

Tamper Detection

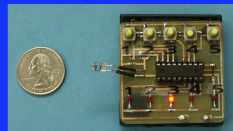
lock: a device to delay & complicate unauthorized entry.



seal: a tamper-indicating device (TID) designed to leave evidence of unauthorized access. Seals do not resist entry (like locks), nor do they report trespassing in real-time (like intrusion detectors).

examples of seal applications

- utility meters
- records integrity
- nuclear safeguards
- waste management
- cargo & port security
- banking & courier bags
- ballots & voting machines
- computer physical security
- loss detection & prevention
- law enforcement & forensics
- protecting medical sterilization
- protecting instrument calibration
- hazardous materials accountability
- protecting food & drugs, etc.



Anti-Evidence Seals

- Current tamper-indicating seals are VERY easy to spoof.
- That's bad because they are protecting important stuff.
- There are workarounds that are labor-intensive & require considerable training.
- But much better seals are needed and possible:

Anti-Evidence Seals

- > Time Trap
- > Magic Slate Seal
- > Blinking Lights Seals
- > Talking Truck Cargo Seal

Advantages of Anti-Evidence Seals

- + much better security
- + some don't require a reader
- + simple, low cost (few \$ of parts)
- + fully reusable (even if mechanical)
- + Can monitor a wall or volume, not just portals.
- + No tools are needed to install or remove the seal.
- + Counterfeiting the seal gains the adversary nothing.
- + You can check the seal multiple times without opening the container.
- + The container can often be opened before checking or removing the seal.
- + Can often be used inside the container (covert, plus limits damage to the seal).
- + Anti-Gundecking: We can automatically verify that the seal inspectors actually checked the seal, rather than just saying they did--a major problem with conventional seals.

