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I expect some of you know Lindsay Knight who started Australasian Training Aids. He can shoot by hold: that is against the picture in his brain. A cricketer, like Steve Waugh, doesn't need a sight: his brain pictures where the ball will be and commands his arms for the bat to hit it. The same with shooting. If you move your eyes or head, keeping your shoulders still, the scene you see doesn't change. Your brain has processed the information from the eyes into the scene you perceive. And you can point your finger at a target without a sight. So, if you hold a gun aright, it aims aright.

How do you know that you are holding the gun right? By having a zeroed sight on it. Bring the gun up: If the aiming mark is on the target you are holding the gun correctly and you will hit the target. This is easiest if the sight is unit power: both eyes can be open and full alertness maintained.

But, if the aiming mark is not on the target a servo mechanism comes into play. The brain detects the error and commands the arms to eliminate it. This is easy and human with unit power, but with magnification the brain has to do a division sum before it tells the arms what to do. This needs training. And, if you have a variety of sights with different magnifications, the brain can get muddled and slower.

Ring Sights are mostly unit power reflex collimators and therefore user friendly. And they are now solid glass so are robust and cannot mist up inside. And the position of the eye fore and aft and side to side is not critical.

The main graticules can provide lead and elevation. Choose the aiming point and shoot. Maintain the aim, watch the strike against the graticule, put that point on the target and hit it as the error has been taken out (Burst on Target). Easy with unit power.

By day the graticule is lit by light from the target area. As the light fails a tritium light source or a LED array takes over.

And, at night, you can use Night Vision Goggles. The Ring Sight injects the graticule image into the NVG, no worry about zeroing as it stays the same. No need to move a night sight from weapon to weapon, just wear NVG.

Now to deal with actual sights. Most of the ones I will talk about are in service, but we have others which you can ask about and see in the Show and Tell demo.

RING SIGHT HC-14-62

V2 This was adopted as the sight for the FN P90 personal defence weapon and is integral to the gun. This is the basic optic.

V3 Here it is in the housing for the P90

V4 Here it is on the P 90

V5 The P90 is light to use so you can fire the gun with the Ring Sight injecting the graticule into the NVG.

V6 It may be better, especially for rifles, to clip the NVG onto the gun like this.

V7 Like this too. In this case the firer holds the gun as if there was no NVG as the eye position is unchanged.

V8 This optic can go on other guns. here is a concept for the SA80 with a laser aimer under the optic and zeroing on the mount.

V9 Not everyone likes the size of the HC-14-62. So there is a smaller one, also with a 14mm aperture. Here is the optic.

V10 Here it is, complete with zeroing, LED lighting and battery on a mount for the SA80 handle.

RING SIGHT LC-9-46

V11. The LC-14-46 optic has been turned on its side to provide a rifle grenade sight. The British are buying the TASS rifle grenade launched from the SA80 muzzle. They rejected the plastic TAAS sight which melted then the gun got hot. So they had a little competition, which we won. No wonder - they were seeking 80% hits
V11a a 1.2 metre square at 50 metres. With Ring Sight LC-9-46 they were getting 100% hits at 150 metres. In the acceptance trials with production standard sights an eight inch group was achieved at 150 metres.

V12 Here is the sight. It fits onto the SUSAT telescopic sight.

V13 Here it is on the rifle. You can see one of the two zeroing screws. The graticule has a bore sight mark and range marks at 50,100 and 150 metres. It is lit by an integral tritium light source so you can shoot with NVG. You can use the bore sight mark to aim the rifle itself with NVG. What more can you ask of a grenade sight? To use it with the M203 grenade launcher - we are working on this and should have samples available by the end of this year.

RING SIGHT WC-30

V14 There are bigger, more powerful, grenade launchers such as the American 40mm MK19. We have done a unit power solid glass sight for SACO Defense which goes out to 2000 metres range and allows for drift. Here it is. You can do burst on target: you can move from target to target more quickly: you can shoot with NVG.

RING SIGHT LC-40-100-NVG

v15 We did this optic long ago so when the RAF wanted a sight to improve shooting sideways from helicopters, we developed it for them.

V16 Here it is on the GPMG. Solid glass optic: graticule light by daylight and by a LED array with adjustable brightness so as not to shut down the NVG.

V17 This viewfoil shows the graticule pattern with enough lead and elevation to allow for helicopter movement and range. Two alternative lithium thionyl chloride batteries which have a very good temperature performance. Integral zeroing. IR Illuminator with its own batteries on a dovetail which can be used for other devices. Gun interfaces for GPMG, M134 Mini gun, M60D, GN M3M, GIAT 20, and 30mm cannon etc.

V18 Here it is on the GPMG in a helicopter on a Royal Navy trial.

V19 Here it is in a GIAT demonstration in France last year on their 30mm cannon.

V20 Of course, these cannon shoot to longer ranges to GIAT asked for magnification as an option. We did a magnifier which fits on the illuminator dovetail. Here it is on the 20mm in the same demonstration.

V21 You can use the optic for other weapons too. This is it on the Russian IGLA shoulder fired homing anti-aircraft missile system. You can see the standard iron sights, no good with NVG.

V22 With the LC-40-100 there is a lit graticule so you can shoot the aircraft down by day and night - if you use NVG. In service in South America.

What else do we have? A smaller version of the LC-40-100, the LC-31-85 more convenient for light machine guns.

Solid glass telescopic sights with black graticules but lit at night so you can use them with NVG.

Light Anti-Armour Weapon sights - we did the RC-12 for the UK LAW80 - 180,000 made - its cheap enough to throw away.

A red dot sight for pistols and SMGs - the EPC.

V23 And my fun thing - SPOT ON - this replaces the foresight - use by day and in
V24 twilight with the naked eye and by night with NVG. The way to improve shooting at the lowest cost.

V25 Look ahead - the Future Infantry Soldier with his helmet display projecting the target scene and graticule in front of his eyes. What is on his weapons? A special sight for each weapon? At what cost? Or a Ring Sight and a CCD camera put behind it? One camera per man not one special sight per weapon. No zeroing worries. You can even issue a magnifying camera to use when needed. And, if all else fails, you still have the Ring Sight to shoot with.

Enough for now - any questions?