting.

When it reaches its limits, however, this natural adjustment is no longer adequate. For example, when aiming over closed sights, where the contrasts are especially strong.

In practise, the extent of your ability to see the ring and aiming mark depends mainly on the correct use of your iris. Here are some of the main rules:

DISTANCE

- The distance from eye to iris (rearsight) should be selected so that the foresight tunnel fills about one-third of the opening.

FUNCTION + FIXING

- To do ist job reliably, an iris unit must be fixed and functioning properly.

CLEANLINESS

- Before shooting, check whether the iris is clean. If you can see fluff or shadows, click any filters out and blow through it.

APERTURE

- Look through the aperture at the target and rotate until the picture appears optimal.

ADJUSTMENT

- Re-adjust the aperture now and again during the shoot, especially in response to lighting changes on outdoor ranges.



**BRIGHTNESS
FOCUS
CONTRAST**

IRIS?

centra

In addition, it has long been known that placing an additional man-made pinhole in front of the pupil not only avoids too much light reaching the retina; at the same time, the image is 'sharpened', because objects at different distances can be held in focus together at the same time. This is the effect which is known as 'depth of field' in photography: the smaller the opening of a circular pin-hole is, the greater the distance over which objects appear to be sharp in the photograph.

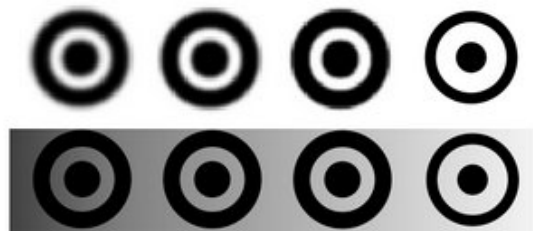
As a shooter, when you look over your rearsight at the foresight ring and the target, you can only see one or the other, but not both, sharply. When you look through your rearsight however, both levels appear to be sharp.

Fine regulation of the aperture permits not only a sharpening of the sight-picture, it also significantly improves the contrast. Light and shade can be modulated in steps, until exactly the right brightness appears between foresight ring and aiming mark.



The iris rearsight is one of the most helpful aids for the aiming eye. It improves contrast and depth of field and so gives us a clear and balanced picture. This reduces the workload for the eye during aiming - it can work accurately for longer.

Centra manufactures iris-units in traditional precision and quality. All components except for the glass elements are made and assembled in-house.



The iris opening should never be less than 0.9 mm, otherwise the picture will appear dull. If the dimming is insufficient, then it will be necessary to use a filter. An aperture greater than 1.2 mm leads to fuzzy edges in foresight ring and aiming mark. In this case, a weak filter provides lightening.



Helmut Brunner senior, the founder and for many years MD of the centra firm, counts as the inventor of the modern 15-leaf precision iris. Many further developments in and around aiming technology have been built on his creativity.

His inventiveness was however equally matched by his attention to the quality of his products. The only guarantee of a sustainable high standard of quality is to assemble and finish each article in-house. This is a maxim which has governed the manufacturing at centra up to the present day.

