



# Mini Beacons Cut Israel's Fratricide Risk

By **BARBARA OPALL-ROME**

**TEL AVIV** — Israel's Ministry of Defense has authorized for export a family of miniaturized vehicle-mounted and hand-held beacons designed to reduce risks of fratricide to forces operating in enemy territory.

Based on technologies developed for Israeli special forces, the infrared (IR) signaling devices made by Thermal Beacon, a boutique Israeli design firm, can be seen by almost any type of thermal imager at ranges from 2 to 9 kilometers.

The hand-held, wide-spectrum thermal beacon (WSTB) Mk-5 weighs 2 kilograms, including its rechargeable one-hour battery pack, while the vehicle-mounted Mk-4 weighs 5 kilograms.

According to recently released company data, the smaller device can be seen from distances of 2 kilometers using far-range IR detectors and up to 5 kilometers using midrange IR sensors. The vehicle-mounted Mk-4 has a recognition range of 4 kilometers using far-range IR detectors and up to 9 kilometers using the mid-IR spectrum.

Both WSTB devices are recog-

nized by thermal tank guns, attack helicopters and other shooters operating in the far-range 8-to-12 micron spectrum, as well as manned or unmanned aerial sensors using the mid-IR 3- to-5-micron spectrum.

According to company data, beacons can also signal in the 0.8-micron near-IR spectrum, which is particularly useful in emergencies when operators requiring immediate extraction will want to turn on all capabilities to be recognized by friendly forces. The near spectrum also is useful for validation applications, offering the user another channel with which to identify himself to his own forces.

"For special operations, every gram counts," said Avi Peer, Thermal Beacon's CEO. "Our WSTB Mk-5 can be used as a locator for rapid extraction of forward operating forces or to differentiate between the 'good guys' and the enemy when both are operating in very tight proximity."

Historically, friendly fire is a tragic byproduct of warfare, the risks of which intensify in congested urban theaters. In Israel's recent anti-terrorist offensive in Gaza, where ground forces were equipped with the latest digitized command-and-

control network, Israel managed to keep losses to a minimum, but four of the 10 Israeli soldiers killed in combat were victims of friendly fire.

In a briefing to reporters in late January, after Israel's Cast Lead operation in Gaza, Israeli Defense Minister Ehud Barak credited proper training, force protective battlefield tactics and "advanced technologies" for the relatively low number of Israeli casualties.

However, Barak, a former special forces operator and Israel's highest-decorated officer, acknowledged that, "We can reduce but never eliminate the phenomenon" of friendly fire.

Peer, a retired colonel and former director of research and development for Israel's National Police headquarters, said his company's export-approved emitters "are not a silver bullet" that will eradicate friendly fire. "But they represent another level of protection that bridges the gap between the digital world and the real world, and reduces the risk of firing on your own people.

"Today, in the modern era of coalition warfare, different countries operate in the same area. And

even if they all have high-end intelligence and digital command-and-control systems, it's still in the last mile that mistakes are made."

Peer declined to identify potential customers for the mini-WSTB devices, but noted that his company finished a demonstration to an overseas delegation in early May and is scheduled to host another foreign special operations team later this month.

Meanwhile, Thermal Beacon continues to supply other company-developed secure optical signaling systems to a variety of international customers. Recent exports include the firm's MS-OMR — multispectral, omni and medium range — vehicle-mounted emitter to special operations forces in Italy and Germany, Peer said.

An Israeli MoD official confirmed May 25 that the ministry's Research and Development Directorate helped fund "special projects" with the small, local signaling company. However, he declined to discuss operational requirements, technical details or designated users of Thermal Beacon devices. ■

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