

PREFACE

- **Thank you for purchasing the BD-1 fingerprint deadbolt.**
- **Please read the documentation carefully before installation & use. The manual details all installation procedures and operation steps.**
- **Manufacturer and/or Distributors of the BD1 will not be responsible for any damages caused by incorrect installation or mishandling of the lock. Any such damages will void manufacturer's warranty.**

Table of Contents

Preface	1
Installation Manual	
1. Parts	2
2. Required Tools.....	4
3. Pre-installation.....	4
3.1 Mark and bore holes on the door	4
3.2 Deadbolt Latch Selection.....	8
4. Installation	9
4.1 Installation of Deadbolt	9
4.2 Installing Strike and Strike Lining Box (on the door jamb).....	10
4.3 Sizing Tail Piece (to the right length).....	11
4.4 Installation of the Outdoor Unit.....	12
4.5 Installation of the Indoor Unit	14
5. Trouble Shooting	21
Operation Manual	23
Section I - Enrolling Administrators (First 2 Fingerprint Users):.....	26
Section II - Enrolling Fingerprint Users 3 thru 30:.....	30
Section III – Deleting Individual Fingerprint Users:	33
Section IV – Deleting ALL Fingerprint Users:	36
Section V – Unlocking the BD1 from outside:.....	38
Section VI – Locking the BD1 from Outside:	40
Section VII – Locking and Unlocking the BD1 from Inside:	41
USER ENROLLMENT TABLE:	42

1. Parts

Please familiarize yourself with all the parts in the packaging box of the BD1. If any part is missing or damaged, contact our service center or your local dealer.

 <p>Outdoor Unit</p>	 <p>Indoor Unit</p>	 <p>Strike Lining Box</p>
 <p>Outdoor Rubber Gasket</p>	 <p>Strike Plate</p>	 <p>Keys</p>
 <p>Deadbolt Latch 2 3/4" backset (70mm)</p>	 <p>Deadbolt Latch 2 3/8" backset (60mm)</p>	 <p>Screws (82 mm)</p>
 <p>Screws (2 x 40 mm & 1 x 29mm)</p>	 <p>Wooden & Metal Screws</p>	 <p>Alkaline Batteries</p>

2. Required Tools

① Electric or battery operated Drill	② One 3/8” Diameter Drill Bit
③ One 1” Diameter Drill bit	④ One 2 1/8” Diameter Drill Bit
⑤ A Carpenter Chisel	⑥ A Hammer
⑦ A pair of scissors	⑧ Vise-Grip
⑨ Philips & flat head screw drivers	⑩ Metal Cutters or Hacksaw
11) Marker	

3. Pre-installation

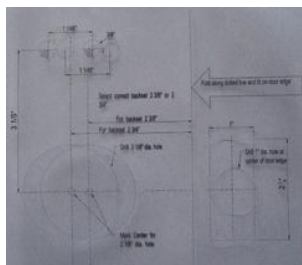
3.1 Mark and bore holes on the door

3.11 *Mark holes on door*

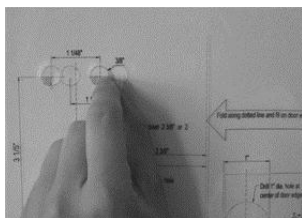
For doors with existing deadbolt lock with 2 1/8” diameter hole:



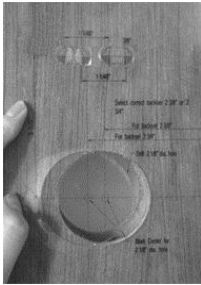
1) Remove existing cylindrical deadbolt .



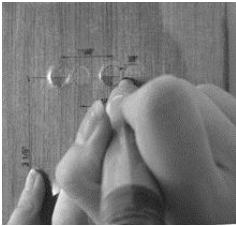
2) Please be sure to use the installation template when installing the BD1 on a door with an existing deadbolt.



3) Cut out the two, 3/8" holes on the Installation Template that correspond to your existing backset (2 3/8" or 2 3/4").



4) Rest the installation template on the front of the door, on top of the existing 2 1/8" hole, making sure that it is aligned properly for the door's existing 2 3/8" or 2 3/4" backset.



5) Mark the two, 3/8" holes that you cut out of the installation template on the door (with a magic marker).

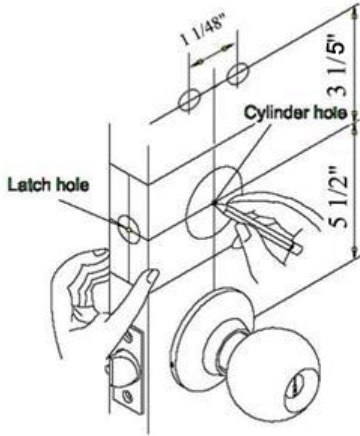


6) Bore the two, 3/8" holes into the door (using a 3/8" drill bit), making sure that the holes fully penetrate through the door.

7) Go to **Section 4.3** in the User Manual

For doors that do not have a cylindrical deadbolt lock or a hole for the cylindrical deadbolt lock:

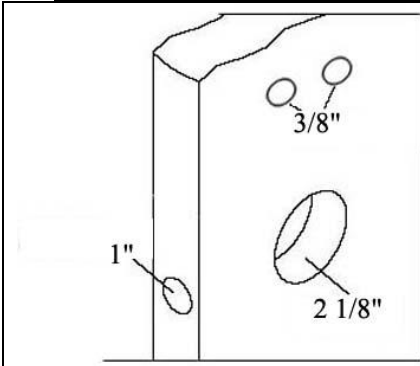
A. Start approximately 46" from floor. Select the appropriate installation template according to the length of the backset. Fold and apply the template to the edge of the



door bevel. Mark the center point of the cylinder hole on the door face, and then mark the center point of the deadbolt hole on door edge, as indicated on the template.

- B. For installation of combination set (door handle and deadbolt), it is recommended that the distance is $5\frac{1}{2}$ " between the two center points.
- C. Mark the center points of the two small holes on the door face for the two upper fixing posts mounted on the top plate of the outdoor unit, as indicated on the installation template.

3.12 Bore holes



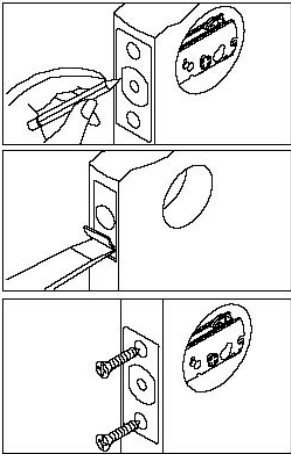
- A. Bore a 2 1/8" diameter hole in the center of door face for chassis. (It is recommended to bore this hole from both sides of the door to avoid splintering.)
- B. Bore a 1" diameter hole in the center of door edge for deadbolt.
- C. Bore two separate 3/8" diameter holes for the upper fixing posts.

3.2 Deadbolt Latch Selection

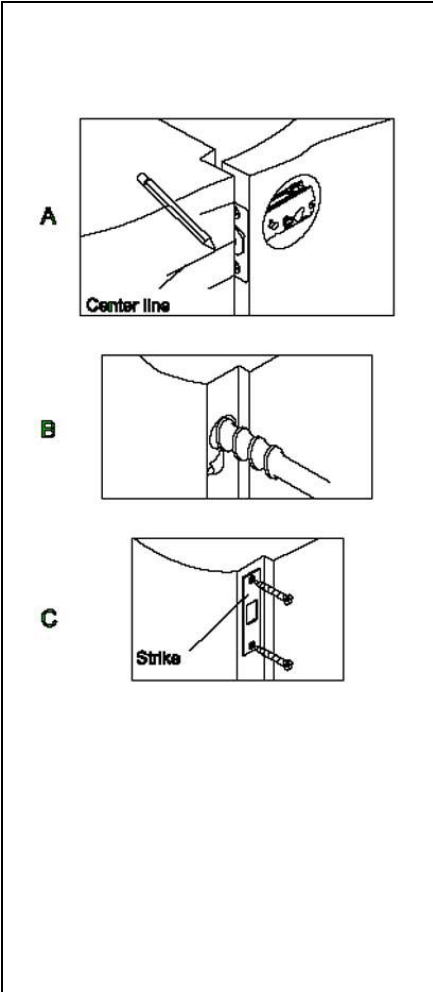
There are two deadbolt latches in each box, one with a 2 3/8" (60mm) backset and the other with a 2 3/4" (70mm) backset. Make sure which length you will need and select the right one before installation.

4. Installation

4.1 Installation of Deadbolt

 <p>The diagram consists of three vertically stacked panels labeled A, B, and C. Panel A shows a hand inserting a deadbolt latch into a hole in the edge of a door. Panel B shows a chisel being used to create a rectangular groove in the door edge. Panel C shows the deadbolt latch inserted into the groove and secured with two screws.</p>	<ul style="list-style-type: none">A. Insert the deadbolt latch into the hole in the edge of the door (follow the UP sign), keeping it parallel to the face of the door. Mark the outline of the face plate and remove the deadbolt.B. Then chisel 1/8" deep rectangular shape, per your marking (or until the faceplate is flush with the door edge).C. Insert the deadbolt latch; make sure the deadbolt UP sign is facing upwards. Then fasten the screws.
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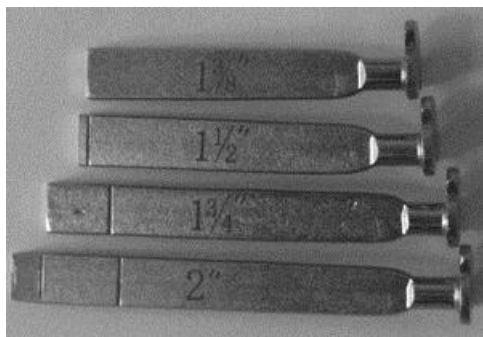
4.2 Installing Strike and Strike Lining Box (on the door jamb)

 <p>Diagram A: A pencil is used to mark a horizontal center line on the door jamb. A circular inset shows a close-up of the pencil tip marking the line. The text 'Center line' is written below the diagram.</p> <p>Diagram B: A hole is being drilled into the door jamb. The text 'B' is written to the left of the diagram.</p> <p>Diagram C: A chisel is being used to chisel the door jamb. The text 'Strike' is written below the diagram.</p>	<p>A.</p> <ol style="list-style-type: none">(1) Close the door until the deadbolt touches the door jamb along the face plate to mark the horizontal center lines.(2) Measure one half of the door thickness from one side of the door jamb, and then mark the vertical center lines.(3) Extend the vertical center line and the horizontal line to mark the drill center point for the strike. <p>B. Bore a 1" diameter and 1" deep hole in the door jamb at the center point for strike. To ensure the proper deadbolt function, this hole must be drilled at least 1" deep.</p> <p>C. Chisel the door jamb at 1/16" deep for the strike plate which must fit flush with the door jamb.</p> <p>D. Insert the strike lining box and then fasten screws to the plate.</p>
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4.3 Sizing Tail Piece (to the right length)

The BD1 is designed to fit door thicknesses of 1 3/8" to 2".

Four pre-sized tailpieces are included with the BD1 for 1 3/8", 1 1/2", 1 3/4" and 2" thick doors.



Your door thickness and length of the tailpiece being used must match exactly. EX: If your door is 1 3/4" thick, then you must use the 1 3/4" long tailpiece.

The BD1 comes with the 1 3/4" tailpiece pre-installed. If your door is not 1 3/4" thick, but the thickness matches one of the other pre-cut tailpieces included with the lock, then you must swap out the tailpiece.

For video directions on how to swap the tailpiece, go to the BD1 product page at www.BioAxxis.com and click on the Support Material section on the bottom of the page for links to the instructional videos.

IF YOUR DOOR THICKNESS DOES NOT EXACTLY MATCH ANY OF THE PRE-CUT TAILPIECES LENGTHS,

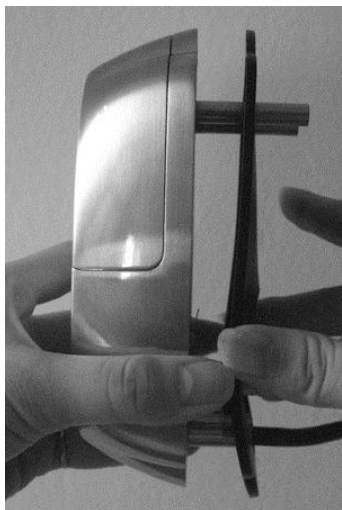
**THEN YOU MUST TRIM THE PRE-INSTALLED TAIL
PIECE TO MATCH YOUR EXACT DOOR THICKNESS.**

If you need to trim the tailpiece, be sure to measure the exact thickness of your door, mark the tailpiece (with a marker) where it needs to be cut and trim the tail piece accordingly per the exact thickness of your door, with a hacksaw or metal cutters.

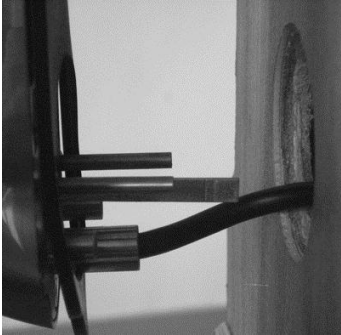
Notes:

The motor could be dislodged if the tailpiece is not cut properly and is too long, due to excessive pressure. **Warranty will be voided if this occurs.**

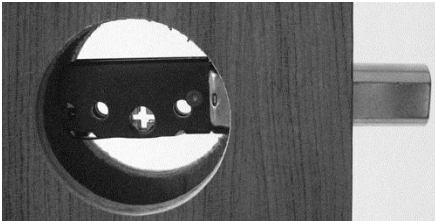
4.4 Installation of the Outdoor Unit



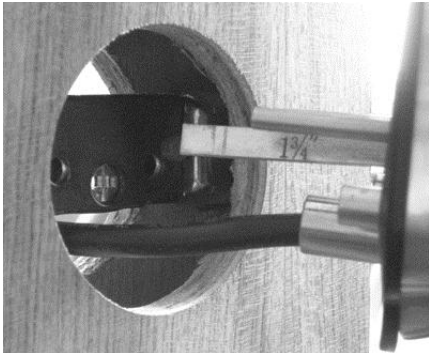
- 1) Attach **the** rubber gasket to the back of the outdoor unit.



2) Make sure the tail piece is vertical.



3) Make sure the deadbolt is engaged.



4) Insert tail piece through the cross slot of the latch.
5) Insert the connector and wire through the cylinder hole below the deadbolt latch.

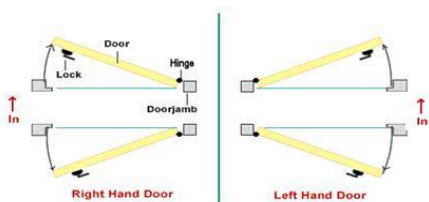


- 6) Insert the two upper fixing posts through the small upper holes on the door (the newly drilled holes).

4.5 Installation of the Indoor Unit

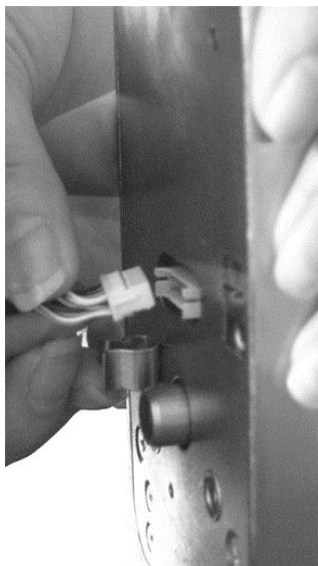


- 1) Select the proper door opening orientation on the back plate of the Indoor Unit. If the door is left handed, please push the orientation selector switch to “L” position; if it’s right handed, switch the selector to “R” position.



Right Handed/Left Handed

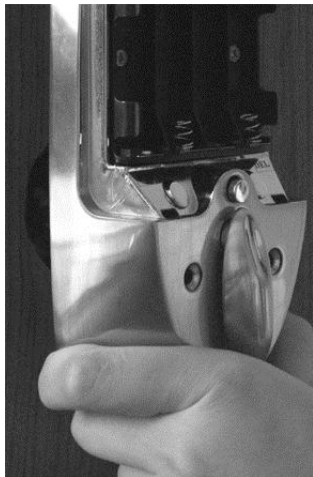
2) Left handed doors are defined as hinge on the left when you are entering the home from outside. The opposite is true for right handed doors.



3) Plug wire set into circuit board, making sure all prongs are firmly seated.



4) Press sheathing of wire casing into the wire holder clamp.



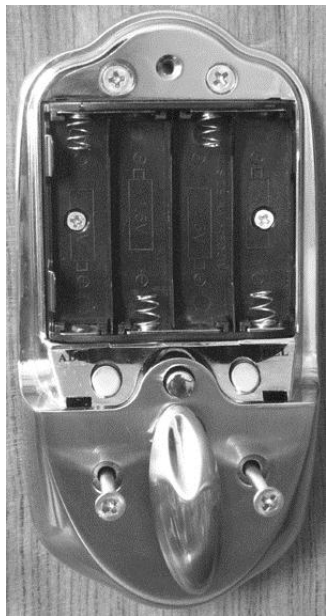
5) Turn the manual turn knob to the vertical position, facing downward.



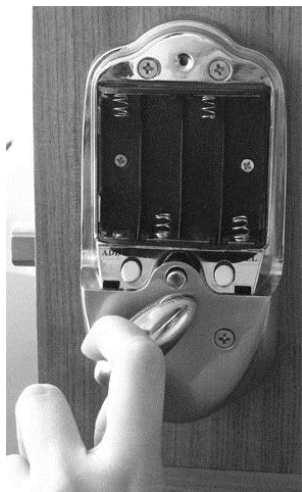
- 6) Insert the tail piece into the vertical retaining slot of the indoor unit.
- 7) Gently finish joining the outdoor and indoor units together, ensuring all fixing posts are aligned properly.



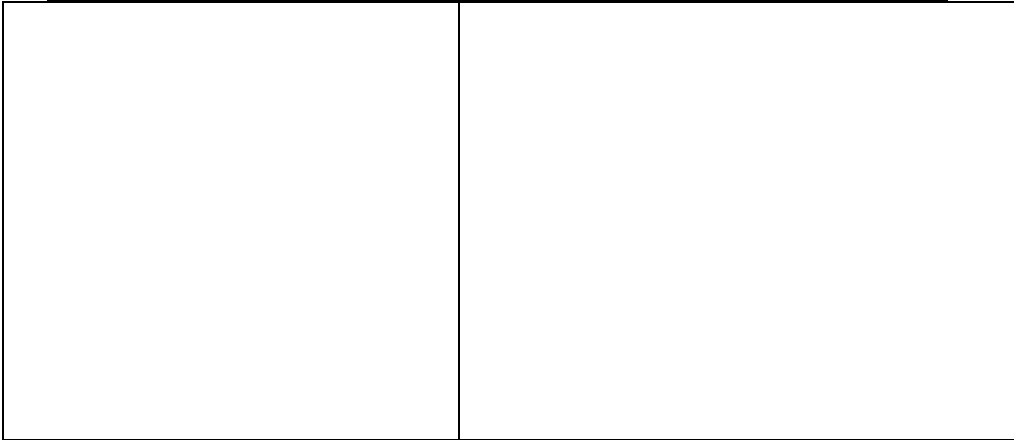
- 8) Fasten the two shorter screws through the upper fixing post holes on the upper section of the inside unit.



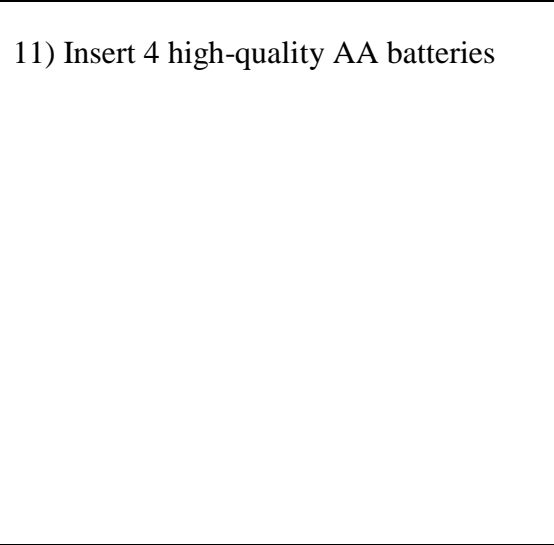
9) Fasten the two long screws through the bottom fixing post holes on the inside unit.



10) Move the manual turn knob back and forth to ensure that deadbolt opens and closes mechanically.



11) Insert 4 high-quality AA batteries





12) Press the electronic open/close button to ensure that the deadbolt opens and closes electronically.

4.6 Final inspection/adjustment prior to enrollment

Note: After installation and prior to using the unit, make sure you read and follow the steps below:

- ① Turn the inside knob to the horizontal position; next turn it to the vertical position (locked position). It should turn freely. If and when the inside and outside locks are attached securely and the inside knob doesn't turn freely, see the trouble shooting table below for possible solution. If the knob turns freely, continue with the next step.
- ② Try to lock and unlock from outside by fully opening and closing the sliding cover.
- ③ Try to lock and unlock from inside by pressing the Open/Close button to ensure it works well electronically.

IMPORTANT SECURITY NOTE: WITHOUT ANY FINGERPRINTS ENROLLED, THE BD1 WILL LOCK AND UNLOCK BY FULLY OPENING AND FULLY CLOSING THE SLIDING COVER.

5. Trouble Shooting

PROBLEMS	POSSIBLE REASONS	SOLUTIONS
Indoor turn knob does not turn or turns very sluggishly	<ol style="list-style-type: none"><li data-bbox="367 284 669 352">1. Incorrect installation<li data-bbox="367 576 669 644">2. Incorrect tailpiece length	<ol style="list-style-type: none"><li data-bbox="703 284 1057 539">1. Make sure the tail piece was inserted vertically through the cross slot of the deadbolt and slot of the indoor unit while the turn knob was vertical (facing down).<li data-bbox="703 576 1057 753">2. Measure the door thickness and swap or trim the tail piece per section 4.3 of the installation manual
Indoor turn knob turns but nothing happens.	<ol style="list-style-type: none"><li data-bbox="367 766 669 906">1. The tail piece did not go through the cross slot of the deadbolt;<li data-bbox="367 1098 669 1278">2. Tail piece was trimmed too short and does not penetrate the slot of the indoor unit;	<ol style="list-style-type: none"><li data-bbox="703 766 1057 1091">1. Remove and reinstall the outdoor unit. Then insert the tail piece through the cross slot of the deadbolt and slot of the indoor unit while the turn knob is in vertical position (facing down).<li data-bbox="703 1134 1057 1315">2. Contact the BD1 dealer that you purchased to lock from OR Contact us at:<u>info@bioaxis.com</u>

<p>The sliding cover is fully lifted to power on without any fingerprint enrolled inside, the deadbolt does not disengage or four alert beeps are heard.</p>	<ol style="list-style-type: none"> 1. Right & left hand door configurations is set incorrectly; 2. The tail piece was not set properly 	<ol style="list-style-type: none"> 1. Correctly configure the unit for left or right hand door swing per section 4.5. 2. Uninstall the outdoor unit and keep the UP sign side of the tail piece up and insert the tail vertically through the cross slot of the deadbolt while the turn knob is in vertical position.
<p>When the sliding cover is fully lifted and immediately put down to engage the deadbolt, but the deadbolt does not fully engage, or four alert beeps are heard.</p>	<ol style="list-style-type: none"> 1. Improper positioning of the strike and strike lining box. It may be deflecting the deadbolt. 	<ol style="list-style-type: none"> 1. Check the position of the strike and the strike lining box.
<p>When the sliding cover is lifted up during daily use, nothing happens (fingerprint scanner does not blink)</p>	<ol style="list-style-type: none"> 1. Batteries not inserted correctly; 2. Wires not connected properly 	<ol style="list-style-type: none"> 1. Remove & reinsert the batteries following “+” and “—“ signs in the battery house. 2. Check the connections and make sure wires are fully plugged in.
<p>Six beeps are heard when any function is performed.</p>	<p>Low Voltage</p>	<p>Change the batteries</p>

Operation Manual

Operation Manual Helpful Hints

(Please read before attempting to program the BD1):

Please be sure to physically leave your door open until you have successfully enrolled the first user (ADMINISTRATOR) into the BD1 and have successfully verified the new user's fingerprint to unlock the door.

With no fingerprints enrolled in the BD1, the deadbolt will engage/disengage when the sliding cover is fully opened and immediately closed.

Definitions of Indication Beeps:

Single, Short Beep – Indicates that **any** operations sequence has begun **OR** that the door has been successfully locked or unlocked **OR** that the sliding cover has been left open for more than ten seconds.

Single, Long Beep – Indicates that programming operation was successful

Short, Double Beep – Indicates that individual fingerprint user deletion sequence has begun.

Long Double Beep – Indicates that Delete All programming was successful

Four Beeps – Indicates unsuccessful enrollment/unsuccessful verification attempt **OR** BD1 was improperly installed (see Installation Guide).

Six, Short Beeps – Low battery alert, change batteries

Common definitions of terms used when using the BD1:

Fingerprint Enrollment:

Process of adding fingerprints to the BD1.

Enrolled Fingerprints:

Fingerprints that have been successfully added into the BD1.

Verifying Fingerprints:

Process of authentication by scanning enrolled fingerprints to:

- A) Unlock the door
- B) Authenticate Administrators enrolled fingerprints to program the BD1.

Before enrolling and verifying fingerprints, make sure to read the following helpful hints for Fingerprint Enrollment and Verification:

Generally, the center of the vortex (swirl) of the fingerprint pattern is the key data point; **ideally, it is placed in the center of the small glass window in a consistent way. Your finger should be flat, motionless and held with light pressure in the same way each time. See the picture below for some guiding drawings.**

Light pressure when placing the finger on the scanner gives the best image, but the finger must not move during scanning.

Moist fingers give better images than dry ones. If on cold, dry days you have difficulty, for example, try moistening your finger with your breath or a little lotion.

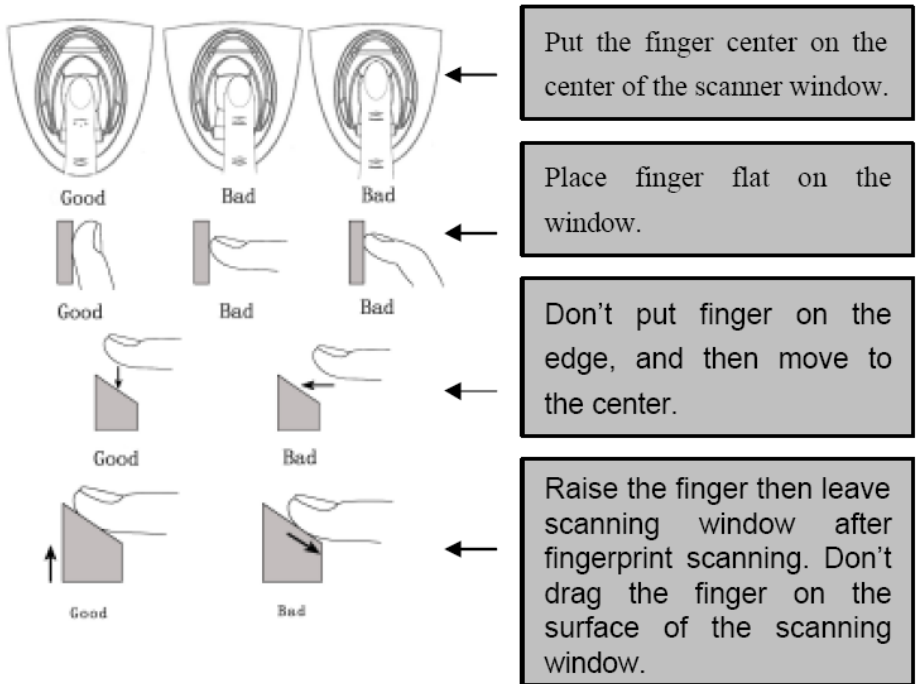
Very dry, dirty or scarred fingers are obviously not recommended, since they will obscure the fingerprint.

The pointer finger is, by far, the best fingerprint to enroll. The thumb is the second best digit.

If the pointer finger is difficult to enroll or verify, try **enrolling the same NON ADMIN fingerprint 2 or 3** times at slightly different angles. *EX: Enroll same pointer finger as users 3, 4 and 5.*

Always wait until the fingerprint scanner **turns on** to place your finger on the scanning window. This is true for both fingerprint enrollment AND verification.

When trying to enroll or verify fingerprints in direct sunlight, be sure to shade the sensor with your shadow, so sunlight will not reflect off of the mirror in the sensor.



Important Programming Notes:

When **Adding** or **Deleting** Fingerprints, the closed sliding cover must be fully lifted within 8 seconds **after** pressing the **ADD** or **DEL** button, or the BD1 will power off. If this occurs, simply **close the sliding cover**, press the **ADD** or **DEL** button again and fully lift the sliding cover immediately to restart the programming sequence.

The first two fingerprint users enrolled will automatically be programmed as **ADMINISTRATORS** (Users 1 and 2). **ADMINISTRATORS** can apply all programming functions as well as verify their fingerprints to unlock the door.

The 3rd thru 30th fingerprint users enrolled (Users 3 thru 30) are automatically programmed at the **USER** level. **USER** level fingerprints can only be used to unlock the door, not to program the lock.

Section I - Enrolling Administrators (First 2 Fingerprint Users):

Sliding cover must be closed before any programming sequence can begin.

As noted in the Helpful Hints section, the first two users that enroll their fingerprints into the BD1 will automatically be programmed as **ADMINISTRATORS** (Users 1 and 2).

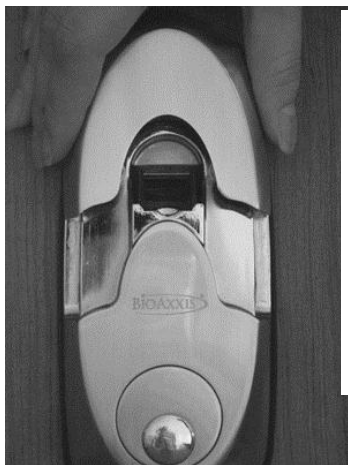
ADMINISTRATORS can apply all programming functions as well as verify their fingerprints to unlock the door.



Please use the following steps to enroll the first fingerprint user (ADMINISTRATOR1/USER 1):

Lock

- Remove the battery cover from the indoor unit
- Press the “**ADD**” button located on the indoor unit
- Single beep will be heard



- Fully open the sliding cover located on the outdoor unit immediately
- Sensor will flicker for less than one second



- A single short beep will be heard and the fingerprint sensor will power on
- After the fingerprint sensor powers on , rest your pointer finger on the sensor window during the first of three scans
- Keep your pointer finger on the scanning window thru all three scans.
- After the scanning is completed you will hear one of the following:
 - **Single, long beep** indicating that the operation was successful

OR

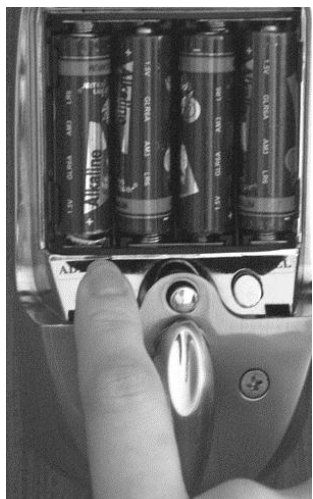
- **Four beeps** indicating that your fingerprint was not successfully enrolled. If you hear four beeps, please start the enrollment process over from the beginning

BD1-XL Biometric DeadBolt

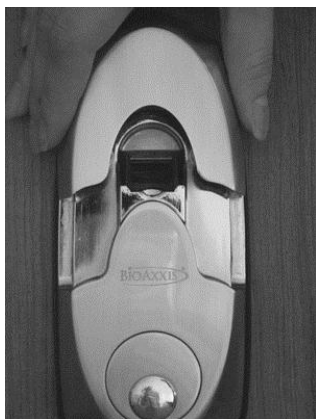


- Close the sliding cover

Please use the following steps to enroll the second fingerprint user (ADMINISTRATOR2 /USER 2):



- Remove the battery cover from the indoor unit
- Press the “ADD” button located on the indoor unit
- Single beep will be heard



- Fully open the sliding cover located on the outdoor unit immediately
- Sensor will flicker for less than one second



- A single short beep will be heard and the fingerprint sensor will power on
- A single short beep will be heard and the fingerprint sensor will power on
- Rest the new **2nd ADMINISTRATOR'S** pointer finger on the sensor window during the first of three scans
- Keep your pointer finger on the scanning window thru all three scans
- After the scanning is completed you will hear one of the following:
 - **Single, long beep** indicating that the operation was successful

OR

- **Four beeps** indicating that your fingerprint was not successfully enrolled. If you hear four beeps, please start the enrollment process over from the beginning

BD1-XL Biometric DeadBolt L



- Close the sliding cover

Section II - Enrolling Fingerprint Users 3 thru 30:

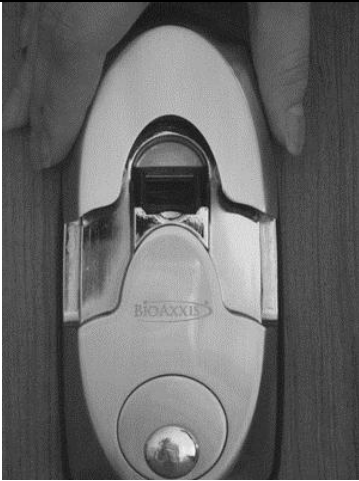
Sliding cover must be closed before any programming sequence can begin.

As noted in the Helpful Hints section, the third thru thirtieth fingerprint users enrolled (Users 3 thru 30) are automatically programmed at the **USER** level. USER level fingerprints can only be used to unlock the door, not to program the lock.

Please use the following steps to enroll additional fingerprint users (Users 3 thru 30):



- Remove the battery cover from the indoor unit
- Press the “**ADD**” button located on the indoor unit
- Single beep will be heard



- Fully open the sliding cover located on the outdoor unit immediately
- Sensor will flicker for less than one second



- A single short beep will be heard and the fingerprint sensor will power on
- After the fingerprint sensor powers on, rest an **ADMINISTRATOR'S** finger on the sensor window to verify that they are an Administrator
- When the first Administrator's fingerprint is successfully **verified**, the sensor will briefly turn off (for less than one second)
- **Immediately** remove the ADMINSTRATOR'S finger



- A single short beep will be heard and the fingerprint sensor will power on
 - Rest the new **user's** pointer finger on the sensor window during the first of three scans
 - Keep your pointer finger on the scanning window thru all three scans.
 - After the scanning is completed you will hear one of the following:
 - **Single, long beep** indicating that the operation was successful
- OR**
- **Four beeps** indicating that your fingerprint was not successfully enrolled. If you hear four beeps, please start the enrollment process over



- Close the sliding cover
- Repeat steps from the beginning of Section II to enroll additional fingerprint users.

Section III – Deleting Individual Fingerprint Users:

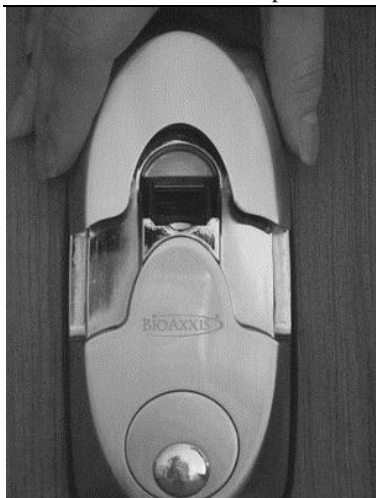
Sliding cover must be closed before any programming sequence can begin.

The Individual Fingerprint User Deletion programming function deletes fingerprint users from the most recent fingerprint user enrolled to the earliest fingerprint user enrolled.

Please use the following steps to delete individual fingerprint users:



- With the battery cover removed, press the “DEL” button located on the indoor unit
- Short, Double Beep will be heard



- Fully open the sliding cover located on the outdoor unit immediately
- Sensor will flicker for less than one second



- A single short beep will be heard and the fingerprint sensor will power on
- **Rest an Administrator's fingerprint** on the scanning window
- When the Administrator's fingerprint is successfully **verified**, a single, long beep will be heard indicating that the most recently enrolled fingerprint user has been deleted
 - If you hear four beeps, this indicates that the verification of the Administrator's fingerprint was not successful. Begin again from the first step of Section III



- Close the sliding cover
- Repeat steps from the beginning of Section III to delete the **next** most recently enrolled fingerprint user.

Section IV – Deleting ALL Fingerprint Users:

Sliding cover must be closed before any programming sequence can begin.

Deleting ALL enrolled fingerprint users will reset the lock and all users (including Administrators fingerprints) will be deleted.

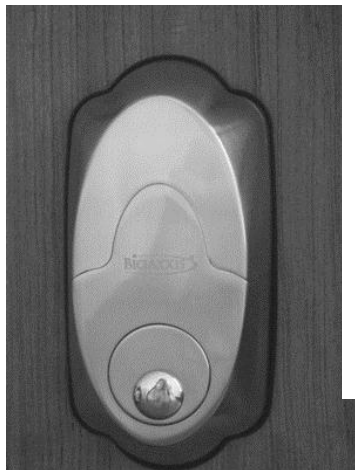
With no fingerprints enrolled in the BD1, the deadbolt will engage/disengage when the sliding cover is fully opened and immediately closed.

Please use the following steps to delete ALL fingerprint users:



- With the battery cover closed, press the “DEL” button and then the “OPEN/CLOSE” button.
- While still pressing the “OPEN/CLOSE” button, rest an Administrator’s fingerprint on the scanning window.
- A single, long beep will be heard.
- Sensor will flicker for less than one second.
- Short beep will be heard and sensor will power on.
- When the Administrator’s fingerprint is successfully **verified**, two long beeps will be heard, indicating that ALL enrolled fingerprint users have been deleted.
- If you hear four beeps, this indicates that the verification of the Administrator’s fingerprint was not successful. Begin again from the first step of Section IV.





- Close the sliding cover

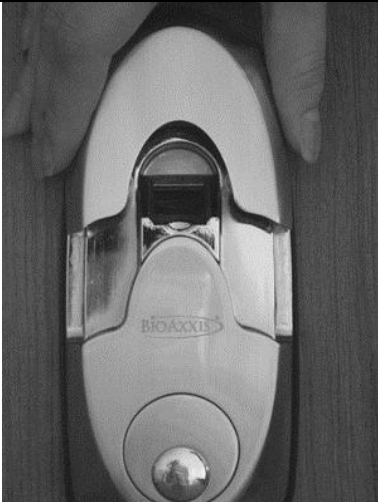
IMPORTANT SECURITY NOTE:

WITHOUT ANY FINGERPRINTS ENROLLED, THE BD1 WILL LOCK AND UNLOCK BY FULLY OPENING AND FULLY CLOSING THE SLIDING COVER.

Section V – Unlocking the BD1 from outside:

In case of emergency, override keys can be used to disengage the deadbolt.

Please use the following steps to unlock the BD1 from outside, with your enrolled fingerprint:



- Fully lift the sliding cover located on the outdoor unit.



- A single short beep will be heard and the fingerprint sensor will power on
- After the fingerprint sensor powers on, rest any **enrolled** fingerprint on the sensor window to verify.
If fingerprint verification is successful, the deadbolt will disengage and a single, short beep will be heard; *If verification of enrolled fingerprint was not successful, then 4 short beeps will be heard. If this happens, the fingerprint scanner will still turn on two additional times enabling users to try more. If all the two additional verification attempts still fail, please start the unlocking process over again, from the beginning of this section.*



- Close the sliding cover

Section VI – Locking the BD1 from Outside:

In case of emergency, override keys can be used to engage the deadbolt.

Please use the following steps to lock the BD1 from outside (when leaving):



- Make sure your door is closed
- Open and immediately close the sliding cover
- Deadbolt will engage and a single, short beep will be heard

Section VII – Locking and Unlocking the BD1 from Inside:

In case of emergency, manual turn knob can be used to disengage the deadbolt.

Please use the following steps to lock and unlock the BD1 from inside:



- Press the "OPEN/CLOSE" button (located between the ADD and DEL buttons)
- Deadbolt will engage/disengage and single, short beep will be heard.

Support:

Contact us at: support@advancedactuators.com for additional support or by phone at 800-408-7101.

USER ENROLLMENT TABLE:

<u>Number</u>	<u>Hand (R or L)</u>	<u>Finger Used</u>	<u>Name</u>

