Aimpoint BR8
A Fire Control System for Small Arms
Reasons for missing the target

**Weapon System**
(e.g. dispersion)

**External influence**
(e.g. ballistical trajectory, wind speed and direction, temperature)

**Time**
(e.g. duration for operation of weapon system)

**Target**
(e.g. visibility, motion)

**Operator influence**
(e.g. shooting position, estimation of distance to target, breathing, aiming, trigger control)
Most important influence

- Operator
- Distance to target together with ballistic trajectory
Mechanical solution — MPS3

- 4 MOA red dot
- 8 NVD settings and 8 daylight settings
- 70,000 hours of operation (on setting 12 of 16) on a single battery
- AA 1.5 V alkaline battery (sight accepts voltage up to 5.0 V)
- Prepared for external picatinny rail
- MIL-STD 1913 MGMount includes 3-step ballistic compensator (200,800 and 1200m)
MPS3 and MGM

- MIL-STD 1913 MGMount includes 3-step ballistic compensator (200,800 and 1200m – option customized)
In operative use with US Forces
Swedish FCS development

- Trials with AGL’s with different FCS’s, and a market study have shown that currently there is no simple, lightweight, robust and affordable FCS available.
- Sweden has therefore decided to develop a FCS with industry for use with underslung grenade launchers, AGL’s and 84mm Carl Gustaf recoilless rifles.
- A PDF study was done in 2002.
- A development contract was placed with Aimpoint in 2005.
- Delivery of prototypes in 2007.
Aimpoint BR8 - Background

- Fully integrated Sight and Fire Control System
- Suitable for a variety of weapons where ballistical correction to improve range performance and $P_{\text{Hit}}/P_{\text{Kill}}$ is essential
- Prepare system for additional functionalities as technology matures
Potential

- A very large number of grenade launchers with very poor sight systems are in operative use (M203, AG36, XM320….)
- A large number of Automatic Grenade Launchers are in operative use (Mk 19, Mk47, GMG…..)
- A large number of Heavy Machine Guns are in operative use (M2, M3……)
- A substantial number of Infantry Support Weapons are in use (Carl Gustaf…..)
Crew served, in service

Mk47 with LVS

+ Can do everything anytime
- Expensive, poor battery life
- Requires a lot of training
- Heavy
Crew served, in service

Mk47 with IS 2000

+ Easy to use
+/- Small for CS, Big for HH
- Moving parts
Hand held, almost in service

OICW with optronic sight
+ Can do everything, anytime
+ 24h system
- Expensive, poor batterylife
- Small FOV = short range
Hand held, almost in service

LEDs indicates correct elevation

Soldato futura, separate FCS

+ Low cost
- Eyes on sight, not on target
- No real night capability
- No possibility to correct fire
Aimpoint BR8 – System

- 1x optical magnification
- 2MOA dot size
- Unlimited eye relief
- 1,2 kg
- 600 m measurement distance
- MIL-STD 1913 (Picatinny rail) interface
- Rechargeable internal battery
- AA size back-up battery
Aimpoint BR8 – NATO Demo
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How it works

1. Aim and measure range
2. Realign and shoot
Man-Machine Interface

Red dot
- Red dot Sight zeroed for the assault weapon
- Zeroed to the lobe of the LRF
Man-Machine Interface

- Possibility to make a new LRF measurement
- Possibility to use assault weapon
- Blinking Red Dot presented as aimpoint for 40mm UGL (superelevation)
Find your target
Aim at target – Measure Range
Blinking Red Dot - Superelevate
FIRE!
Aimpoint BR8 – Project status

- Prototypes have been delivered to FMV (Swedish Defence Materiel Administration)
- Demonstrated for NATO in Toledo 2007-02-15: > 65% $P_{\text{Hit}}$ at 1.2x1.2m targets from 100 to 250m!
- Additional prototypes available in late 2008
WHAT DOES THE USER GET?

- Superior situational awareness
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- Superior situational awareness
- Fastest target acquisition
- User friendly and reliable
- Dawn and dusk capability
- Compatible with all generations of NVG
- Long battery life
- Dramatic increase in $P_{\text{Hit}}$
- Increased lethality to the enemy and increased survivability to own troops
- Reduced training time and costs