Solarbeam Wireless Perimeters

- Solar & Battery Powered
- Stand-Alone Technology
- Durable Construction
- Proven IR Beam Technology
- Low Maintenance
- Easily Deployed
- Patented Technology
IR BEAM DETECTION – “how it works”

• Think of this as a *beam fence*
• Multiple pulsed beam array extends between towers
• All beams in the array must break simultaneously
• Requires a physical action to trigger an alarm
• Low false alarm rate
• Proven technology
• Low installation costs
• Patented technology (US 8, 193, 936, B2)
Simple Assembly & Installation

COMPONENTS

45-Watt Solar Panel
Control Panel

4- 12V12A Gel Batteries

Cement Pedestal

Mounting Hardware Included

IR Beams (Spanning 660’)

AT&T Secure M2M LTE or Secure Radio Connection
TOWER INSTALLATION

PREPARE THE SITE AND PLACE THE PRE-FORMED CONCRETE PAD IN PLACE, BOLT THE TOWER TO THE BASE AND ALIGN THE BEAMS, ASSEMBLE THE TOWER, TEST AND GO HOME.

- 18” x 22” Hole
- Concrete Base (250lb)
- Attach to the Base
- Simple Beam Alignment
- Assemble the Tower
- Test & Leave
AIRPORT PERIMETER EXAMPLES

SOLARBEAM WIRELESS PERIMETER SYSTEMS ARE PERFECT FOR LONG REMOTE AREAS WHERE OTHER SYSTEMS MAY NOT BE COST EFFECTIVE OR EASILY DEPLOYED. NINE SOLARBEAM TOWERS CAN PROTECT ONE MILE OF PERIMETER.
Electrical Laydown Yard

**Problem:** Theft occurring in remote areas where hi-value equipment is staged and stored

**Solution:** Install a low-cost and easily deployable 19 tower perimeter system

**Customer Benefit:** Immediate ROI due to theft savings, system may be redeployed as the threat dictates or site changes

**Key Result:** Unique approach without competition, customer cost savings, value in product not infrastructure

**Client Benefit:** available thru local dealers, unique client opportunity
PERIMETER DESIGN for RESIDENCE & DOCK
NOTIFICATION & COMMUNICATION

Tower communications can be configured, based upon the client’s notification preference.

Notification options on a beam violation can include:

a) a direct link to the alarm panel,

b) immediate notification to the central alarm agency, verbal notification to guard house,

c) text messaging

d) activation of camera for verification.

Further integration can also include local activation of strobe lights or warning devices such as a voice deterrent system.

Noted below, the Solarbeam™ system offers four communication options for system integration.

<table>
<thead>
<tr>
<th>RADIO LINK</th>
<th>CELLULAR</th>
<th>COMPUTER MONITOR</th>
<th>WEB INTERFACE</th>
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<tbody>
<tr>
<td><img src="image1.png" alt="RADIO LINK" /></td>
<td><img src="image2.png" alt="CELLULAR" /></td>
<td><img src="image3.png" alt="COMPUTER MONITOR" /></td>
<td><img src="image4.png" alt="WEB INTERFACE" /></td>
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- Communication for remote locations for up to 4-zones (Monthly fees apply)
- Computer monitor with Solarbeam software program
- CCTV (PIP) internet/ upgradable

solarbeam.com
The Sea-Wall Tower Assembly is a standard 6ft. customized tower adapted to mount directly on the sea-wall to provide notification of waterway entry or entry onto the seawall, dock or boat storage area. IR beams protect the marina’s water entry points as well as the sea wall entry.

As shown on the photos below, a quarter panel section is removed from the standard 6ft tower, allowing the IR beam to be placed closer to the water, but not so close as to damage the beam should high tide occur. As the tower is low voltage, no electrical shock hazard exists.

**COMPONENTS:**
- Solar or AC Powered
- PV Controller & complete prewire
- 4- 12Volt Batteries
- Mounting hardware included

**SUGGESTED APPLICATION:**
- Waterway entries
  - Sea walls
  - Dock pilings
  - Bridges
  - Marinas

*IR NOT VISIBLE TO THE EYE*
WALL MOUNTED TOWERS

The Wall Mounted Tower is designed to attach directly to the wall, fence post or light pole as shown in the photos below. The tower can be painted and easily mounts to the wall thereby avoiding the cost of the pedestal base for a further cost savings. The tower can be either non-solar or solar powered.

INCLUDES

- 6’ Enclosure
- Top Cap or Solar Panel
- PV Controller & complete prewire
- 2 – 12V Batteries
- Mounting hardware include
The Top Wall Mounted Tower Assembly is a standard 6ft. customized tower enclosure adapted to mount directly on the top of walls or fixed structures. As shown on the photos below, a quarter panel section is removed from the standard 6’ tower, allowing the IR beam to be placed at any location within the 6’ foot portion of the enclosure. This model can be solar or non-solar powered and adds versatility to protecting commercial or residential areas.

**COMPONENTS:**
- Solar Panel
- PV Controller & complete prewire
- 4-12Volt Batteries
- Mounting hardware included

**SUGGESTED APPLICATIONS:**
- Perimeter walls
- Entry points
- Fixed railings or Structures
- Seawalls
FENCE BACK-TO-BACK TOWER

The Fence Back-to-Back Tower Assembly is designed to mount on both sides of a fence and protect several areas while sharing the solar panel and batteries. This installation utilizes existing fence infrastructure and no concrete pedestal is required to provide for further cost savings. IR beams can also pass through similar style fences and this assembly can also utilize a non-solar tower array if electrical power is conveniently located.

COMPONENTS
Solar Panel
PV Controller & complete prewire
4- 12Volt Batteries
Mounting Hardware Included

SUGGESTED APPLICATIONS
Fence perimeters
Entry gates
Dock pilings
Rail road bridges
The non-solar tower assembly is designed to allow for "hard-wired" installations where 120 VAC power is available (to charge the batteries) and in the event the tower is located in a shaded area or areas where sunlight may be restricted. These towers are also available in slim-line wall-mounted versions and the non-solar tower provides flexibility for all types of installations. As the tower is still primarily battery powered, a power failure does not affect system operation. All Solarbeam towers may be painted to match surrounding surfaces.

**COMPONENTS**
- Cap & Conduit
- Control Panel
- 4- 12V12A Gel Batteries
- Mounting Hardware Included
- IR Beams (Spanning 660’)
- Radio Transmitter (Up to 5 miles)

**SUGGESTED APPLICATIONS**
- Residential walls
- Interior warehouse doors
- Gated entrances
- Heavily shaded areas
- Building interiors
- Commercial buildings
REMOTE SOLAR SUPPLY

POLE MOUNTED SOLAR PANEL

TOWER SOLAR PANEL

REMOTE SOLAR PANEL

REMOTE SOLAR PANEL

48 – 80 AMPS OF STAND-BY POWER

* SOLAR ARRAY PANELS & VOLTAGE REGULATOR
GATED COMMUNITIES & GOLF COURSES

EASY TO IDENTIFY LOCATION AND DETECTION
PRIVATE COMMUNITIES
CORRECTIONS FACILITY

EXTENDED TOWER STANDS
14 FEET- 6 INCHES
AIRPORT APPLICATIONS
AGRICULTURE APPLICATIONS
SEA WALL & MARINE APPLICATIONS

6' SEA WALL TOWER

6' SEA WALL TOWER

SEA WALL MOD. TOWER

SEA WALL TOWER

½ WALL MOUNTED

BEAM PATHS
WATER & SEWER PLANTS

CHLORINE GAS

BEAM BYPASSES AUTOMATICALLY WHEN GATES OPENS

WATER TOWER

STROBE LIGHT

GENERATOR

CHLORINE GAS

DIESEL FUEL
WHAT HAPPENDS AFTER A HURRICANE

PHOTOS TAKEN 10/5/04 AFTER HURRICANE FRANCES: NONE OF THE TOWERS WERE DAMAGED
Warranty

• Lifetime lightning warranty
• 10 years on tower body, lenses, & solar panel
• 5 years on TAKEX beams
• 5 years on batteries (years 1 & 2 at 100%)
• 3 years on internal electronics
• Service agreements available to include PM
• Best warranty in the industry
Patent Summary

United States Patent US 8,193,936 B2 was awarded to Solarbeam, a Trademarked protected company, on June 5 2012. This patent provides for protection of the unique application of solar powered towers and solar powered security systems used to detect intruders.

As found on pages 37, 41 and 42, the patent protects the embodiment of using solar powered towers or systems that wirelessly transmit their signals and utilized IR or photo beams, microwave signals, laser, radars, acoustic sensors, ultrasound, sonar and cameras that include processing units to detect intruders.

This specifically addresses solar powered systems using cameras with analytics used for intruder detection. For further information on this patent and others, please contact Solarbeam International.
Idaho National Laboratories Accelerator Ring Facility
Canadian Highway Authority (Roadway Animal Detection System)
Correctional Facilities in Puerto Rico and the Florida Keys
City of Homestead (14 Installations)
Gables Estates Homeowners Association
City of Indian Creek Village
Addison Reserve Homeowners Association
St. Andrews Country Club
Private estates
Blaylock Oil Company
Redland Engineering & Construction
Hanck Nursery
South Motors BMW

“We consider Solarbeam a partner in crime deterrence and law enforcement…”
Chief Rolle, Homestead Police Dept.
Summary

• Solid perimeter protection with camera verification
• Simple, cost-effective technology easy to field
• Patented, TSA Safe Skies and DOE Reviewed
• Durable & long lasting (10 / 5 / 3 year warranty)
• **Lifetime** lightning warranty
• Lower recurring maintenance and longer service life than any other system fielded
• Proven low-risk – installed in critical infrastructure sites for 14+ years