

ISI EchoTracer™ & ISI EchoSeeker™

The latest advancement in firefighter rescue.



ISI EchoTracer™

Revolutionary Technology

The revolutionary ISI EchoTracer™ firefighter locating system, uses patented Pulse™ ultrasonic technology, provides a means for fire department Rapid Intervention Teams (RIT) to significantly decrease the time it takes to find a downed firefighter. *Extensive field trials have shown the ISI EchoTracer™ system to provide a reduction of as much as 50-80% of the time it would normally take to locate a firefighter in a smoke-filled structure.* That precious time could be the difference between performing a rescue and making a recovery. Using Pulse technology, the system utilizes ultrasound—high frequency sound waves similar to sonar. The ISI EchoTracer™ system consists of an omnidirectional transmitter (the Beacon) and a narrowly focused receiver (the Tracer). RIT members use the Tracer to follow the path to the downed firefighter wearing the Beacon. Once the firefighter has been located and the ISI EchoTracer™ has been switched to Exit mode, RIT members use the ISI EchoTracer™ to follow the path to Beacons placed at the exits.



Utilizing innovative PULSE™ (Personnel Ultrasonic Locating Safety Equipment) technology, the ISI EchoTracer™ Beacon™ seamlessly integrates an ultrasonic transmitting device into ISI Z Seven and DXL SCBAs.

ISI EchoSeeker™ seamlessly integrates an ultrasonic tracking device into the ISI 3500 thermal imaging camera.

ISI EchoSeeker™

Combining Effective Technology

ISI EchoSeeker™ attaches directly to preexisting ISI thermal imaging cameras, between the battery pack and the unit itself. When thermal imaging and ultrasonic technology are combined, the result is a unit that can dramatically decrease rescue time. With two-button operation, light weight binocular style design, and slide-on external battery, ISI EchoSeeker™ is user-friendly and simple to operate. That precious time could be the difference between performing rescue and making a recovery.

The ISI 2500 and ISI 3500 thermal imaging cameras provide the highest standard of imaging performance available.



Innovation. Reliability. Performance.

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GPS vs. RF vs. Ultrasound

The Global Positioning System (GPS) uses 1.5 GHz, very long range, satellite-based radio waves, which will not penetrate most non-metallic building materials (e.g. concrete and plaster). GPS will not work accurately beyond about one foot into most buildings. Radio Frequency (RF) positioning systems can also be problematic. Frequency choice is important because a lower frequency will yield better building penetration, but, unfortunately, will result in lower position accuracy. Additionally, radio waves slow down going through building materials and are reflected by metals, both of which reduce accuracy. Radio frequency (RF) homing devices are problematic for rescue because the radio waves can penetrate walls to varying degrees. Wall penetration can lead to “blind alleys” in the path to the victim. A searcher could be separated from the fallen firefighter by a physically impenetrable wall, ceiling, or floor. Ultrasound signals do not penetrate walls, rather they are reflected, revealing the path to a disabled rescue worker. Even

if the rescue worker is located around a corner or behind an obstacle, ultrasound can reveal the path. Rescue personnel can avoid being led down blind alleys and wasting precious time, as they may be with RF homing systems. Walls with high metal content and closed doors also do not present a problem for ultrasound. As long as even a small opening exists around an entryway, the ultrasonic signal from a Beacon can be detected by the ISI EchoTracer™.



Beacon™ Specifications	
Type	360° omnidirectional ultrasound transmitter
Frequency	Firefighter mode/channel
Battery	Integrated SCBA power supply
Material	Ultem® 1000 thermoplastic
Range	120' minimum
Mutual Aid Compatibility	Cross compatible with other ISI EchoTracer™ equipment

ISI EchoSeeker™ Specifications	
Size (w/ camera)	5.80"H x 6.25"W x 8" L
Weight (w/ camera)	Approx. 4.5 lbs with battery
Display	High intensity LEDs
Battery	7.2 volt NiMH Rechargeable
Battery Life	3.5 hours
Water Resistance	IP67
Temperature Tolerance	200° F for 46 minutes, 300° F for 26 minutes, 500° F for 8 minutes
Mutual Aid Compatibility	Cross compatible with other ISI EchoTracer™ equipment

Extensive field trials have shown the ISI EchoTracer™ system to provide a reduction of up to 50-80% of the time it would normally take to locate a firefighter in a smoke-filled structure.



INTERNATIONAL SAFETY INSTRUMENTS
AN AVON PROTECTION SYSTEMS COMPANY

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