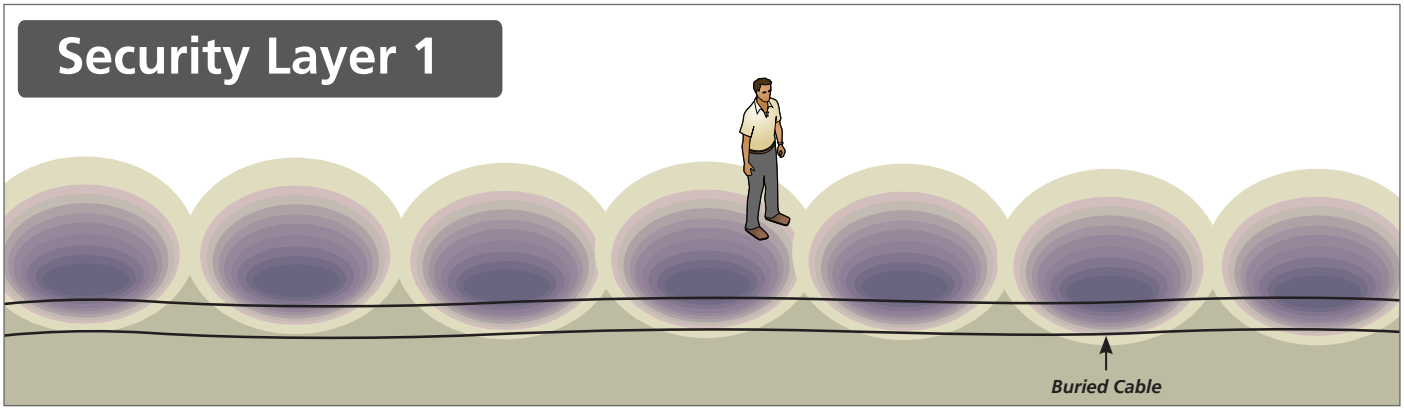
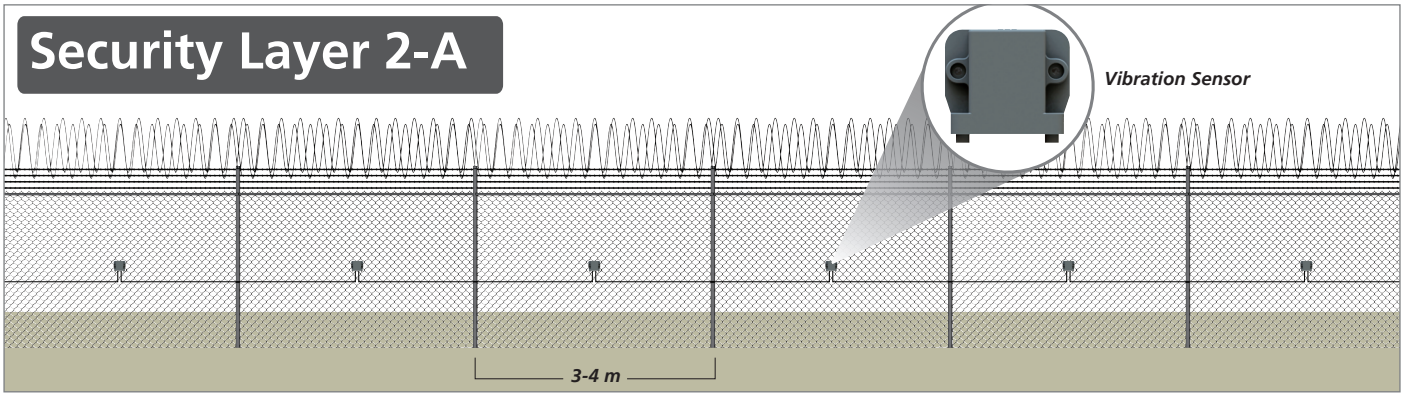
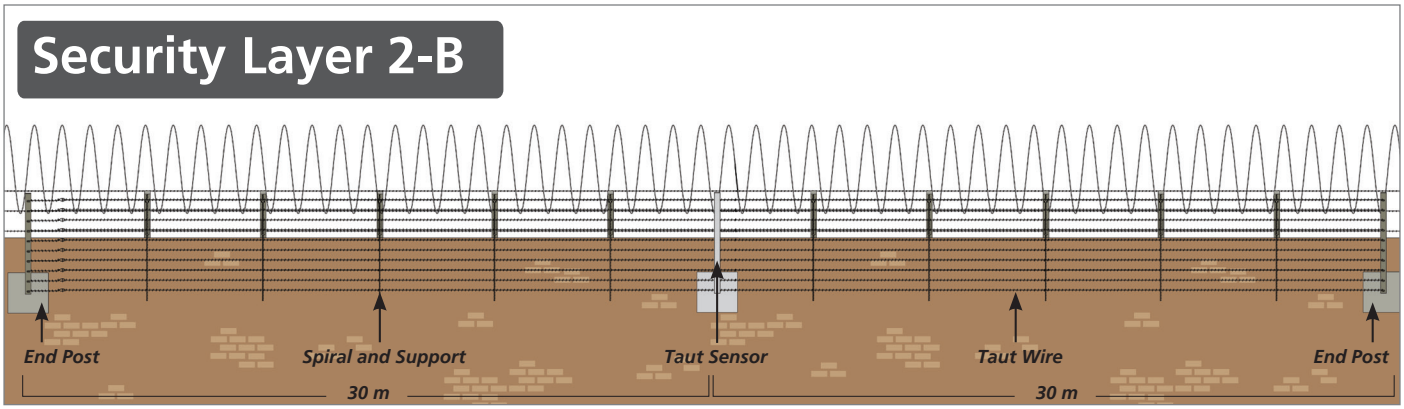
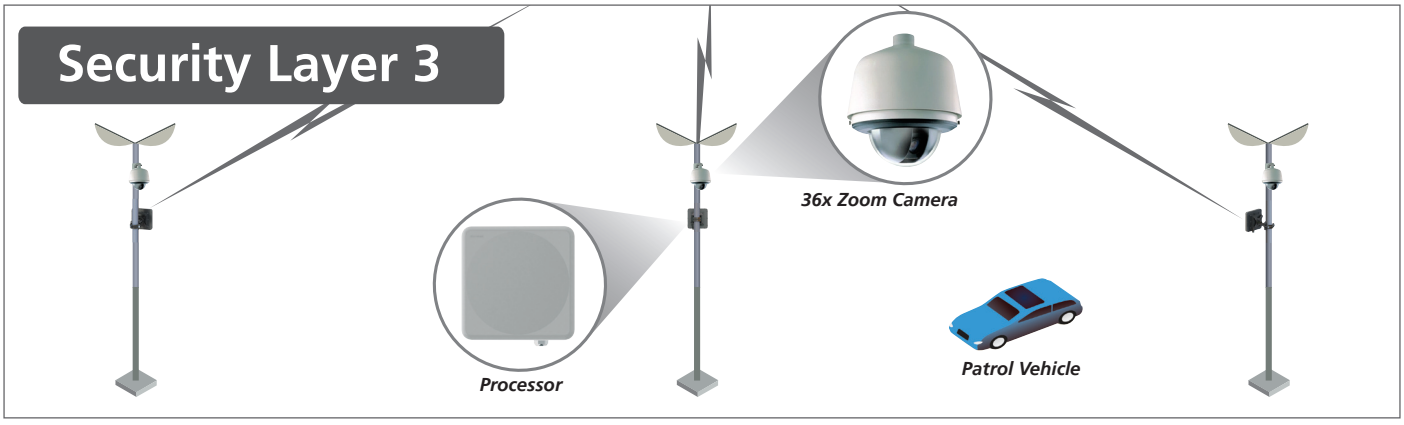
Three Layers of Security









SECURITY LAYER 1

The MBS-404 system is based on the magnetic anomaly detection (MAD) principle. The system is designed to detect any local change in magnetic flux caused by movement of ferromagnetic materials and ignores local changes in magnetic flux caused by other sources. The movement of ferromagnetic materials (iron or steel) is one source that causes local changes to the magnetic flux of the earth.

In principle, the MBS-404 is a moving iron or steel detector. Its high probability of detection is based on the proven assumption that intruders carry weapons, military equipment, cameras, wire-cutters, keys, cellular telephones, or other such tools of their trade made of these materials.

SECURITY LAYER 2-A

Vibration sensors sense the vibration of an intrusion and transports this data to the processor unit by cable or wireless. This can be used for multilayer security. Other alarms can be interfaced like sirens, lights, cameras, etc..

Processor unit receives sensor input with its ID to find the location, then processes and sends the alarm information to the control room. Potential free points are used to extend the audio/video alarm.

The control room receives the information from the processor unit and provides the visual information associated with the location of intrusion. In case of unmanned locations, an auto dialler requests support from external agencies.

SECURITY LAYER 2-B

Taut barrier solutions consist of multiple twisted barbed wires, typically separated in 9 - 20 cm (3.5 - 8 in.) intervals and stretched along a typical segment of 60 meters (197 ft.).

Taut barrier sensors are mounted on sensor boxes located halfway between end posts. An array of tensioned barbed wire is run between the anchor posts, supported and spaced by spirals. Each sensor is clamped to two adjacent wires. Tension on the wire is maintained in such a way that any additional weight will raise the alarm. Even a small deflection or cutting of a wire causes an alarm. Taut wires can be segmented into zones to find intrusion attempts from upper, middle or lower sectors of the fence. The ID of the sensor box displays the exact location where the intrusion attempt is made.

Basic Components

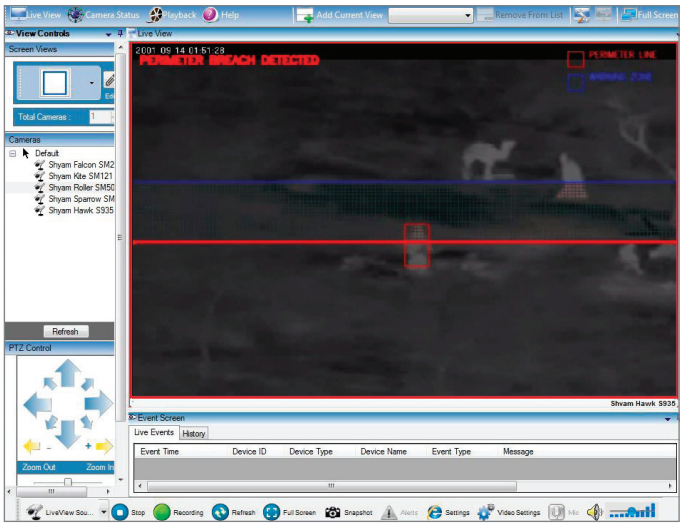
- **Sensor Box:** These are fitted with electro-mechanical sensors to accommodate the height of the fence. Every taut wire passes through a sensor, hence any changes in tension on the wires are detected.
- **Processor Unit:** State-of-the-art technology is used to process the alarm logic from the sensor. Input to this board comes from four directions and outputs are sent to the control room by fixed wire line or wireless. This unit runs on solar power with rechargeable batteries. This unit is IP 65, suitable for for outdoor installation. Potential free contact will activate the alarm and send online video streaming of the event at the time of intrusion.
- **Control Room:** Control room receives information from the processor unit for visual display through computer, laptop, or LED display. The solution provides an audio/video alarm, monitoring, and recording of event. An auto dialler can be interfaced for immediate support for unmanned locations.

SECURITY LAYER 3

This layer is used for video streaming activity from live cameras to locate any intrusion attempts. Generally, PTZ cameras are installed around 300 meters apart all along the perimeter on the same posts that are used for lighting around the perimeter.

As soon as Layer 1 and Layer 2 security measures detect any intrusion attempts, they send their information with location ID to the control room and the cameras responsible for video streaming in that location are switched on and angled towards the location of intrusion and transmit contineous video to the control room.

Video analytics is used as a virtual barrier for intrusion detection.



Virtual Perimeter Surveillance