



The future in motion

**UltraVision Security Systems, Inc.**  
*Product Backgrounder: MicroDetector™*

The MicroDetector™ is the world's first motion-sensing device that is portable, rechargeable and retrievable and allows monitoring via an off-premise receiver. The device minimizes the need to leave valuable personnel behind to monitor cleared areas in tactical field operations. As such, law enforcement agencies effectively “multiply” their force. This optimizes the use of force members, and ensures maximum safety of law enforcement personnel and the public they protect. The MicroDetector™ Personal Motion Detector 1 (MicroDetector™ PMD-1) is just 4” in diameter and 1.5” thick, portable and battery operated. The device uses microwave technology to perform instantaneous motion sensing operations in the field, with no prior setup or installation.

### **Applications**

A primary need for law enforcement centers on maximizing the effectiveness of available personnel. The MicroDetector has been designed to provide a technological edge that increases this maximum effectiveness and has been called “the force multiplier” by leading law enforcement officials. Police, SWAT teams and other security personnel are often faced with two operations difficulties: both “clearing” an area and, more importantly, ensuring a “cleared” area remains clear. The MicroDetector can, by person or robotics or other tactical measure, be placed in a room to determine in advance if there is any detectable motion within a room. The MicroDetector™ unit can also perform the critical task of ensuring an area remains clear, effectively eliminating the need to leave members of a force behind, a costly and potentially dangerous situation. When used in this manner the unit effectively multiplies the available members of law enforcement for more mission-critical tactical operations.

The MicroDetector is also an effective stakeout support device. The unit is always-on, providing a technological edge that complements officer effectiveness on long, tedious stakeouts where it is difficult to maintain round-the-clock alertness. The unit can be positioned, regardless of lighting conditions, where target motion is most likely to occur. Domestic disturbance calls or robberies can turn into hostage situations. In these scenarios, the MicroDetector can help officers pinpoint motion within a home or other structure or indicate a complete lack of motion.

Lastly, the MicroDetector is useful for military units that often need portable motion sensing capabilities for forward base perimeters. In such applications, the MicroDetector unit can easily establish protective perimeters that can be set up and taken down in a matter of minutes.

### **Use and Deployment**

Effective use of the MicroDetector™ PMD-1 takes virtually no training. The user simply turns the device on. An On-Off in the middle of the motion sensor allows for one-handed operation, a huge benefit to law enforcement personnel. Once deployed, each MicroDetector™, via its wireless transmitter, returns a “*Motion detected? Yes/No*” indication back to a PDA or laptop computer. Operations center officers can then alert in-field personnel that the situation in a cleared area has changed.



Each MicroDetector™ has a unique sensor serial number which is used to identify the unit’s location once deployed. Future models will give officers the ability to record a vocal identifier which can further pinpoint the MicroDetector location—the officer might choose to record “northeast corner of warehouse” or “3<sup>rd</sup>-floor hall,” for example.

The unit is encased in a rugged, durable plastic housing. Motion detection is omni-directional up to 25 feet. Further, motion can be detected through light walls or even if the sensor is covered by a few inches of soil (to effectively “hide” the unit from threats). Motion detection occurs with objects that are man-size or greater.

The receiver (laptop, PDA, etc.) may monitor as many sensors as a tactical operation should ever need (32), provided they are within radio-range. Range to the PDA is limited to 200 ft. (60M) to maximize battery power duration. Units will ship in a carrying case of four PMD’s. The case also serves as the battery charger.

Specifications:	
Size:	4 in diameter (10cm) 1.5 in thick (4 cm)
Weight:	8 oz. (226g)
Motion detection range:	25 ft (7.6M)
Detection pattern:	Omni-directional
Battery charger:	Induction (wireless)
Charger power:	240VAC/120 VAC
Battery life:	24 hours continuous 48 hours in power saver mode
Housing:	Environmentally sealed, waterproof to depth of 1M
Reporting Frequency:	WiFi -- 900 MHz (7 useable channels)
Wireless Range:	200 ft (60M), repeaters can extend distance.
Environmental:	0°F to 120 °F (-18°C to 49°C)
Motion detection reporting:	Alarm tone and serial number
Operation reporting:	Each sensor automatically reports three times per minute to the base station to indicate a unit functions, sensor serial number is reported
External plug:	Each sensor has an external power connector
Customer variations:	Such functions as gain, sensitivity, duty cycle and schedule are customer-adjustable

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