



KAHLES

THE KAHLES K18i IPSC RETICLE

We at KAHLES share the passion and professionalism of ambitious shooters. We passionately support their aspiration to continually enhance performance. We do this with intuitive simple and smart products, based on profound user insight. This is why we have developed a reticle, especially for IPSC matches.

The KAHLES "IPSC" reticle has been designed together with some of the best IPSC shooters in the world, like Raine Peltokoski and Jarkko Laukia, both top shooters from Finland. We have asked Raine to explain the basic idea behind the simple reticle concept.



Photograph by
Kimmo Iso-Tuisku

How to work with the KAHLES IPSC reticle – by Raine Peltokoski

"In practical shooting the targets can be set on multiple different distances within a single stage. The distances can vary from below 10m to beyond 300m. The bullet does not travel straight and in long distances the drop of the bullet needs to be taken into account. This is normal for any long distance target shooting. What makes practical-rifle shooting difficult is that the speed aspect of the game does not allow sight adjustment between the targets. You must shoot all distances with one scope elevation setting.

There are two basic principles to handle the need for changing the aiming point on the targets: holding over and holding under. Holding over means the zero distance is closer (typically 100m) than the targets and for targets further away the aiming point is higher than the target. Holding under means the zero distance is further than (some of) the targets. Due to the targets being at the high part of the bullet trajectory the aiming point needs to be lower than those targets.

My personal principle behind Kahles IPSC reticle relies on a technique to dial the scope zero always to the longest target distance and holding under for the targets at the high part of the bullet trajectory. A big part of the holding under technique is the easiness at windy conditions for the longest targets because elevation is zeroed correct and only windage, sideways correction, needs to be taken into account. This is both fast and accurate.

The benefit of holding under is that you can have the illuminated dot on the target for most of the time. For closer targets you can easily find an aiming point on IPSC Classic target, just lower than it normally is. The magnification change does not have an effect on the illuminated dot position, which adds freedom on the stage plan compared to holding over technique.

Another big idea behind the KAHLES IPSC reticle is the openness of the view. No thick lines, nor multiple lines distracting vision and finding the next target. In fast shooting the targets are maximally visible and the dot placement is easy."



MAIN TECHNIQUES

The following examples shall illustrate different strategies how to use the IPSC reticle. The graphs we use are based on the STRELOK PRO App, using the data from Raines weapon system.

<u>Data used for calculations:</u>	Caliber:	.223
	Bullet:	Lapua FMJ
	Bullet weight:	55 grs
	Bullet speed:	912 m/s
	Zero distance:	100 meters or longest target

TECHNIQUE 1

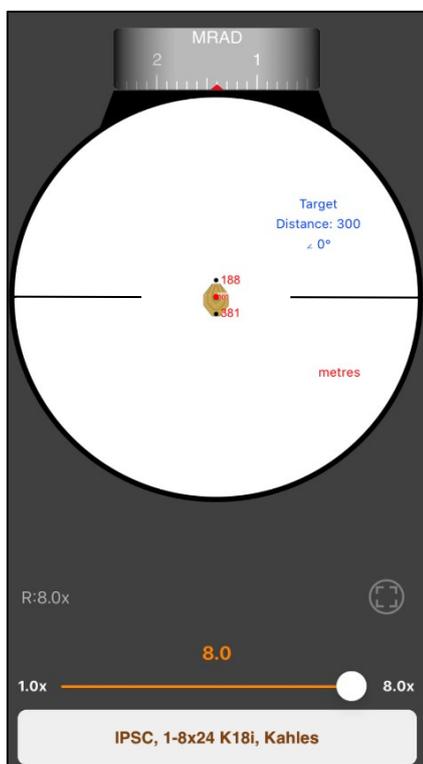
Raine Peltokoski always dials zero on the longest target distance and holding under for the targets at the high part of the bullet trajectory.

Target 1:	300 meters
Target 2:	100 meters
Target 3:	300 meters & 4 m/s wind from 90° right

In that example Raine would dial to 300 meters, taking 14 clicks up as shown in graph 1.1. Keeping the 14 clicks, Raine would place the red dot lower on the 2nd target at 100 meters as shown in graph 1.2.

The upper assisting dot can also be used when holding under.

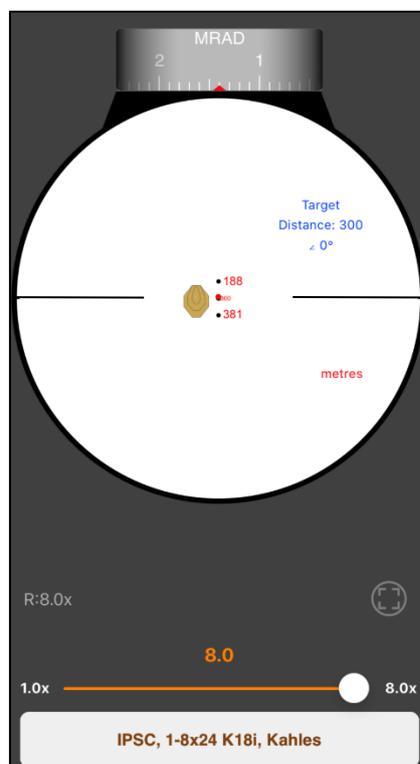
In windy conditions the longest target sight picture is on the target elevation-wise and off only windage-wise, like on Graph 1.3. Aiming easiness in difficult conditions is maximised as much as possible. The thin horizontal lines and red dot act as a guides for positioning of the rifle towards the target.



Graph 1.1.
Target distance 300 m / 14 clicks



Graph 1.2.
Target distance 100 m / 14 clicks



Graph 1.3.
Target distance 300m,
Wind 4 m/s 90° right, 14 clicks



TECHNIQUE 2

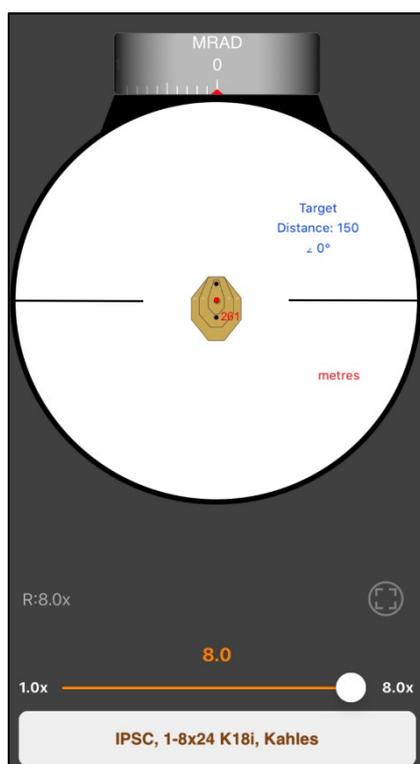
Holding over, just working with the reticle, no clicks.

Target 1: 150 meters

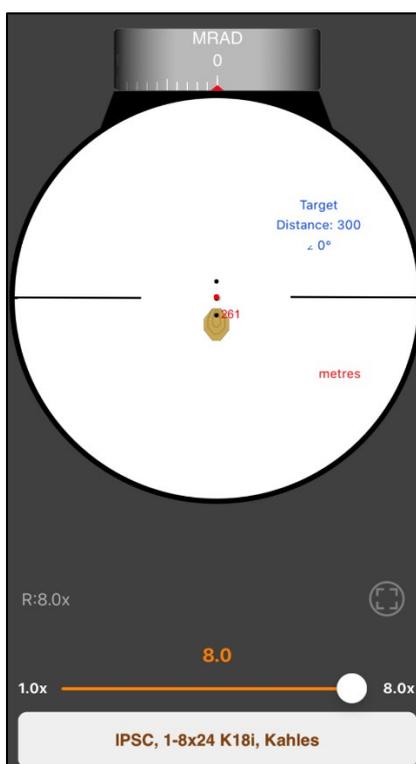
Target 2: 300 meters

In that example the 150 m target would be approached with the center dot as shown in graph 2.1.

The lower dot would work for the second target at 300 m.



Graph 2.1.
Target distance 150 m / 0 clicks



Graph 2.2.
Target distance 300 m / 0 clicks

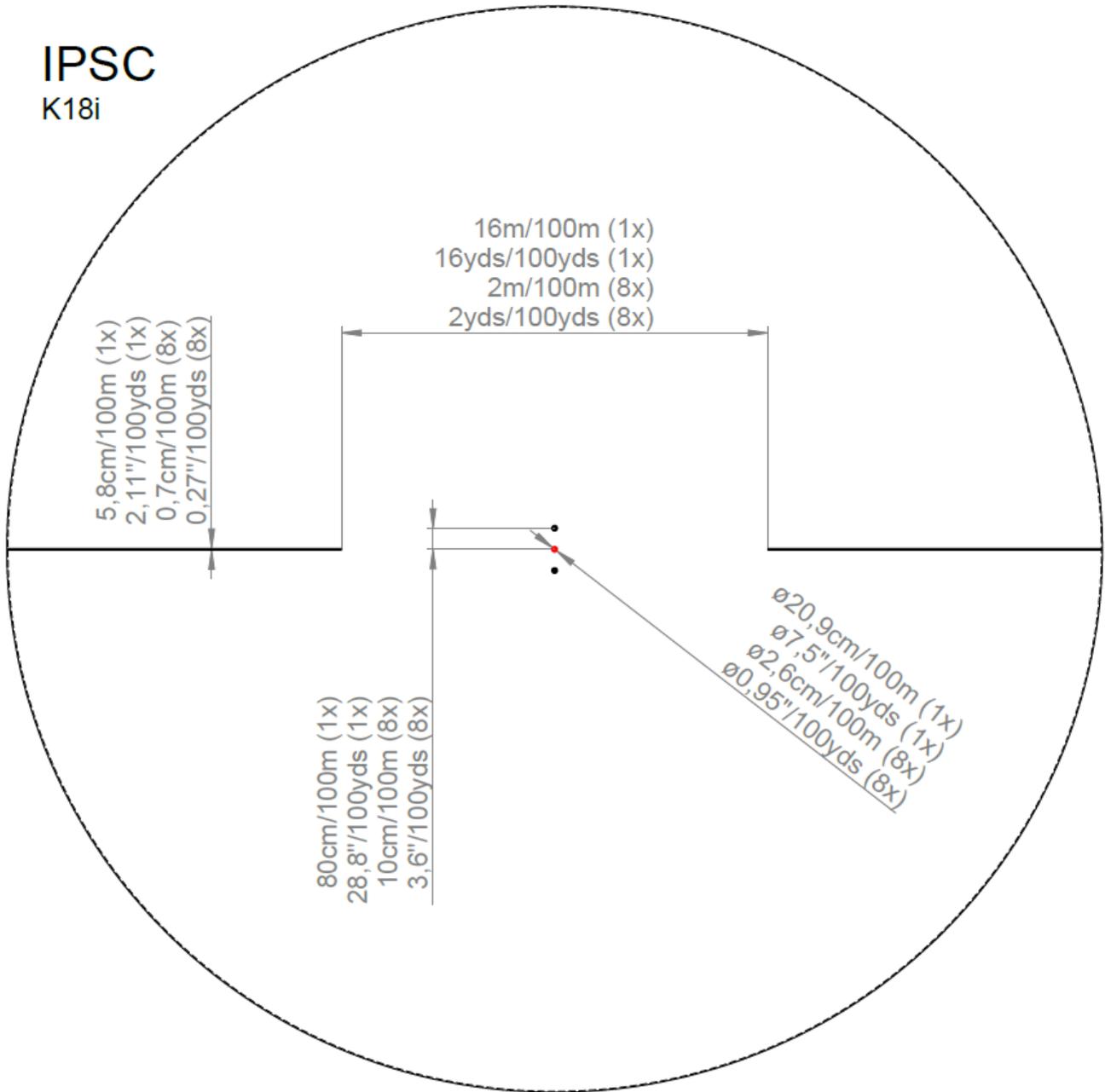
These are the two main principles for aiming on targets on different distances in fast rifle shooting.

KAHLES IPSC reticle has the two assisting dots to help fast aiming even in exceptional situations where the two techniques might be combined.



RETICLE DIMENSIONS

IPSC
K18i



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