

Detex Corporation, 302 Detex Drive, New Braunfels, Texas 78130-3045  
 (830)629-2900 / 1-800-729-3839 / Fax (830)620-6711  
 E-MAIL: detex@detex.com INTERNET: www.detex.com

## INSTALLATION INSTRUCTIONS FOR THE EAX-500 EXIT ALARM (EAX-500 / 500W / 500SK)

The Detex EAX-500 is designed for applications that require an alarmed exit device on secured doors. The alarm, with approximately 100dB, will sound when someone attempts an unauthorized exit. The EAX-500, with it's smaller size makes it the choice for quick and easy installations on emergency exit and restricted doors.

### U.S. PATENT NUMBERS:

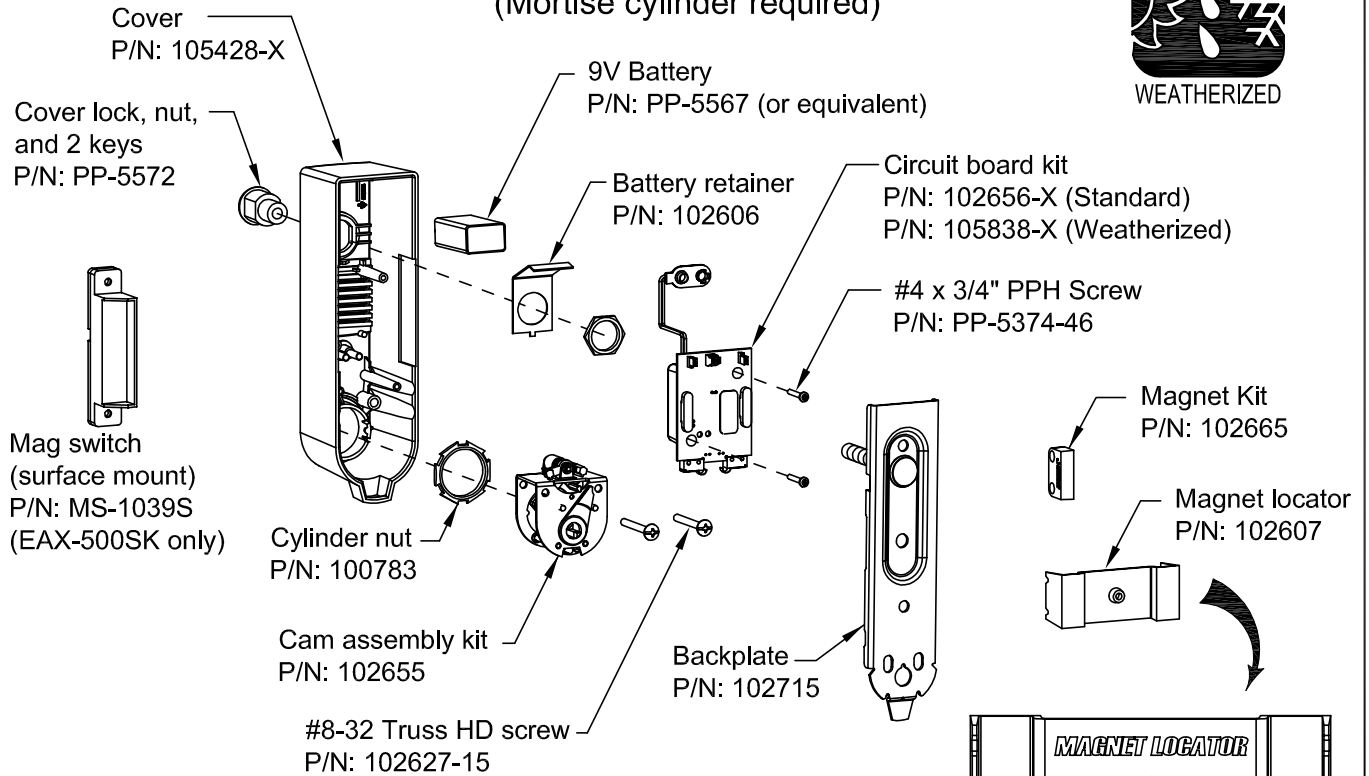
20050257389  
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Drawing # 102600

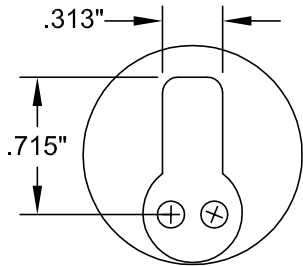
'W' models only



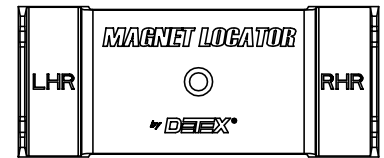
### Parts breakdown depiction (Mortise cylinder required)



**Hardware Kit**  
 P/N: 102633  
 Includes Keystop parts  
 P/Ns:  
 105770-1 (KS)  
 105770-2 (KS2)  
 & screw P/N 101976-1



Mortise Cylinder with standard Yale cam required



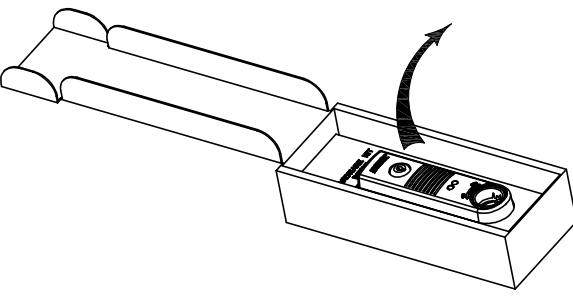
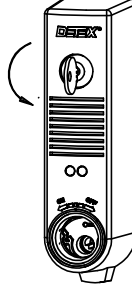
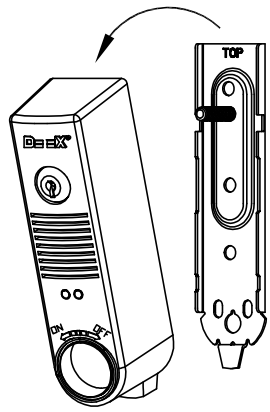
**Locate this component for Step 7**



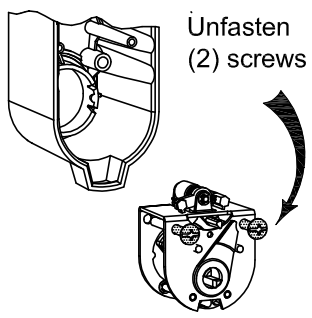
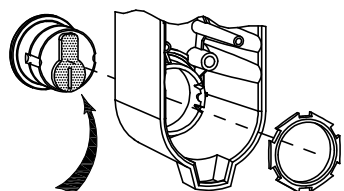
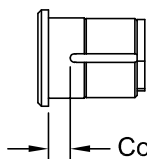
Scan for installation support documents

**NOTE:**  
 Device will vary based on configuration and order options.

# STEP 1: REMOVE COVER FROM BACK-PLATE

<b>1</b> Remove cover from back-plate	REMOVE device from box 	Turn key CCW to UNLOCK cover (Approximately 8 times) 	
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# STEPS 2-6: PREP DEVICE (If Key Stop is required, see OPTIONAL KEY STOP page)

<b>2</b> Remove cam assembly from cover  <p>Unfasten (2) screws</p>	<b>3</b> Install mortise cylinder with cylinder nut provided Mortise cylinder  <p>Cam orientation as shown with key removed</p>	<b>If 7-pin cylinder is used - OBSERVE</b>  <p>Collar required if distance is greater than 5/16". Optional collar can be ordered from Detex (p/n: ECL-1595)</p>
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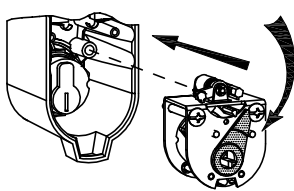
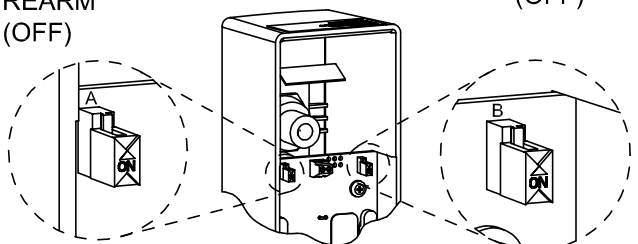
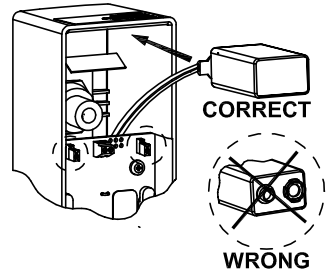
<b>4</b> Re-install cam assembly  <p>Set OKC cam as shown</p>	<b>5</b> Set selector switch functions (See Table A) AUTO REARM (OFF) (Default settings shown) STATUS INDICATOR (OFF) 	<b>6</b> Connect 9-volt battery and install as shown  <p>CORRECT</p> <p>WRONG</p>
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Table A: Selector Switch Functions		
(*Default settings; **Will shorten battery life)		
<b>STATUS INDICATOR</b> (Switch B)	OFF*	No indication that device is armed or disarmed.
	ON	ARMED - red LED blinks approximately every 3 seconds.** DISARMED - green LED blinks approximately every 3 seconds.**
<b>AUTO REARM</b> (Switch A)	OFF*	Key required to reset the alarm after it has been activated. Extended Bypass (see OPERATIONS page)
	ON	Alarm will automatically rearm 2 minutes after alarm has been activated and door closed. Custom settings can be programmed by DETEX. Non-Extended (Timed) Bypass (see OPERATIONS page)

# STEP 7: For Door Mounting

## DOOR PREP & BACKPLATE / MAGNET MOUNTING

Mark/drill backplate and magnet holes on door and frame/mullion

Install magnet, backplate and cover

NOTE: Remove locator and backplate prior to drilling mounting holes

**Backplate**

Drill #7 for #1/4-20 machine screws  
Drill 7/32" or 3/16" for #14 sheetmetal screws

**Magnet**

Drill #43 for #4-40 machine screws  
Drill #44 for #4 sheetmetal screws

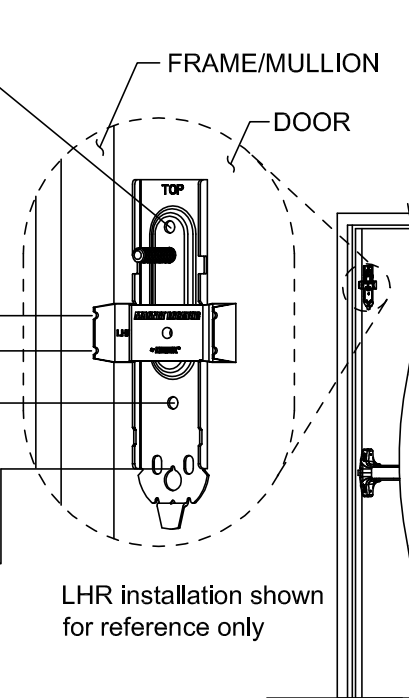
**Backplate**

Drill #7 for #1/4-20 machine screws  
Drill 7/32" or 3/16" for #14 sheetmetal screws

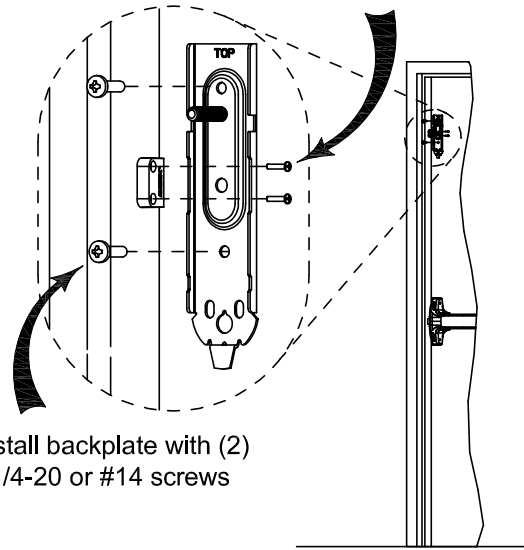
**OKC**

Where applicable, mark TOP hole center & drill 1/4" dia. pilot hole through door  
See OKC INSTALLATION

LHR installation shown for reference only



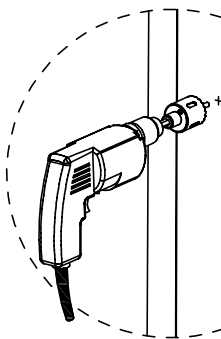
Install magnet with (2) #4-40 or #4 screws



Install backplate with (2) #1/4-20 or #14 screws

Skip to Step 9 to continue non SK installation

### Outside Key Control (OKC) Installation (if required) (all models except SK)



**IMPORTANT!**

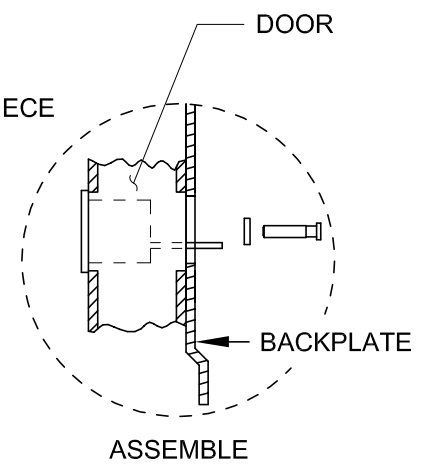
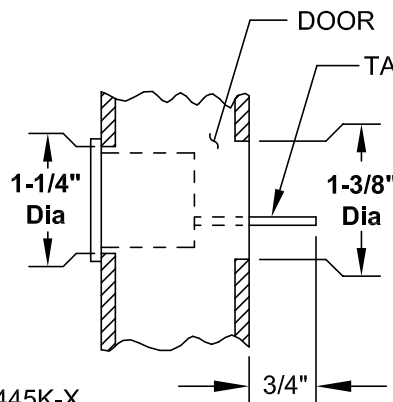
**Cylinder Side:**

Drill 1-1/4" hole through outside door face

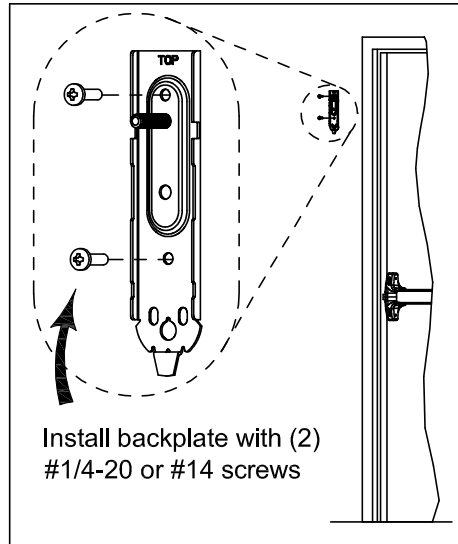
**Device Side:**

Drill 1-3/8" hole through inside door face

Rim cylinder - Detex P/N: ECL-445K-X



# STEP 7: (continued) For SK models (wall mounting) BACKPLATE MOUNTING

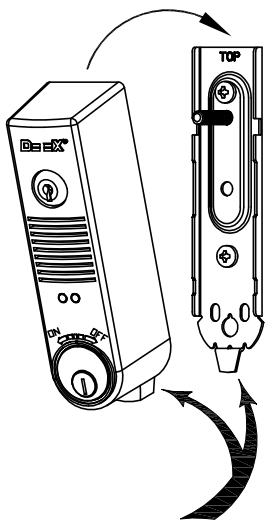


## STEP 8: Multi-door & SK function wiring connection (if required) (Recommended installation)

<b>NOT FOR USE ON EAX-500W</b>		
<p><b>8a</b> Remove board</p> <p>Remove (2) screws</p>	<p><b>8b</b> Recommended hole size</p> <p>Drill 7/8 dia, (1) place</p>	<p><b>8c</b></p> <p>Reassembly: Fitting or nut NOT included P/N PP-5107 1/2 connector</p>
<p><b>8d</b></p> <p>Screw wires to (P1) terminal block (18ga Max wire dia) (not available on weatherized)</p> <p>Disconnect power &amp; cut (JP1) jumper (see note 3 below)</p> <p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li>1. If wire runs longer than 10 feet, must use twisted pair</li> <li>2. 1/16" slotted jeweler screwdriver required.</li> </ol>	<p>Diagram shown typical for two door magnetic switches: MS-1039S &amp; MS-1059S wire in series. MS-2049 (Red wire not used) Weatherized not available for SK installations</p> <p>Closed contact when door is closed</p> <p>Common Closed Mag Switch 1 Common Closed Mag Switch 2 Terminal</p>	

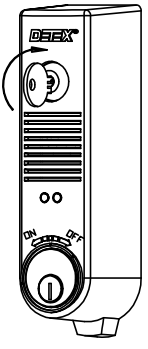
## STEP 9: INSTALL DEVICE

Install device onto backplate



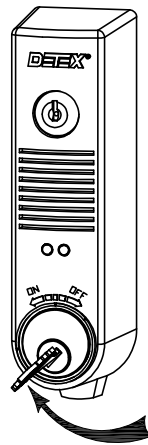
Hook at bottom, then tilt cover over backplate

Turn key CW to lock cover  
**CAUTION:**  
Do not over tighten



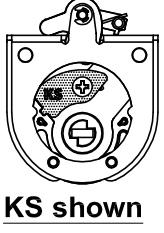
## OPTIONAL KEY STOP INSTALLATION

(If required, key stop included in hardware kit)

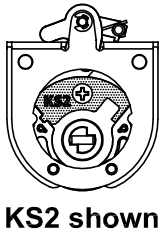


Install key stop

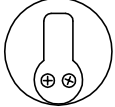
Rotate key to this position before reinstalling cam assembly



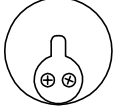
**KS shown**



**KS2 shown**



KS used with standard Yale style cam




KS2 used with Adams Rite small style cam


### Front View (KEY STOP POSITIONS)

"ON" position (Key can be removed)

"OFF" position (Key cannot be removed)



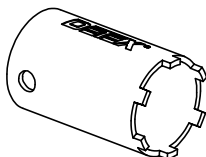
Key and cams shown in 90° stop "ON" position



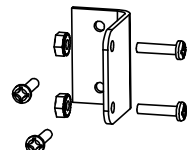
Key and cams shown in "OFF" position

## Optional Accessories

Cylinder Nut Tool  
P/N: 103779



Inswing Door Kit  
P/N: 102644



## SPECIAL NOTES and DEFINITIONS:

1. The door needs to be closed to test the unit.
2. When operating the ON/OFF switch, there is a slight delay.
3. The key is inserted and removed only in the vertical position (home position).
4. Key function: counter clockwise (CCW) = Armed; clockwise (CW) = Disarmed
5. Outside Key Control (OKC)

The bottom left hand switch is only used when the outside key control function is used. This allows entry from outside. It bypasses the alarm & rearms in 15 seconds after the door closes. The OKC will not arm or completely disarm the alarm as the inside key does. When in Extended Bypass mode (Switch A, OFF) the unit will not rearm until 15 seconds after the door closes. The door can remain open if desired. When in the Timed Bypass mode (Switch A, ON) the unit will arm after 15 seconds & go into alarm if the door remains open.

**MAGNET HANDING/RE-HANDING PROCEDURE:** Magnet handing is where the device determines if the left, right or an external reed switch will be used to indicate if the door is opened or closed. When the battery is initially installed, the device simultaneously flashes the LEDs and chirps the siren a total of five times.

This indicates that the device is in the magnet handing process:

Step 1: Turn the key CW to the 'OFF' position.

Step 2: If re-handing is necessary, remove the unit from the door and momentarily short the *Mag Rst* (or *Test*) jumper contacts. The device simultaneously flashes the LEDs and chirps the siren a total of five times.

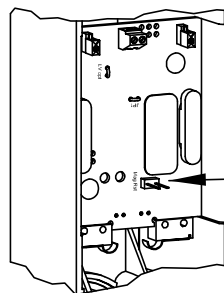
Step 3: With the door open, install the device on the door.

Step 4: Turn the key CCW to the 'ON' position. The red LED blinks twice.

Step 5: Close the door or bring the external magnet into position with the external door switch.

The siren chirps and the LED flashes on the selected side of the device (red LED flashes for the left side or external; green LED flashes for right side).

The device will now operate normally, and the selected reed switch side is stored in memory so changing the battery does not require re-handing.



*Mag Rst* (or *Test*)  
jumper contacts.

**OPERATIONS:** To arm the system, close the door and turn the key CCW to the 'ON' position.

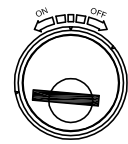
The red LED will blink twice followed by the green LED flashing for the remainder of the arming time (default 15 seconds). After the arming time, the green light will turn off and the siren chirps/red LED flashes three times. The device is now armed and if the door is opened the alarm will sound and the red LED turns on.

**DISARMING:** To turn off the alarm or disarm the system, turn the key CW to the 2 o'clock position.

**AUTO REARM:** With Switch A 'ON', alarm shuts off two minutes after closing the door.

**EXTENDED/NON-EXTENDED (TIMED) BYPASS:** With Switch A in the 'OFF' position, the unit operates in the extended bypass mode. This mode prevents the unit from arming while the door is open. Conversely, with Switch A in the 'ON' position, the unit operates in the non-extended (timed) bypass mode. This mode allows the unit to arm regardless of the doors position. If the door is not closed at the end of the arming delay, the unit will go into alarm.

Key orientation  
*without* Key Stop  
installed



"ON"  
position



"OFF"  
position

Key orientation  
*with* Key Stop  
installed



"ON"  
position



"OFF"  
position

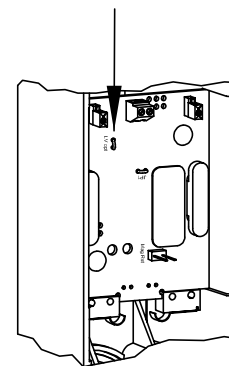
**LOW BATTERY ALERT:** Simultaneous siren chirps and red LED flashes occur at 45 second intervals when the battery reaches approximately 7 volts. Cut LV Opt jumper if low battery alert is not desired.

LV Opt jumper  
(under Switch A)

**STATUS INDICATOR:** With the Status Indicator switch (Switch B) 'ON', red LED flashes every three seconds when armed; green LED flashes every three seconds when disarmed.

**ACTIVATE / DEACTIVATE SILENT ARMING:** *NOTE: Device must be magnet handed.*

1. Turn the key CW to disarm and remove the unit from the door if installed.
2. Remove the battery.
3. Turn the key CCW to the 'ON' position. Hold the OKC switch lever (see Step 3) closed and install the battery. The unit chirps twice when silent arming is turned 'ON', and chirps once when silent arming is turned 'OFF'.
4. Release the OKC lever and turn the key CW. Reinstall the unit on the door.



## TROUBLESHOOTING

Problem	Probable Cause	Action
Device is not powering up.	Battery is dead.	Replace battery.
Device not arming.	<ol style="list-style-type: none"> <li>1) Needs to be rehand.</li> <li>2) Cylinder microswitch lever broken.</li> <li>3) Cylinder installed incorrectly.</li> <li>4) Magnet not aligned correctly.</li> </ol>	<ol style="list-style-type: none"> <li>1) Rehand</li> <li>2) Microswitch needs to be replaced. Remove PCB and return to Detex repair.</li> <li>3) Check cylinder installation. Make sure key is turned counter-clockwise all the way to ON.</li> <li>4) Use magnet locator to install magnet. See magnet handing.</li> </ol>
Chirp every 45 seconds	Low Battery.	Install new battery.
No status indicator	Status indicator (Switch B) is OFF.	Slide Status Indicator (Switch B) slide switch to the ON position.
Unit is not Auto Rearming	Switch A is OFF.	Slide Switch A slide switch to the ON position.
External magnet not working	<ol style="list-style-type: none"> <li>1) Device is not set for external magnet.</li> <li>2) MS-2049 not wired correctly. Red wire not used.</li> </ol>	<ol style="list-style-type: none"> <li>1) Remove battery, cut JP1 jumper. With battery connected, short "Test mode" pins, listen for 5 chirps. See RE-HANDING section.</li> <li>2) Use MS-2049 black and white wires to green connector on PCB.</li> </ol>
One side does not work.	Unit is handed on the wrong side.	See RE-HANDING section.
The alarm sounds after the time delay	<ol style="list-style-type: none"> <li>1) Door not closed.</li> <li>2) magnet not aligned.</li> </ol>	<ol style="list-style-type: none"> <li>1) Close door and rearm the alarm.</li> <li>2) Use magnet locator to install magnet. Shim as needed. Adjust as necessary.</li> </ol>
Chirps 5 times when battery is plugged in.	Device needs to be handed.	See magnet handing procedure