



## **HALO** **HOSTILE ARTILLERY LOCATING SYSTEM**

Selex ES leads the way in fourth generation techniques of acoustic weapon locating systems. The company has over 40 years experience and has delivered acoustic weapon locating systems to more than 20 armies worldwide.

The Hostile Artillery LOcating (HALO) system is currently in service with the British Army, the Canadian Army and the US Marine Corps and six other nations. This new type of weapon locating system uses specially developed advanced acoustic data processing techniques to determine the location of artillery and mortars with exceptional accuracy, reliability and speed.

HALO employs unmanned Sensor Posts (SP), comprising clusters of sensitive microphones, to detect the acoustic (pressure) waves generated by gun or mortar fire and other explosions. SP data is communicated to the HALO Command Post where it is processed and, almost instantaneously, the location of the source of the sound is presented to the operator.

The British Army has been successfully using HALO for many years. It has been deployed in both the urban areas and

mountainous terrain of Bosnia and Kosovo; and operated in the deserts and cities of Iraq and Afghanistan.

### **KEY BENEFITS**

- Detects gun breaks and impacts from artillery, mortars, tanks and heavy cannons; and explosions of mines, bombs and improvised explosive devices
- Highly accurate – typically within 1% of range at 15 kilometres
- Passive and covert
- Low-cost, lightweight, rugged, easy to deploy and use
- Monitors activity over a very large area – typically over two thousand square kilometres
- Provides 360 degree coverage
- Requires minimal manning
- Uses many distributed sensors, which continue to locate even if some are damaged
- Does not saturate and locates multiple simultaneous firing locations
- Operates effectively in extremes of terrain and climate
- Is a stand-alone target acquisition system, which can alert and cue radar and other systems
- Easily integrated into digital Command & Control systems



HALO is an extremely versatile system. It can be deployed in any configuration and in areas where there is limited space. SPs do not need to be laid out according to any particular template. GPS provides sufficient accuracy for HALO survey. A computer-based deployment aid assists the user in optimising area coverage and communications. This flexibility enables HALO to be used successfully in cities and other complex terrains.

The use of HALO is not limited to standard artillery locating tasks. HALO is also suited to force protection operations. Its use for this role enables security forces to dominate the area for many kilometres around an installation. If a number of bases need to be protected in this way, and they are suitable distances apart, a coherent picture of activity over a large area can be formed.

Locations of the sources of explosions, whether from heavy weapons or bombs and mines, can be instantly passed to Command & Control systems for near real-time distribution to appropriate decision makers and counter fire assets. All information is stored and can be replayed or transferred for archive. HALO provides the commander with displays that show trends of activity over time to allow pattern analysis and interdiction task planning.