Dakota Alert, Inc.

BBT-2500

Break Beam Transmitter

User Guide

www.dakotaalert.com

PRODUCT DESCRIPTION: The BBT-2500 is used with the DCR-2500 receiver. The BBT-2500 uses Active Infrared to detect anything that passes through the sensor pair and breaks both beams at the same time. When the beams are broken, the unit sends a signal to the receiver. This will sound one of four different tones (Classical, Westminster Chime, Ding Dong, or Whistle). The BBT-2500 can be used to monitor access into any area, from your backyard to lumber yard and everything in between.

READ MANUAL THOROUGHLY BEFORE INSTALLATION. RETAIN MANUAL FOR FUTURE REFERENCE. FAILURE TO FOLLOW DIRECTIONS PROPERLY MAY RESULT IN DAMAGE.

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.

WARNINGS: This device complies with Part 15 of the FCC rules, Operation of this device is subject to the following conditions: 1. This device may not cause harmful interference. 2. This device must accept any interference, including interference that may cause undesired operation.

HARDWARE INSTALLATION

Verify that all installation hardware is included. **Tools needed:** Phillips screwdriver, adjustable wrench.

(4) Right Angle Brackets

(4) Cross Brackets

(4) 'U' Shaped Brackets

PAIRING

To make installation easier it is recommended to pair units 'A' and 'B' before mounting.

On a flat surface push the power button (Figure 1-1) on 'A' then push the power button on 'B'. Laying the units flat on counter or table, line up the infrared light holes (Figure 1-2). The units will then pair. You will see lights flashing during this process. Leave the units in place for one minute to make sure this process is complete.

Once paired, test them by completely blocking all 3 holes (2 infrared light holes and indicator hole shown in Figure 1-3). Unit should send a signal to the DCR-2500 and sound an alert. Unit will only alert if all 3 holes are completely blocked for at least 100ms. If an object passes through the beam faster than that it will not be detected.

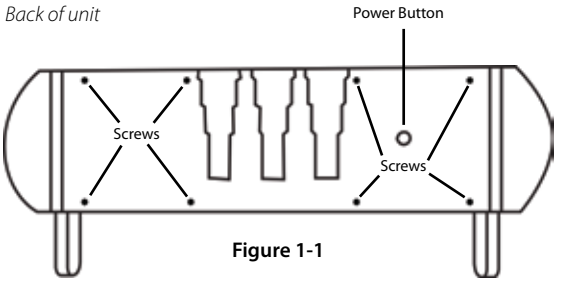


Figure 1-1

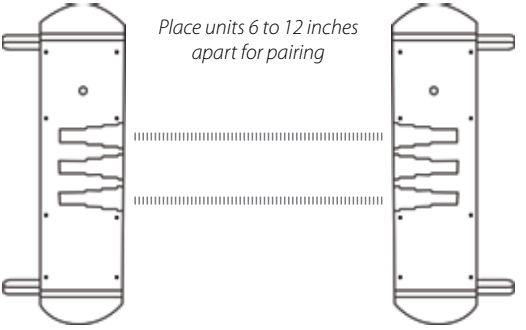


Figure 1-2

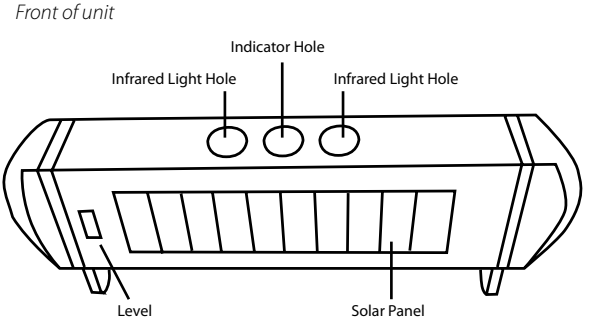


Figure 1-3

'A' unit contains the radio transmitter module. The 'A' unit transmitter module is factory set to match the zone 2 setting of the DCR-2500. It is not recommended to change the code setting unless it is needed to avoid interference or a different zone is desired. **Be careful when opening this unit to avoid damaging any internal components or wires.**

'B' unit contains no user serviceable parts. **It is not recommended to open this unit.**

Below are the two most common mounting options.

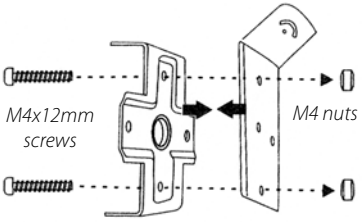


Figure 3-1

CIRCULAR POST MOUNTING

1). Take the right angle bracket (Figure 3-1) and attach the cross bracket using (2) M4 nuts and (2) M4x12mm screws. Repeat for all brackets.

2). Using (2) M5 nuts and (2) M5x18mm screws attach right angle bracket (Figure 3-2) to units 'A' and 'B'.

3). Attach to post with 'U' shaped bracket (Figure 3-3) . Using (2) M5 nuts and (2) M5x27mm screws attach 'U' bracket around post. Tighten securely.

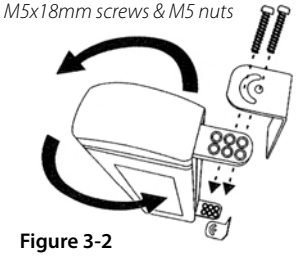


Figure 3-2

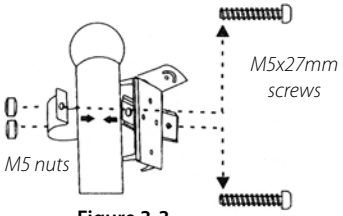


Figure 3-3

FLAT SURFACE MOUNTING

1). Using (2) M5 nuts and (2) M5x18mm screws attach right angle bracket (Figure 4) to units 'A' and 'B'.

2). Use screws that are appropriate for your material and surface (not included) and mount right angle bracket taking care to keep units 'A' and 'B' level.

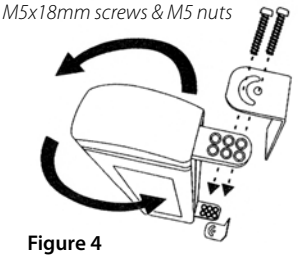


Figure 4

MOUNTING OUTSIDE

Units 'A' and 'B' can be mounted up to 300' apart. Determine height and location you would like to mount the unit. Recommended height is 3-4'. There must be line of sight between 'A' and 'B'. Units must be mounted level. Install the unit on a stable surface. Do not install where trees or other objects can block the beam. Mounting 3-4' will avoid false alerts by small animals crossing under the beam, but still detect people and vehicles.

Mount unit 'B' first and face the infrared holes toward where unit 'A' will be mounted.

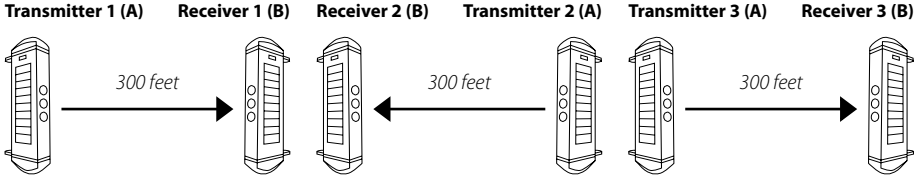
When mounting unit 'A', face the infrared holes towards unit 'B'. When the units align there is an audible click in unit 'A'.

To make sure of proper alignment cover only the top two infrared holes. Unit **should not** alert. Then cover only the bottom two holes, again unit **should not** alert. Cover all three holes and the unit **should** alert. If the unit alerts with only the *top* two infrared holes covered, *raise* the unit about an inch to correct misalignment. If the unit alerts with only the *bottom* two infrared holes covered, *lower* the unit about an inch. When properly aligned, the unit will only alert when all three infrared holes are covered.

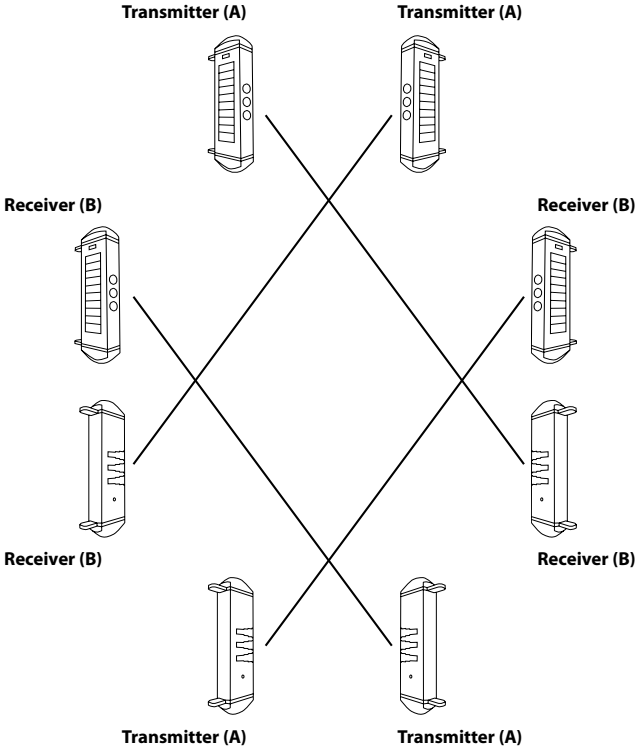
FOR ALL MOUNTING SITUATIONS

In all mounting situations it is very important that the 'A' unit only interact with one 'B' unit or the pair may not alert properly. Use the diagrams below for reference.

STRAIGHT LINE MOUNTING *(900 feet)*



PERIMETER MOUNTING



ONLY OPEN UNIT 'A' IF CHANGING THE ZONE/CHIME IS ABSOLUTELY NECESSARY. It is not recommended to change any settings as the BBA-2500 is factory set to match.

DO NOT OPEN UNIT 'B'.

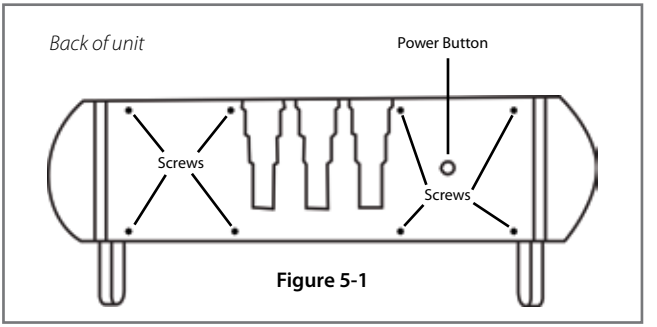


Figure 5-1

Remove the 8 screws on the back of unit 'A' (Figure 5-1). Gently lift the solar panel to expose the transmitter board (Figure 5-2). Locate the 10 dip switches on the red block. The first eight dip switches are for the frequency setting (256 combinations). Set switches 1-8 to match the eight switches in the receiver. Switches 9 and 10 are for the zone/channel settings on the transmitter. The four zones are listed in the table below.

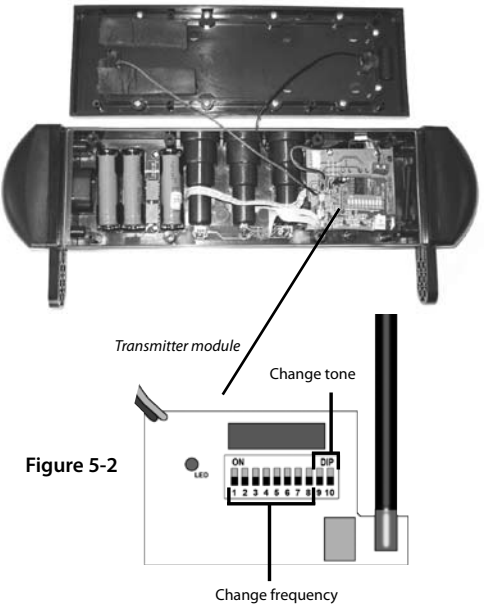


Figure 5-2

Switch 9	Switch 10	Channel	Tune
On	On	1	Classical
Off	On	2	Westminster
On	Off	3	Ding Dong
Off	Off	4	Whistle

Coding the DCR-2500 receiver:
Open the receiver case by inserting a small screwdriver into one of the pry notches on the side of the case (refer to receiver manual). Gently lift off the front cover. Locate the eight dip switches on the DCR-2500 and make sure they are set identically to dip switches 1-8 on the BBT-2500.

Note: If more than one transmitter is used with the receiver, the first eight dip switches of all transmitters must match the eight dip switches of the receiver.

Note: Whenever a change is made to the time jumper or the dip switches, the receiver must be turned OFF and then back ON to operate properly.

TROUBLESHOOTING:

If sensor pair alerts when originally paired, but will not alert when mounted...
1. Push power button on unit 'A'
2. Look in center hole for the indicator light. If light is on, proceed to step 3. If light is not on, press power button again. Indicator light should come on.
3. Repeat steps 1 and 2 for unit 'B'. This will re-sync the units.

If experiencing false alerts...
- *Check for obstruction (i.e. branch, frost)*
- *Extreme fog*
- *Extreme snow and rain*
- *If obstruction/weather are not involved, try changing the frequency of the DCR-2500 and unit 'A'*
- *If unit is blocked continually a second signal will be generated after one hour*

If no signal...
- *Turn power off on all units for 60 seconds and then turn power back on*
- *Make sure units are still aligned*
- *Make sure all 8 dip switches in DCR-2500 match the first 8 dip switches inside unit 'A'*

TECHNICAL SUPPORT: If you encounter any difficulty in the operation of this product after reading the manual, please contact Dakota Alert. 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.

WARRANTY: Dakota Alert warrants this product to be free of defects in material 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 warranty it will be repaired or replaced at no charge. If it is not covered by warranty, you will be notified of any charges before work is done.

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