

TECHNICAL REPORT

21 Dec 95

(Laser/R2)

A NOTE ON THE USE OF NIGHT VISION GOGGLES WITH IR LASER AND RING SIGHTS

Reference A: Ring Sights Ltd Technical Report dated 27 Jul 92

A Comparison of Laser Sights and Reflex Collimator Sights

1. IR Laser sights are fixed to the gun and zeroed to it; they put a near infra-red spot on the target scene which can only be seen with an image intensifier system such as Night Vision Goggles (NVG).
2. The alternative is to use a reflex collimator sight, such as a Ring or EPC Sight, which produces an aiming mark visible in NVG. Reference A compares a visible laser sight with reflex collimator sights; the arguments in it apply to infra-red sights too except that the latter cannot be seen by a poorly equipped enemy (it is worth pointing out that Russian NVG are openly available on the market: they are being sold at the IWA at Nuremberg).
3. In fact there is little difference in the use between a Ring or EPC Sight (such as that on the FN P90) and a laser sight except that the Ring Sight can provide a pattern (open T on the P90 sight) which makes pick up of the aiming mark easier. Ring Sights can be used by day and night without NVG (or at night with NVG) while the IR laser sight only with NVG.
4. Any weapon fitted with a Ring or EPC Sight can be used with NVG without fitting an IR laser sight so that the man can use his personal weapon directly. Zeroing is unchanged with and without NVG.
5. Summing up:-

IR laser sights can give the position of the firer away to the enemy's NVG.

IR laser sights cannot be mounted at the correct ballistic position (since this is on the sight line) so are only zeroable at one range.

IR laser sights must be used with NVG whereas Ring and EPC Sights can be used by the unaided eye by day or night as well as with NVG.

Any man can fire his own personal weapon (with Ring or EPC Sight) with NVG without re-zeroing (useful when the man on watch changes regularly).

The man with NVG can fire any weapon the situation requires (if it has a Ring or EPC Sight).

Ring and EPC Sights fit to the weapon in a far less vulnerable position than laser sights.