



**Dakota Alert®**  
*WIRELESS SECURITY EQUIPMENT*

# Break Beam Transmitter

BBT-4000

---

USER GUIDE

[www.dakotaalert.com](http://www.dakotaalert.com)



---

This BBT-4000 Break Beam Transmitter sends a signal to your DCR-4000 receiver when it detects moving objects, such as people and vehicles. Connect multiple break beam transmitters (or other transmitters) to your receiver to create a complete security system.

## PACKAGE CONTENTS

- Break Beam Transmitter (2 sensors)
- Mounting hardware
  - » Right-angle brackets (4)
  - » Cross brackets (4)
  - » U-shaped brackets (4)
  - » M4 × 12 mm bolts (8) 
  - » M5 × 18 mm bolts (8) 
  - » M5 × 27 mm bolts (8) 
  - » M4 nuts (8) 
  - » M5 nuts (16) 
- *User Guide*

### Tools needed

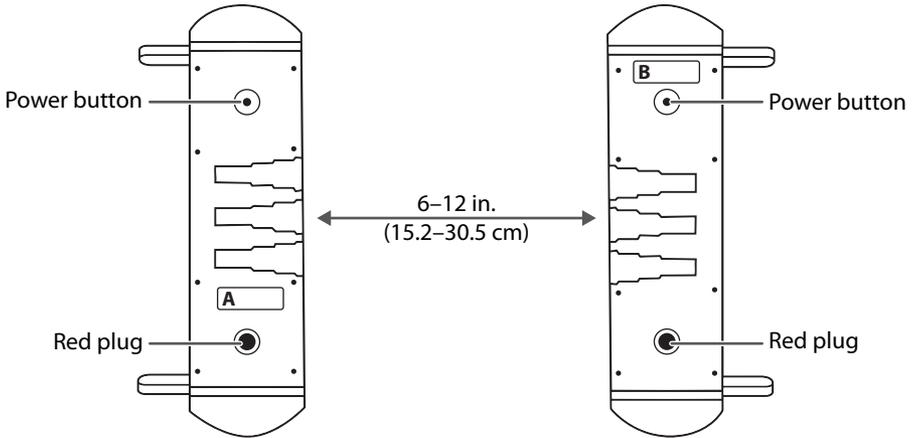
- Phillips screwdriver
- Adjustable wrench

## SETTING UP YOUR BREAK BEAM DETECTOR

1. Pair the sensors to each other. See “Pairing the sensors” on page 3.
2. Select a tune and code the break beam transmitter to your receiver. See “Coding your receiver” on page 4.
3. Mount the sensor units. See “Mounting your sensors” on page 5.

## PAIRING THE SENSORS

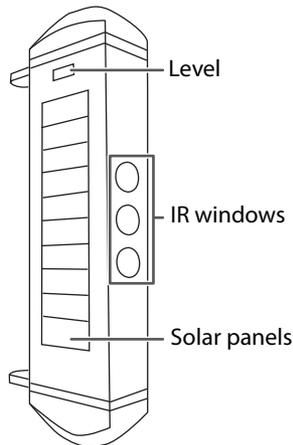
1. Place sensors A and B on a flat surface, 6–12 inches (15.2–30.5 cm) apart, with the three IR windows on the sides of the sensors facing each other.



2. Press the power button on sensor A until the button lights solid red, then press the power button on sensor B until the button lights solid red. The sensor units pair. Leave the sensors in place until both power button lights turn off (about one minute).



3. Test the transmitter by completely blocking all three IR windows. You should hear a click and the indicator light in the center window of sensor A lights.



## CODING YOUR RECEIVER

**Note:** You can connect up to 16 transmitters to your receiver.

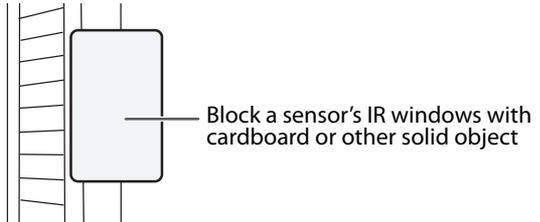
1. Place your receiver and the break beam transmitter near each other.

**Note:** Sensor unit A contains the radio transmitter.

2. Press and hold the **MODE** and **⏮** (volume) buttons for three seconds. When all four lights flash, release the buttons.
3. Press **⏮** (volume) repeatedly until you find the tune you want to use.

|   |                  |   |                 |    |                |
|---|------------------|---|-----------------|----|----------------|
| 1 | Ding Dong (high) | 5 | Alarm/Siren     | 9  | William Tell   |
| 2 | Ding Dong (low)  | 6 | Coo Coo Clock   | 10 | Canon in D     |
| 3 | Westminster      | 7 | Bird Chirping   | 11 | Morning        |
| 4 | Fur Elise        | 8 | Twinkle Twinkle | 12 | Toreador March |

4. After you choose a tune, block a sensor's IR windows to activate the transmitter. The receiver emits a short beep.



5. If you are coding more than one transmitter, repeat steps 3 and 4.
6. After your transmitter(s) are coded, press and hold the **MODE** button until the LEDs stop flashing.
7. To test the tune, block a sensor's IR windows. You'll hear the selected tune through your receiver and the lights will flash.

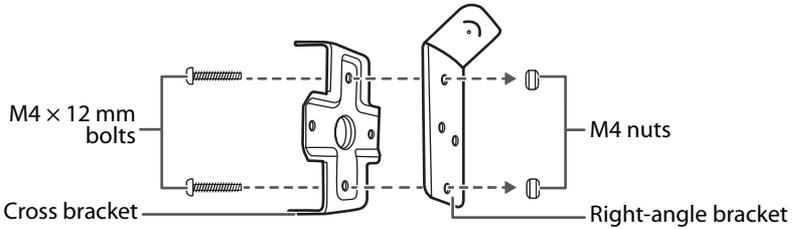
## MOUNTING YOUR SENSORS

Before you mount, choose a mounting location:

- The recommended mounting height is 3 feet (0.9 m). This will help avoid false alerts from small animals crossing under the beam but still detect people and vehicles.
- The sensors can be mounted up to 300 ft. (91.4 m) apart.
- Mount the sensors on a stable surface. Do not install where trees or other objects can block the beam.

### Circular post mounting

1. Attach the right-angle bracket to the cross bracket using two M4 nuts and two M4 × 12 mm bolts. Repeat for all brackets.

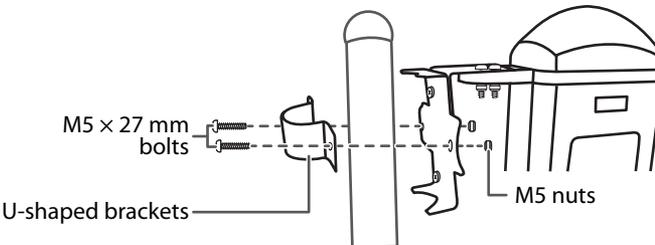


2. Attach a right-angle bracket to the top and bottom of each sensor unit using four M5 nuts and four M5 × 18 mm bolts.



3. Mount sensor unit B first, attaching it to a post with two U-shaped brackets, four M5 nuts, and four M5 × 27 mm bolts. Tighten securely, making sure that the sensor is level and the IR windows are facing toward where you will mount sensor unit A.

**Note:** If the U-shaped bracket doesn't fit your post, use a vise to bend it to the correct shape.



4. Mount sensor unit A to a post with two U-shaped brackets, four M5 nuts, and four M5 × 27 mm bolts. Tighten securely, making sure that the sensor is level and that the IR windows are facing toward sensor unit B.

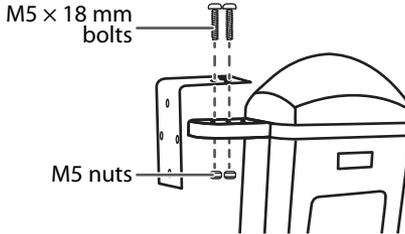
**Note:** When the sensor units align, sensor unit A's indicator light blinks.

5. Test your break beam transmitter to make sure that the sensors are aligned:
  - » Cover only the top two windows – the sensor should not alert. If it does, raise the sensor about an inch.
  - » Cover only the bottom two windows – the sensor should not alert. If it does, lower the sensor about an inch.
  - » Cover all three windows – the unit should alert. When properly aligned, the sensors only alert when all three infrared holes are covered.

**Note:** The IR windows must be blocked for at least 0.1 seconds (100 ms). If an object passes through faster than that, it will not be detected.

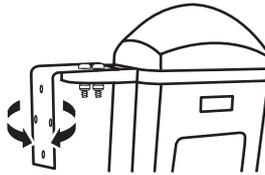
### Flat surface mounting

1. Attach a right-angle bracket to the top and bottom of each sensor using four M5 nuts and four M5 × 18 mm bolts.

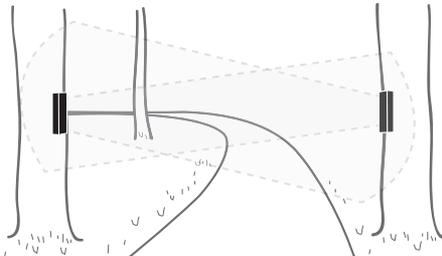


2. Mount sensor B to a flat surface using screws that are appropriate to your material and surface (not included). Make sure that the sensor is level and the IR windows are facing toward where you will mount sensor A.

**Tip:** Use the built-in levels to help keep the sensors in-line.



3. Mount sensor A to a flat surface. Make sure that the sensor is level and that the IR windows are facing toward sensor B.
4. Test your break beam transmitter to make sure that the sensors are aligned:
  - » Cover only the top two windows – the sensor should not alert. If it does, raise the sensor about an inch.
  - » Cover only the bottom two windows – the sensor should not alert. If it does, lower the sensor about an inch.
  - » Cover all three windows – the unit should alert. When properly aligned, the sensors only alert when all three infrared holes are covered.



## RECHARGING THE TRANSMITTER

The sensors automatically recharge using built-in solar panels. If using in a dark, interior space without light, you can recharge the sensor using the power adapter that came with your receiver:

1. Remove the red plug on the back of the sensor.
2. Connect a power adapter from the power jack to a power outlet.

**Note:** Your sensors' batteries last 2–3 weeks without charging.

## ADJUSTING THE VOLUME

Press  (volume) button repeatedly to adjust the volume (four levels and off). The lights show the volume level for four seconds.

## TROUBLESHOOTING

### If you are getting false alarms:

- Make sure that there are no tree branches or other obstructions blocking the sensors. If the sensor is continually blocked, it will send an alert every hour.
- You may receive false alerts during extreme rain, snow, or fog.

### If the transmitter is not detecting:

- Make sure that the transmitter is coded to the receiver. See "Coding your receiver" on page 4 for coding instructions.
- Turn the sensors' power off for 60 seconds, then turn the power back on.
- Move the transmitter closer to the receiver.
- Keep the transmitter away from large metal objects that may interfere with the radio signal.
- Make sure that the sensors are correctly aligned:
  - » Cover only the top two windows – the sensor should not alert.
  - » Cover only the bottom two windows – the sensor should not alert.
  - » Cover all three windows – the unit should alert. When properly aligned, the sensor unit only alerts when all three infrared holes are covered.

## SPECIFICATIONS

- **Power source:** Solar or AC adapter
- **Frequency:** 433.92 MHz
- **Wireless range:** Up to 1 mi. (1.6 km)\*
- **Operating temperature:** -30 to 120°F (-34.4 to 48.9°C)

\*Actual range will vary depending on local terrain and obstructions.

## TECH SUPPORT

If you have problems using this product after reading this manual, please contact us. You can reach us by phone at 605-356-2772 from 8:30 AM to 5:00 PM Monday through Friday (Central Standard Time). We will be happy to answer your questions and help you in any way we can.

## SAFETY INFORMATION

- Only use this product for the detection of moving objects such as people and vehicles.
- Do not disassemble or attempt to repair the product.
- Do not install this unit with any other infrared detector. It may cause false alarms.
- Do clean and inspect the unit regularly for proper use. If any problem is found, contact Dakota Alert, Inc.

## WARRANTY

Dakota Alert warrants this product to be free of defects in materials and workmanship for a period of one year from the date of purchase. This warranty does not cover damage resulting from accident, abuse, act of God, or improper operation. If this product does become defective, simply return it to Dakota Alert. Please include a note describing the troubles along with your name and return address as well as the original sales receipt. If the product is covered under the warranty it will be repaired or replaced at no charge. If it is not covered by the warranty, you will be notified of any charges before work is done.

## LEGAL NOTICES

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

 **WARNING:** Cancer and Reproductive Harm. Go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov) for more information.



**Dakota Alert, Inc.**

www.dakotaalert.com

**Phone:** (605) 356-2772

**Fax:** (605) 356-3662

**Address:** 32556 477th Ave. | P0 Box 130 | Elk Point, SD 57025  
19-0041