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Dakota Alert SBB-4000

Dakota Alert SBB-4000 Solar Break Beam Driveway Alarm Sensor Instruction Manual

Product Overview

The Dakota Alert SBB-4000 is a solar-powered break beam driveway alarm sensor designed for long-range outdoor monitoring. It consists of two beam units that can be spaced up to 300 feet apart. When the infrared beam between the sensors is broken by a person or vehicle, a wireless signal is sent to a compatible Dakota Alert 4000 Series receiver up to one mile away.

Each beam unit features dual solar panels to ensure continuous charging throughout the day, providing reliable operation in various weather conditions. The system is weatherproof and designed to operate within a temperature range of -30°F to 120°F.

Installation is straightforward, offering both flat surface and pipe mounting options. The system utilizes simple code-learning technology for easy pairing with receivers. Up to 16 sensors can be paired with a single receiver, or an unlimited number of receivers can be paired to one sensor, offering flexible expansion for your property's security needs.



Image: Dakota Alert SBB-4000 Solar Break Beam Sensors installed at a driveway entrance, demonstrating their function.

Setup Instructions

1. **Initial Charging:** Before installation, ensure both SBB-4000 beam units are fully charged. They can be charged via their micro-USB ports if solar charging is insufficient or for initial setup.
2. **Mounting the Sensors:** The system includes mounts for both flat surfaces and pipes. Choose a mounting location where the two beam units can be positioned facing each other, up to 300 feet apart, with a clear line of sight. Securely attach the mounting brackets.
3. **Aligning the Beams:** Mount the beam units at the desired height. Ensure they are perfectly aligned so that the infrared beam from one unit is received by the other. Use the built-in level on top of each unit for horizontal alignment. Precise alignment is crucial for reliable operation.
4. **Consider Sun Angles:** When positioning the 'A' (receiver) unit, avoid direct sunlight hitting its front lens at a shallow angle (less than 40 degrees), especially during sunrise or sunset. This can cause false alarms. Orient the 'B' (transmitter) unit towards the sun if possible, and the 'A' unit away from direct sun paths. Plan for seasonal changes in sun angle.

5. **Pairing with a Receiver:** The SBB-4000 is a transmitter only and requires a compatible Dakota Alert 4000 Series receiver (e.g., DCR-4000, RE-4k Plus, PR-4000). Follow the code-learning instructions provided with your specific 4000 Series receiver to pair the SBB-4000 sensors. Up to 16 sensors can be paired with one receiver.



Image: The SBB-4000 beam units and their versatile mounting options.

Your browser does not support the video tag.

Video: An unboxing video demonstrating the components of the Dakota Alert SBB-4000 system, useful for initial setup.

Operating Instructions

Once installed and paired, the SBB-4000 system operates automatically. When the infrared beam between the two sensor units is interrupted, the 'A' unit transmits a wireless signal to your paired 4000 Series receiver.

- **Detection:** The system detects any object that breaks the invisible infrared beam.
- **Signal Transmission:** A radio signal is sent to the receiver, which can be up to one mile away, depending on environmental conditions and obstructions.
- **Receiver Alert:** Your 4000 Series receiver will then provide an audible or visual alert, as configured.

- **No Local Indication:** Note that the SBB-4000 beam units themselves do not produce a local sound or visible indication when the beam is broken. All alerts are communicated wirelessly to the paired receiver.
- **Beam Obstruction Reminder:** If the 'A' unit detects that the beam has been continuously obstructed for more than 20 seconds (or 5 minutes, if configured), it will send a 'reminder' signal to the receiver.

Maintenance

The Dakota Alert SBB-4000 is designed for low maintenance, but periodic checks ensure optimal performance.

- **Solar Panel Cleaning:** Periodically clean the solar panels on both units to ensure maximum charging efficiency. Dust, dirt, or debris can reduce their effectiveness.
- **Beam Lens Cleaning:** Keep the lenses on the front of each beam unit clean and free from obstructions like spiderwebs, leaves, or dirt. A clean lens ensures accurate beam transmission and reception.
- **Battery Check:** The internal Lithium-Ion batteries are designed for long life, typically lasting a year or more in residential use with adequate solar charging. If you notice reduced performance or frequent low battery alerts from your receiver, consider checking or replacing the batteries.
- **Environmental Checks:** Regularly inspect the area around the sensors for new obstructions (e.g., growing vegetation, new structures) that might block the beam or interfere with solar charging.
- **Weather Resistance:** The units are weatherproof and designed to withstand temperatures from -30°F to 120°F. Ensure all seals and covers are intact to maintain weather protection.



Image: The SBB-4000's weather-resistant design and dual solar panels for reliable charging.

Troubleshooting

- **False Alarms:**
  - **Direct Sunlight:** If false alarms occur during sunrise or sunset, check the alignment and orientation of the 'A' (receiver) unit. Direct sunlight can saturate the IR receiver. Adjust the angle or add a small physical shield to block direct sun without obstructing the beam path.
  - **Obstructions:** Ensure there are no small objects (e.g., leaves, spiderwebs, tall grass) intermittently breaking the beam.

- **No Detection:**
  - **Beam Alignment:** Verify that the two beam units are perfectly aligned. Use the built-in level and make fine adjustments.
  - **Power:** Confirm both units are sufficiently charged. Check the battery status if your receiver provides this feature.
  - **Distance:** Ensure the distance between the sensors does not exceed 300 feet.
- **No Signal to Receiver:**
  - **Receiver Pairing:** Re-verify that the SBB-4000 sensors are correctly paired with your 4000 Series receiver.
  - **Wireless Range:** While rated for up to one mile, actual range can be affected by terrain, dense foliage, and large metal objects. Try repositioning the receiver or sensors if possible.
  - **Interference:** Other wireless devices might cause interference.
- **Unexpected Beam Obstruction Reminders:** If the 'A' unit sends continuous obstruction reminders, it indicates the beam is blocked for an extended period. Check for persistent physical obstructions or severe misalignment.

Specifications

Feature	Detail
Brand	Dakota Alert
Model Number	SBB-4000
Power Source	Battery Powered (2 Lithium Ion batteries included)
Compatible Devices	Dakota Alert 4000 Series Receivers
Item Dimensions (L x W x H)	3.25 x 2.5 x 7.75 inches
Connectivity Technology	Wireless
Installation Type	Wireless DIY
Alert Type	Motion Only (Break Beam)
Control Method	Remote (via paired receiver)
Maximum Beam Detection Range	300 feet (between sensors)
Maximum Wireless Range	1 Mile (to receiver)
Operating Temperature	-30°F to 120°F
Included Components	2 x Beam Units
Item Weight	4.55 pounds



Image: Dimensions of the SBB-4000 Break Beam Transmitter.

Warranty Information

Dakota Alert is committed to customer satisfaction and product quality. For specific warranty terms and conditions, please refer to the documentation included with your product or visit the official Dakota Alert website. Warranty coverage typically addresses manufacturing defects under normal use.

Support

For further assistance, technical support, or to explore compatible products, please visit the official Dakota Alert website or contact their customer service. Dakota Alert is a USA-based company with over 30 years of experience in wireless driveway alarm systems.

You can find more information and products at theDakota Alert Store on Amazon.

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