

• Safe Zone Systems



Concealed Weapon/Bomb Detection

Fully Automated, Easy to Install & Operate

Safe Zone Systems' Concealed Weapon Detector is a significant scientific breakthrough in the detection of both concealed weapons and bombs. The fully automated system identifies concealed weapons before they can be used and requires no human interaction. The small, compact footprint is easy to utilize in either covert or overt situations.

The Concealed Weapons Detector (CWD) bounces a safe, very low power radar beam off the subject being examined. The return signals are analyzed by an artificial neural net contained in the small, self-contained, cereal-box-size instrument which can render an automatic decision without human intervention.

Testing has proven that both metallic and non-metallic weapons, including vest bombs and firearms, ranging from assault rifles to hand guns (including a partially plastic Glock), can be detected at ranges from 3 to 15 meters, with accuracies reaching better than 91 percentile. An independent test was conducted by one of our National Labs using vest bombs which resulted in accuracies reaching percentiles of 96%.

APPLICATIONS

The Concealed Weapon Detector is ideal for any high-density populated area. It's compact size allows it to be mounted on the wall, on a stand, or a tripod.

- Buildings, Schools, Courthouses
- Government Buildings, National Assets, Monuments
- Military Installations, Embassies
- Airports, Transportation Hubs, Train Stations

OPERATION

The packaging shown here is 12 X 14 X 4 inches. This package can be wall mounted or placed on a stand or tripod. It weighs about 9 pounds (with a production unit goal of 5 pounds) and consumes only 50 watts of line power. The output of this device can be a simple light box, as shown, or it can transmit a signal to a pager carried by a security guard, or it can lock a door or barrier.



The microwave radar section can be redesigned into a monolithic assembly, greatly reducing the size so that it can be placed in a belt pack. This would vastly enhance covert operations. The printed patch antenna is covered by a plastic radome.

BENEFITS

- Detection can occur prior to the subject entering a building
- Sensing is quick and can be handled from a long distance
- Non-metallic objects (such as packs of explosives) can be detected
- Probability of detection is very high
- Small size and ability to be concealed make it useful for covert operations



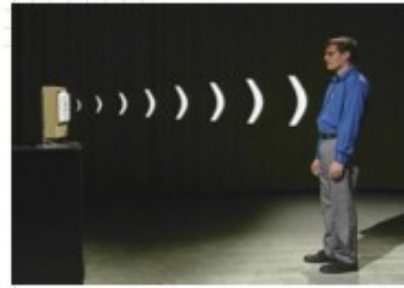
OPERATIONAL CAPABILITIES

- Range typically to 50 feet, can be modified for greater ranges
- Discriminates bombs from normal pocket clutter
- Detects and identifies terrorist style bombs
- Effective against hand guns
- Extremely easy to use with little training
- Custom configurations available
- Real time indications
- Non-imaging no violations of constitution
- Can be wall, stand, tripod, table mounted

TECHNICAL

- Sensor portion is a spread spectrum, low power radar
- Target scattering is received and stored
- Internal processor computes specific parameters in both the time and frequency domains
- Results are compared to empirically derived standards and real time reference for a determination
- Decision is presented per user's choice-visual, audible, tactile or electronic
- Measurements can be repeated every 5 seconds
- Testing was conducted by Sandia National Laboratories that showed a detection rate in the high 90s percentile
- Easy and simple installation

Advanced Detection



System scans and decides if the individual is a threat.



System scans and decides this individual is NOT safe (note bomb jacket underneath coat)