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SM-100 SHIELDED ENCLOSURE MONITORING SYSTEM

The SM-100 is designed to verify shielding effectiveness without causing false alarms. Unlike typical systems that generate a carrier wave on one side of the shield and detect it on the other side of the shield, we send data from the inside of the shield to the outside and retransmit it back into the inside of the shield. Only after the data is verified is the signal strength of the received data package logged. Stray signals will never be detected and reported as a failure of the shield as could happen with frequency detection systems. Our high gain receiver has sensitivity as low as -110dBm.

The SM-100 system draws heavily on the technologies used in the communication world. By reapplying existing technologies for a new application we greatly reduce the cost to field a system. We can therefore offer a truly affordable on-line monitoring system.

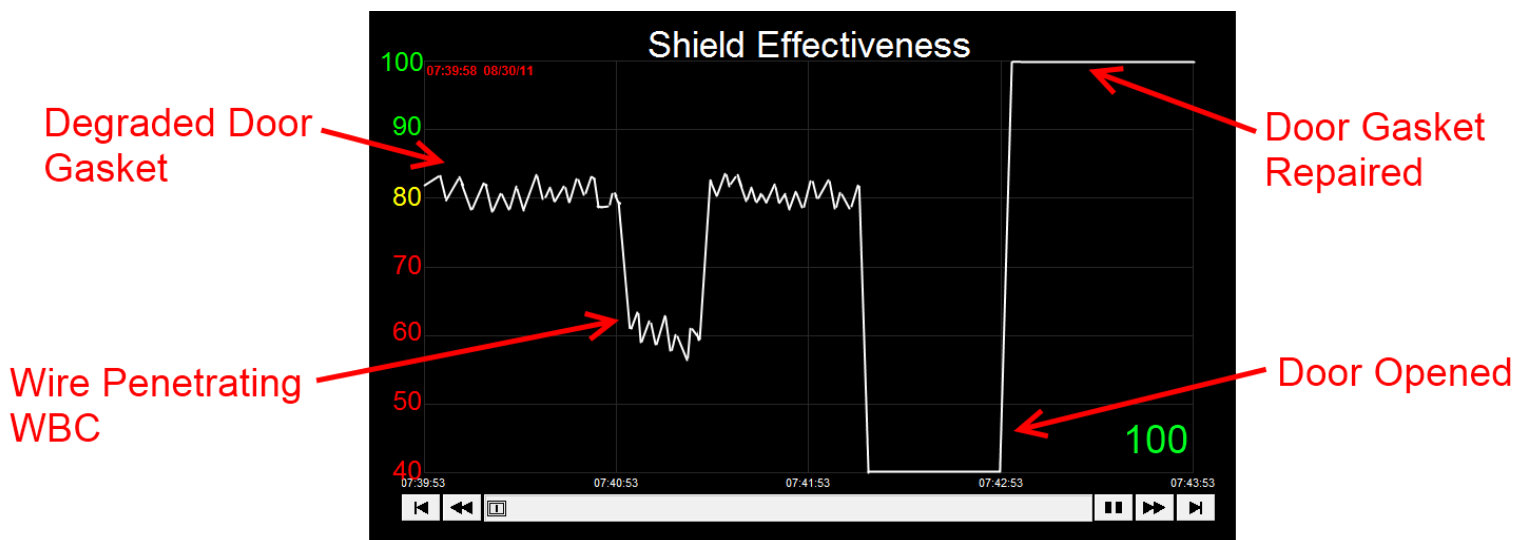
The SM-100 monitoring system is designed to continuously monitor the shielding effectiveness of shielded enclosures, shielded rooms, and shielded buildings.

Now you can know when a door is left open, a wire is pulled in through a WBC, a hole is drilled through the shield or the finger-stock in the door has degraded.

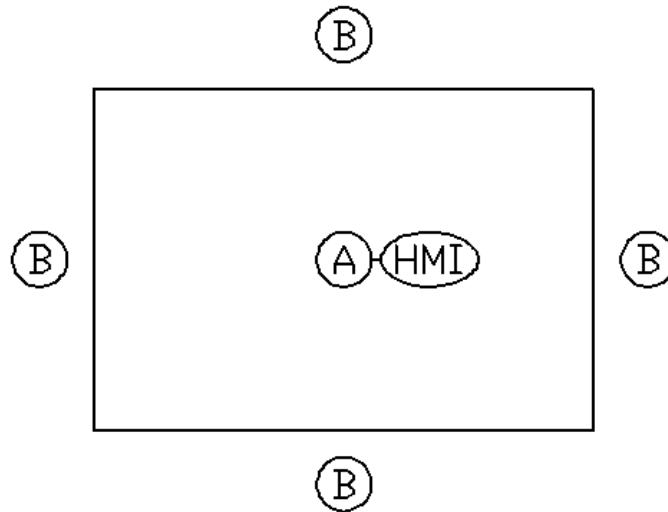
The SM-100 comes with a minimum of one SM-100A inside the enclosure and one SM-100B outside the enclosure. Additional modules may be installed for better coverage on large structures.

- Test Frequency: 902-928MHz Frequency Hopping Spread Spectrum
- Transmitter Power: 1mW to 1 watt
- Measurement range: 40-100 dB with standard antennas
- Sample Rate: 2 seconds - 24 hours
- Memory storage: 128MB flash memory
- Historical data storage: USB Flash drive or SD card
- Remote access available over Ethernet
- 7 inch touchscreen HMI
- Continuous graphing of shielding effectiveness

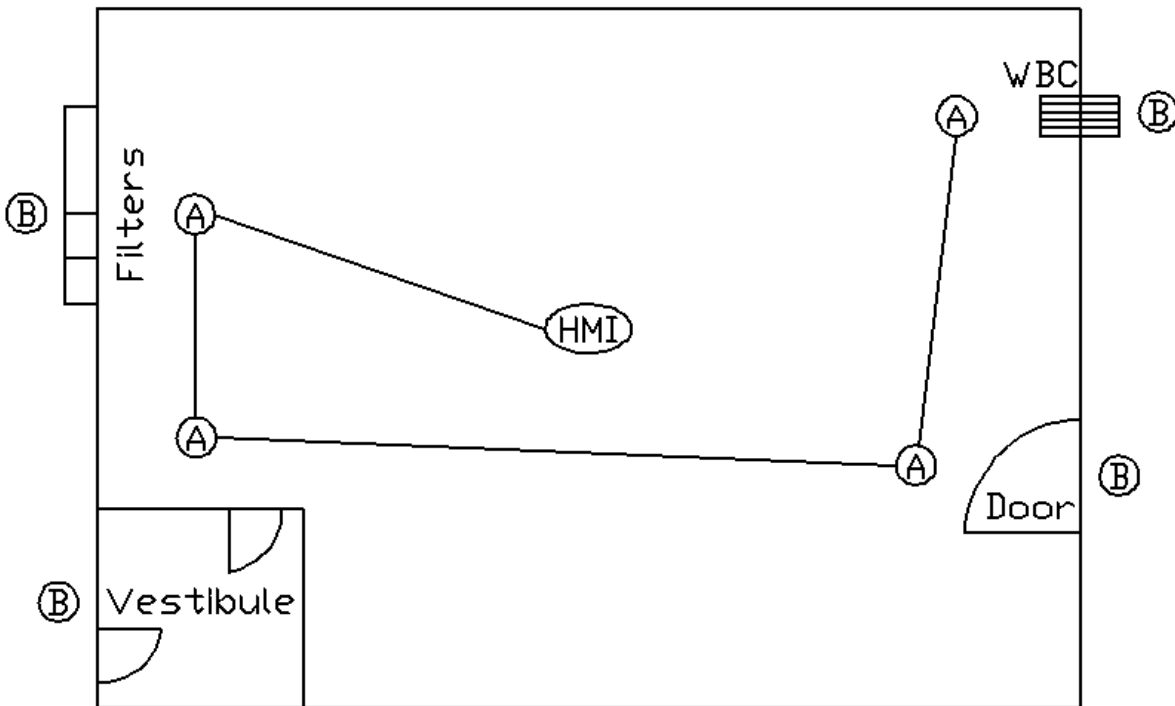
Options include: Weather tight enclosures, high gain antennas, custom reporting



The SM-100 can be scaled to accommodate any size enclosure, from the most basic with one unit inside and one unit outside the shielded enclosure to large buildings with many units outside and inside the shield. The examples below show possible solutions for different shield monitoring needs.



Example 1: In this example we are monitoring a small room. One Master unit (A) is required inside the shield and continuously polls for responses from the Slave units (B) outside of the shield. The Master unit communicates with a Touchscreen (HMI) that provides feedback to the user about the quality of the shield.



Example 2: We are monitoring a larger shielded enclosure. Instead of monitoring every possible point, a Master unit (A) and Slave unit (B) are placed at each penetration. The Master units are daisy chained together and then connected to the HMI for feedback. For large shielded building this is a much more cost effective solution considering most shield problems originate from doors, waveguides and filter penetrations.



**Electric Power, Inc. Call at (804) 778-7735 or
Visit us at www.Hemp-Shielding.com**

