A close-up photograph of a soldier wearing a camouflage helmet and aiming a rifle. The soldier's face is partially visible through the helmet's visor. The rifle is equipped with a holographic sight. The background is a blurred, warm-toned environment, possibly a battlefield or training area.

**Gain  
The  
Edge**

**HOLographic Weapon Sight**

**Military and Law Enforcement Products**

 **EOTech**  
Electro-Optics Technologies

## A Revolutionary Breakthrough

Today's F-14 Tomcats use holographic heads-up display technology to meet the requirement for super fast, accurate target acquisition. It has been proven by TopGun fighter pilots throughout the world.

The HOLOgraphic Weapon Sight (HWS) is the 1st electro-optic sighting system to apply holographic technology to small and medium sized weapon platforms. When used in Close Quarter Battle (CQB) environments, this revolutionary weapon optic delivers amazing speed and accuracy gains, un-compromising use of peripheral vision, leaves no muzzle side operator signature and is packaged in a compact, durable unit.

Now deployed with elite Special Forces and SWAT teams the world over, the HWS delivers vastly improved shooting performance for all levels of operators.



## The Magic of Holography:

In holography, all the information required to reconstruct the reticle image is recorded everywhere in the Heads-Up Display window. If the window is obstructed by mud, snow, rain, etc., the HWS remains fully operational, with point of aim/impact being maintained. Even in such extreme cases where the laminated window is shattered, the HWS is fully functional! As long as the operator can see through any portion of the window, the entire reticle pattern is visible on target ..... the operator can still engage with confidence.



Still accurate covered in mud

Still accurate covered in snow

Still accurate broken window

## Real Life Story:

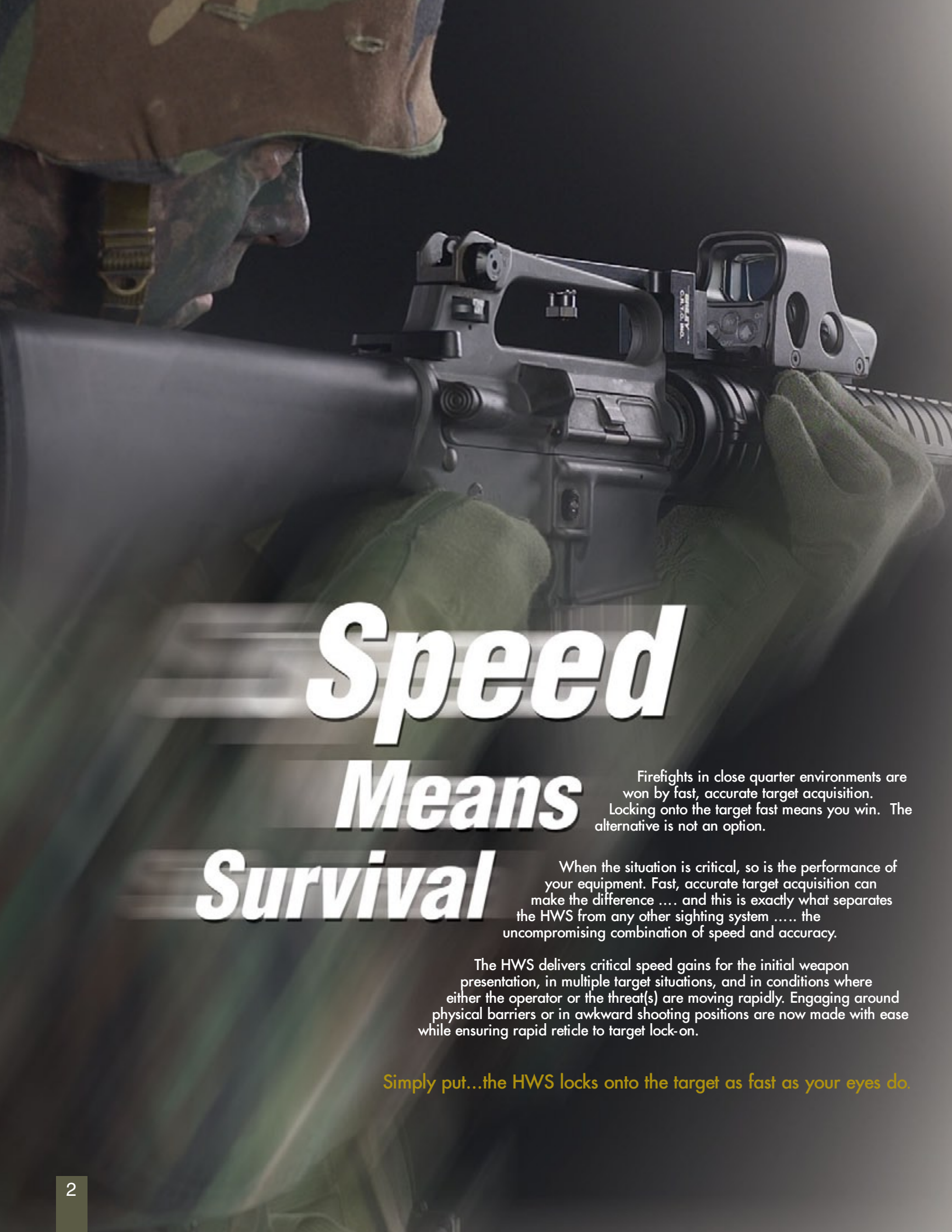
A case in point is a recent occurrence with a US Federal law enforcement agency. An operator took an in-coming training round (orange paint) during a firefight engagement in a shoot house. The training round smashed the HWS's front window upon impact. The operator had no idea he was hit ... because he saw the holographic reticle clearly and continued through his course of fire and engaged all targets perfectly ... without any change to point of impact. Needless to say ... all the operators training that day were in awe.



Shooters view







# *Speed Means Survival*

Firefights in close quarter environments are won by fast, accurate target acquisition. Locking onto the target fast means you win. The alternative is not an option.

When the situation is critical, so is the performance of your equipment. Fast, accurate target acquisition can make the difference .... and this is exactly what separates the HWS from any other sighting system ..... the uncompromising combination of speed and accuracy.

The HWS delivers critical speed gains for the initial weapon presentation, in multiple target situations, and in conditions where either the operator or the threat(s) are moving rapidly. Engaging around physical barriers or in awkward shooting positions are now made with ease while ensuring rapid reticle to target lock-on.

Simply put...the HWS locks onto the target as fast as your eyes do.

## The HOLOgraphic Advantage

The holographic patterns have been designed to be instantly visible in any lighting conditions, instinctive to center regardless of the shooting angle and to stay in view when sweeping an engagement zone. Reticles are designed as large, see through, patterns that achieve lightning quick reticle to target acquisition speed without covering up or obscuring the aiming point.

The standard reticle is a 65 MOA ring with alignment ticks and a 1 MOA aiming dot. The large, open ring is the key to the lightning quick eye recognition and unmatched target acquisition speed. Alternatively, the 1 MOA can be used for precision aiming at distances as far as 500 yards where it only covers 5" of the target scene. The reticle demonstrates its versatility for a host of close quarter and long range engagement scenarios ... there is no compromise between speed and precision accuracy.

### Extreme Durability - Built to Take It:

The HWS has been designed and tested to provide consistent, reliable performance even in the most hostile operational environments. The HWS is Waterproof (submersible), fogproof, shockproof, and withstands extreme temperature variations.

The HWS can withstand a 10 foot drop test mounted to an M4's receiver with no functional degradation to the weapon optic and holding zero to within 2 MOA. The HWS can take the banging, beating, and punishing treatment commonly inflicted in battlefield environments and remain fully operational and hold zero. Every HWS is extensively tested in a punishing recoil simulator generating 3,500 G's of acceleration in less than 0.5 milliseconds (the recoil of a .454 Casull revolver) as well as various environmental chambers.

The Heads Up Display is constructed with a 3 layer, shatterproof laminate glass that is 3/16" thick for added durability. Additional protection of the Heads Up Display is provided with a "roll bar" ruggedized hood.

Sealed optical cavity ensuring waterproof (submersible) and fogproof operation

Universally available and military stocked AA batteries



Anti-reflective coatings to eliminate muzzle side reflective glare signature

Electronics fully encapsulated in shock absorbing resin compound

State-of-the-art aerospace composite material enclosing the optical cavity

Hardened and corrosive resistant componentry

#### Electronics Features:

The HWS uses state-of-the-art, digital electronics design. Twenty brightness levels ensure proper brightness control in either low light or very bright sunlight. An on-board microprocessor provides automatic battery check indicator, up/down brightness scrolling and programmable auto shut down features. All electronics are fully encapsulated in shock absorbing resin compound.

### No Reticle Wash-Out

The HWS's 30 brightness settings ensure the holographic reticle can be instantly viewed in ALL types of lighting environments, cluttered backgrounds and target colors. The HWS delivers an impressive 10,000,000:1 bright to low reticle contrast ratio ... to ensure the reticle is always clearly viewable.

Reticles can be easily seen against white targets in full sunlight – even in desert or tundra environments. With the HWS, there is no reticle "wash out" conditions as seen in red dot sighting systems. Operators can then adjust to work in moonlit or super low light environments against dark colored targets without "overwhelming" the target scene. For extreme low light conditions, engaging the HWS's night vision mode allows the reticle pattern to be viewed in tandem with the most advanced night vision systems on the market today. The 30 brightness settings provides the operator the flexibility to adjust for optimal conditions in today's ever changing battlefield environments.



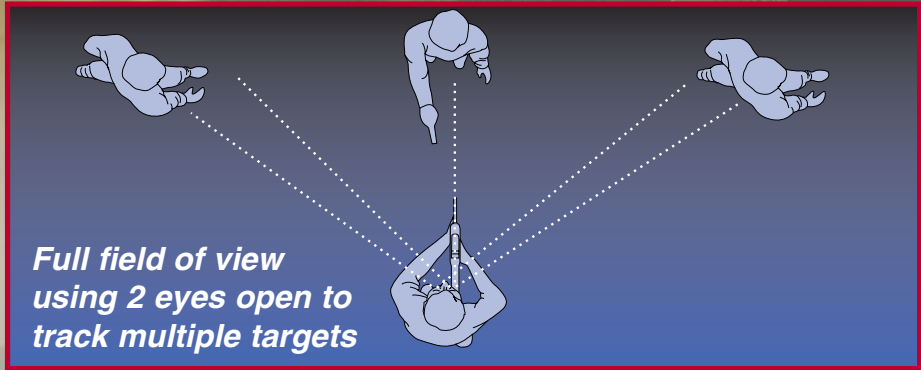
Night Vision toggle switch

The combination of a large, see-through reticle pattern, the position of the Heads-Up Display nearer the eye, and the full peripheral vision with 2 eyes open delivers target acquisition speed unmatched by any other sighting system.





*Both eyes open, peripheral vision maintained... maximizes situation awareness.*



### ***Heads Up, Full View***

Multiple threats are given in tactical situations. The retention of peripheral vision is critical for threat ID and situation awareness. Engagement with 2 eyes open is a must.

The HWS employs a true Heads-Up Display that eliminates blind spots, constricted vision, or the tunnel vision associated with tubed sights. All user controls are flush to the HWS's streamline housing with no protruding knobs, battery compartments or mounting rings that block the shooters vision of the target area. True, 2 eyes open shooting is realized. Instant threat identification is achieved by maximizing the operator's peripheral vision and ultimately gaining greater control of the engagement zone. The end result - operators achieve maximum situation awareness.

## Night Vision Capability

The Model 550 HOLOgraphic Weapon Sight (HWS) is fully compatible with all generation levels of night vision intensifier tubes. A special night vision (NV) setting allows the operator to immediately drop the brightness intensity of the holographic reticle to eliminate any "halo" affect while viewing through an image intensifier tube. The M550 can be positioned in tandem behind night vision intensifiers without any "bloom" of the target area. Now, operators can combine the proven night vision technological advantage with a superior, close quarters weapon optic to achieve greatly enhanced weapon aiming – in complete darkness.

Unlike active IR laser pointer systems, the HWS is a passive system and emits no muzzle side signature. While in the NV mode, the HWS is undetectable against enemy night vision surveillance systems, providing operators with a stealth means for effective nighttime weapon aiming.

The M550's unique switch allows the operator to instantly drop the holographic reticle's brightness to the NV mode of operation. The operator has the ability to toggle back and forth between the NV mode and the normal day/night operation within fractions of a second. The M550 has 10 distinct night vision settings to provide maximum flexibility to the operator. Typically 3 to 4 brightness settings are not enough to support a host of constantly changing conditions including manufacturing variances in the sensitivities of the image intensifier tubes, varying ambient light environments, and varying light gathering sensitivities of the human eye across users. The M550 still maintains the 20 normal brightness settings for normal day/night operations.

The typical configuration is with both the monocular night vision system and the HWS mounted in tandem on the weapon's receiver (see Figure 1). Operators can also witness the holographic reticle with head/helmet mounted monocular night vision image intensifier systems, even on a partial cheekweld on the weapon's stock (see Figure 2). This allows the operators added flexibility and greater versatility when deploying with night vision systems in the ever changing battlefield environments.

Fig. 1 Weapon Mounted Configuration

Flat lens with anti-reflective coatings eliminate any reflective glare signature



Fig. 2 Head Mounted Configuration

## No Revealing Signature

The HWS is a passive weapon optic and does not emit any muzzle side, position revealing light signature ..... the projected reticle pattern is visible only to the operator. Even Gen III night vision equipment cannot detect muzzle side signature of the operators position.

The result – the operator remains absolutely undetectable in any operating environment.





## Other Weapon Platforms

In holography, virtually any image can be created as a reticle pattern, in either 2 or 3 dimensions. Given sufficient volume, the HWS's reticle patterns can be tailored to support various user requirements for a host of applications in both small arms and medium sized weapon platforms as well as individual launching platforms. Reticle designs can be fabricated to incorporate multiple trajectory point of aim/ point of impact, range assisted scales, and anti torque or cant visual indicators. Optical elements and ranging nomenclature can also be fabricated in a non-interfering optical domain of the window to assist in target ranging and even dual use images for M16/203 launching platforms.

The HWS has already been successfully adapted to various less lethal launching systems, medium sized caliber machine gun weaponry, shoulder fired weapons (like the M72 LAW), and now, even grenade launching platforms. With the advanced holographic technology, the HWS demonstrates its unique flexibility and adaptability to solve a number of cost effective, fire control issues for a host of applications and weapon platforms well beyond small arms applications.



## AA Batteries

The HWS is the only military grade close quarter weapon optic to use the universally available AA batteries. The AA batteries are in military inventories worldwide and allow for interchangeability with one common battery source across all standard battery powered gear. Now operators can stock, maintain, and deploy with one common AA battery source for their close quarters weapon optic, night vision systems, flashlights, GPS gear, radio equipment, etc. The HWS accommodates all versions of AA batteries including lithium, alkaline, and rechargeable types. The AA battery option extends the battery life to over 500 hours of continuous usage (at nominal level 12 brightness setting) and is suggested for arctic or cold weather operation (lithium types). The HWS is available in a compact model that is 1" shorter and is powered by "N" Alkaline battery (camera type batteries).



N Batteries

AA Batteries

## Model Differences

	Model 510	Model 510 AA	Model 510 Less Lethal	Model 550	Model 550 AA
Order Code	511.A65/1	512.A65/1	511.LL Sage	551.A65/1	552.A65/1
Night Vision Compatible	No	No	No	Yes	Yes
Waterproof & Submersible	to 10 ft depth	to 10 ft depth	to 10 ft depth	to 33 ft depth	to 33 ft depth
Battery	N Alkaline	AA lithium, alkaline, or rechargeable	N Alkaline	N Alkaline	AA lithium, alkaline, or rechargeable
Battery Life (setting 12)	100 hours continuous	500 hours continuous	100 hours continuous	100 hours continuous	500 hours continuous
Length of Sight	4 inches (102 mm)	5 inches (131 mm)	4 inches (102 mm)	4 inches (102 mm)	5 inches (131 mm)
Reticle Options	65 MOA ring w/ 1MOA dot or Single 1 MOA aiming Dot	65 MOA ring w/ 1MOA dot	Special Less Lethal Pattern for Sage	65 MOA ring w/ 1 MOA dot	65 MOA ring w/ 1 MOA ring

## Mounting Solutions

The HWS mounts to any universal Picatinny mounting rail (supports 1" Weaver dovetail) with an integral mounting platform for adaptation to user preferred eye relief. The HWS can interface to any standard issue M16 or M4 variant in either a fixed carryhandle or flattop receiver, and with no modifications to the weapon. The M16 and M4 mounting platforms provide for the functionally critical aspect of co-witnessing of the iron sights within the HWS's Heads Up Display while maintaining the operator's critical cheekweld position.

Various other mounting platforms are supported for the HK MP5, UMP45, G36, the Sig 550, FN P90 or FAL and Remington, Benelli, and Mossberg tactical shotguns. Each of these platforms allow access to iron sights (with sight mounted), maintenance of critical cheekweld position, and achieve maximum peripheral vision for the operator.

The HWS also interfaces to a host of machine gun weapon platforms including FN's M240, 249, the M2/M3, and Minimi. Consult the factory for non-standard mounting solutions to such weaponry as the Steyr AUG, Beretta 70/90, FAMAS, Daewoo K1/K2, IMI GALIL, AK47/MAK90 variants, etc.

## HDS Specifications:

### Operation:

**Optics:** Transmission holography – 100% parallax free

**Magnification:** 1X unlimited eye relief

**Length/Width/Height:** 4"x1.8"x2.25"(102 x 49 x 60 mm)

**Length/Width/Height AA Model:** 5"x1.8"x2.25"(131x49x60 mm)

**Weight:** 8.8 oz. (250 grams)

**Weight AA Model:** 11.5oz. (326 grams)

**Temperature:** -40 to 150 F (using AA lithiums); -20 to 150F (all other battery choices)

**Waterproof:** M550 submersible to 33 water depth; M510 to 10 ft water depth

**Sealing:** Fogproof internal optics

**Color/Finish:** Non reflective black with hard coat finish

**Adjustment (per click):** 0.5" at 100 yards

**Adjustment Range:** +/- 40 MOA travel

**Mount:** 1" Weaver dovetail/Picatinny rail (Mil spec 1913)

**Return to Zero:** Repeatable to 1 MOA after re-mounting

### Heads-Up Display Window:

**Optical surfaces:** Anti-glare & scratch resistant coatings

**Window Dimension:** 1.20" x 0.85" (30 x 23 mm)

**Window Material:** Shatterproof laminate (3/16" thick)

**Field of View (100 yds):** 30 yards (28m) at a 4" eye relief

**Standard Reticle:** 65MOA ring with quadrant ticks with a 1MOA Aiming dot

**Reticle Contrast Ratio:** 28,000:1 brightest to lowest

**Night Vision Contrast Ratio:** 10,000,000:1 with NV switch engaged

### Electrical:

**Power source:** Universally available AA batteries (supports lithium, alkaline, or re-chargeable)

**Optional power source:** "N" Alkaline batteries (camera type batteries .. available most anywhere)

**AA Battery Life:** 500 continuous hours (lithium) at nominal setting 12

**N Battery Life:** 100 continuous (alkaline) at nominal setting 12

**Brightness Settings:** 30 settings with scrolling feature (10 settings for NV use)

**Brightness Settings:** 20 settings with scrolling feature

**Auto Battery Check Indicator:** Flashing reticle upon start-up

**Auto Shutdown:** At 8 hours – programmable to 4 hours

### Night Vision Compatibility:

Tandem operation with Generation I - IV N.V. tubes

Toggle switch with 10 settings (Immediate drop to N.V. mode)



M-16 Carryhandle co-witness mount



M-16/M4 Flat-top co-witness setup



MP5 mid range profile mount



MP5 low profile mount



Tactical shotgun mounts

## Company Background

The HOLOGraphic Weapon Sight is a precision optic developed, designed, and manufactured with pride in the USA by engineers with many cumulative decades of experience in advanced optics. In developing the HWS, EOTech teamed with – ERIM – which produced the world's first hologram in 1962. ERIM has been a world leader in performing research and development in the areas of remote sensing, satellite imagery, and battlefield surveillance for the US Department of Defense, NASA, and US Intelligence communities for over fifty years.

EOTech is dedicated to providing feature rich, highly reliable products backed by outstanding customer support. EOTech – creating products with a whole new point of view.



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