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SIGHT FOR THE B-300 LAW

The B 300 LAW comes in two parts; the launcher, which carries the sight(s) and is reusable, and the projectile inside a container discarded after firing. The launcher has an integral battle sight and an interface for other sights. One of these sights is the x 4 TRILUX telescopic sight. IMI is seeking a replacement for the TRILUX sight.

The TRILUX sight is a military telescopic sight with a field of 8°. It is doubtful if x 4 magnification is needed to shoot tanks out to 400 metres especially if the target is moving. The TRILUX (indeed all telescopic sights optimised for use by the naked eye) has an exit pupil of 6.6 mm. This makes it unsuitable for use with Night Vision Goggles which have an entrance pupil of some 22 mm (only 10% of the available light gets into the NVG). So at night the TRILUX has to be removed and a night sight put on (this is traditionally when the enemy attacks!). Interchanging sights means that the zeroing (alignment of sight with launcher) has to be thought through (not easy when the night sight may have to be used on another weapon type). And the B 300 LAW needs its special reticle pattern with dedicated range, lead and stadia lines: if these are put in a night sight this sight becomes dedicated to the B 300. The B 300 is widely issued: will such a night sight always be available?

There is an alternative. A specially designed Ring Sight™ can be put on the weapon (it could replace the battle sight). It is cheap enough to throw away (though this isn't necessary on the B 300): the UK LAW 80 has an integral unit power Ring Sight™, the RC-12, which is discarded with the barrel after firing. The sight is zeroed to the barrel in production. By day the reticle is lit by ambient light from the target area. In low light a tritium light source lights the reticle and this also lights the reticle for NVG. The reticle pattern can be the same as that used in the TRILUX so all the drills remain the same.

The sight line has to be in line with the eye but the part of the sight defining the sight line should be close to the launcher for robustness and convenience in handling and storage. So there is a collimator (which can be solid glass - no misting up internally - no maintenance) built onto the launcher with the sight line periscoped up to the eye by a prism folded away when not needed; because the prism's reflecting faces are parallel the orientation of the prism does not affect the sight line alignment. The top of the prism carries a beamsplitter which superimposes the reticle (focused at Infinity) on the target. The firer keeps both eyes open to maximise alertness (though he can use only one eye if he wishes).

The firer can wear monocular, biocular or binocular NVG and view the reticle and target through them. He acquires the target with NVG (he can keep low behind a parapet etc) and when he has decided to engage he lifts the B 300 into position, aims and fires as if it were day. So anyone with NVG can get a B 300 (with an integral Ring Sight™) and kill tanks at night. When day dawns he takes off the NVG and uses his naked eyes - no sight change is required. If magnification is really required (say for target identification) he could use Head Mounted Binoculars with the Ring Sight™ (though we doubt if this is needed).

The RC-12 Ring Sight™ on the UK LAW 80 has been successful. Some 180,000 have been made. The latest design has two solid glass optical components carried in plastic housings to be designed to suit the launcher. If temperature compensation is required this can be provided (as with the TRILUX).