



Silent Guardian™ Protection System

Less-than-Lethal Directed Energy Protection



Silent Guardian™ Protection System saves lives, stops aggressors, protects assets and is proven safe.

Benefits

- Provides a zone of protection that saves lives and protects assets
- Minimizes collateral damage
- Provides real-time ability to establish intent and de-escalate aggression
- Does not cause physical harm; prevents injury and death
- Provides precise effects at a longer range than current less-than-lethal systems
- Fills the gap between shout and shoot

Silent Guardian™ Protection System employs millimeter wave technology to repel individuals without causing injury. This capability enables users to stop, deter and turn back adversaries without the use of lethal force. The system also disrupts an assailant's ability to effectively use a weapon. Silent Guardian provides extraordinary tactical ability to control outbreaks of violence, minimize collateral damage and ultimately saves lives.

The system's antenna emits a focused beam of millimeter wave energy. The beam travels at the speed of light and penetrates the skin to a depth of 1/64 of an inch, producing an intolerable heating sensation that causes the targeted individuals to instinctively flee or take cover. The sensation

ceases immediately when an individual moves out of the beam or the operator steers the beam away. Silent Guardian does not cause injury because of the shallow penetration depth of the millimeter wave.

Substantial government testing has been conducted to characterize the effects of millimeter waves on the human body. These tests have confirmed the technology's safety and have established there is a significant margin between safe and harmful exposure levels.

The system can be operated across a broad range of scenarios, including maritime and desert environments. Silent Guardian has been sealed for dust and supports operations in conditions up to 125 degrees Fahrenheit ambient. The

antenna is capable of sustaining multiple bullet holes with minimum system performance degradation and is also protected from environmental damage caused by rain, dust and salt fog.

Silent Guardian is easily transportable on standard military tactical vehicles and can also be integrated into combat vehicles. The system's magazine is only limited by fuel availability.

Silent Guardian is designed, developed and manufactured by Raytheon Company. Raytheon is the only company producing this millimeter wave capability. The system is available now and ready for action.



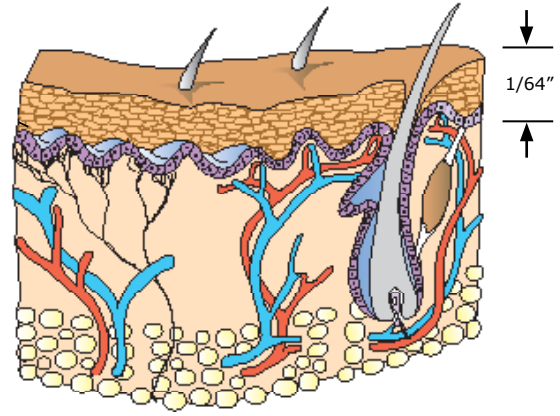
Silent Guardian™ Protection System



Stationary firing position with 360-degree coverage.



Easy-to-use joystick control with auto-tracking capabilities.



Penetrates skin to 1/64 of an inch.



Various applications for law enforcement, facility protection and homeland security.

The focused collimated beam allows precise targeting of specific individuals.

Silent Guardian™ Specifications

	Height	Width	Length	Weight
AC/DC Converter	65 in	45 in	74 in	3,870 lb
Transmitter Unit	95 in	83 in	94 in	6,440 lb
Transmitter with Antenna	136 in (level) 147 in (maximum interference)			
Antenna	45 in ²			

System Characteristics

Range:	Greater than 250 meters*
Targeting:	Stationary firing position with 360-degree coverage Integrated sensors with joystick control Single-man operation
System Setup:	Automatic target tracking Modular architecture Secure antenna stabilization platform – able to operate in 40 mph winds
Mission Profile:	Less than 2-second retargeting capability Shoot-and-scoot capability Less than 2 seconds to switch from standby mode to armed

Contractor Support:	Complete logistics support package available to include: <ul style="list-style-type: none"> • Return and repair maintenance • System training • Web-enabled supply support • Supports Army two-level maintenance system
----------------------------	---

*The Joint Non-Lethal Weapons Directorate has stated that the long-range active denial systems (ADS) are effective beyond small-arms range, typically up to 500 meters. The Raytheon-funded mid-range Silent Guardian ADTS' range is greater than 250 meters.



Military applications, including checkpoint security, perimeter and point defense, force protection and peacekeeping missions.



Images courtesy The Defense Visual Information Center

Raytheon Company
Missile Systems
 Directed Energy
 P.O. Box 11337
 Tucson, Arizona
 85734-1337 USA
 520.794.9340 phone
 520.794.7915 fax

www.raytheon.com

Raytheon

Customer Success Is Our Mission