



## Core features

- Adaptable to most types of fences
- Military grade
- Easy-to-install and integrate
- Robust and reliable
- Adaptive signal processing
- Low False Alarm Rates (FAR)
- Compensates for extreme weather conditions
- Virtually maintenance-free

## Description

**Barricade** is an advanced perimeter intrusion detection system based on fence mounted vibration detection sensors.

It is a reliable solution for enhancing the security of metal fabric fences including: chain link, razor wire and welded mesh. Any attempt to cut, climb or pull the fabric of the fence sends electronic signals to a local processor, resulting in an alarm.

The Barricade system consists of multiple vibration sensors spaced approximately 2 - 3 meters (7 to 10 ft.) apart along the length of the fence, connected by a single cable. The cable sensor line is fastened to the fence approximately 150 cm (5 ft.) above the ground. Typically, four cable segments, each up to 15 meters (160 to 500 ft.) long, will be routed to a local processor which reports to the command and control center.

Barricade's unique sensors serve as band-pass filters, ensuring uniform sensitivity across the range of vibration frequencies that correspond to typical intrusion profiles.

## Markets

Barricade is a cost effective solution for CIP (Critical Infrastructure Protection) facilities, military and law enforcement sites, transportation compounds and border applications. The sensor is easy to install on any existing fence structure.

## How it works

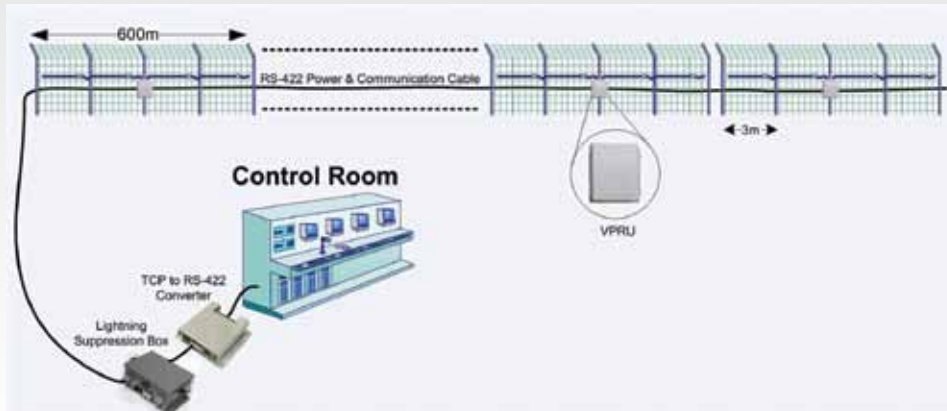
The basic sensing device is a discrete mechanical sensor, sensitive to physical movements and vibrations. An array of vibration detection sensors are assembled along a single cable to create a single zone of detection. The cable, with the sensors, is fastened to the fence with a lead into the local Vibration Processing Reporting Unit (VPRU).

Fence vibrations, detected by one or more of the sensors, are analyzed by the VPRU to generate an alarm. The alarm can either be communicated to the control room or activate dry contacts.



## Typical configuration

The Barricade system configuration may vary to conform to security requirements, type of fence or terrain.



Two main parameters define the system configuration:

- The required resolution of detection – this parameter defines the size of a single detection zone. A typical zone would be around 100 meters (328 ft.), but could be of any length below 150 meters (492 ft.).
- The distance between sensors is defined by the fence structure which is the distance between two supporting posts, normally 2 - 3 meters (6.6 to 9.8 ft.).

## Peripherals

The VPRU is the outdoor transponder for Barricade, and can serve up to four vibration sensor zones, each of up to 150 meters (492 ft.) in length. Each VPRU enclosure is protected by a tamper switch.



## TECHNICAL SPECIFICATIONS

### VIBRATION SENSOR

- Inertial band-pass-filter
- Operating temperatures: -40° C to +70° C (-40° F to + 158° F)
- Completely weather proof
- Size: 50 dia. x 80 L mm (2 dia. x 3.1 L in.)

### VPRU - OUTDOOR TRANSPONDER

A 4 zone controller with dry contact output relays or RS-422 communication

#### Inputs:

- 4 Barricade vibration sensor zones
- 1 tamper cover switch
- 1 auxiliary input (supervised by EOL resistor)

#### Outputs:

- 1 Normally Open (NO) alarm relay
- 1 Normally Closed (NC) fail relay
- Optional - relay board with 2 dry contacts per sensor zone (alarm & open line)
- All contacts are 500 mA 50 V

#### Data communication:

- RS-422

#### Input voltage:

- 12 - 30 VDC

#### Current requirement:

- RS-422 option - 4 mA
- Dry contact option - 25 mA max

#### Transient suppression:

- All inputs and outputs are lightning protected

#### False Alarm Rate (FAR):

- Less than 5 FA per 1 Km in 1 month

#### Temperature:

- -40° C to +70° C (-40° F to + 158° F)

#### Humidity:

- 95% non-condensing

#### Enclosure:

- Weatherproof per NEMA 12 / 13

#### Unit size:

- 240 x 180 x 100 mm (9.4 x 7.1 x 3.9 in.)

*Specifications are subject to change without prior notice.*