

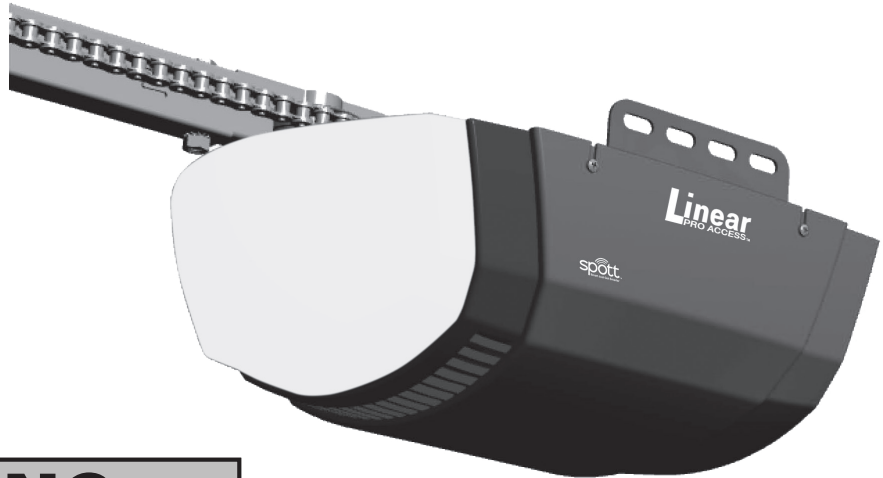
Linear®

LDCO850

Smart Wi-Fi Garage Door Opener
DC motor with LED lighting and belt- or chain-drive rail

Homeowner's Manual

Installer's Contact Information:



⚠ WARNING

To reduce the risk of injury to persons – Use this opener only with sectional residential overhead doors. Do not use on one piece or swing doors.

- Please read this manual and included safety information carefully.
- After the opener is installed and working properly, use your smart phone to download, and activate the Linear PRO Access Smart Control app (page 10).

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IMPORTANT SAFETY INFORMATION

Important Safety Information will follow the words CAUTION and WARNING which are used to emphasize potentially hazardous situations.

CAUTION

This type of warning note is used to indicate the possibility of damage to the garage door or garage door opener.

WARNING

This type of warning note is used to indicate possible mechanical hazards that may cause serious injuries or death.

WARNING

Children operating or playing with a garage door opener can injure themselves or others. The garage door could cause serious injury or death. Do not allow children to operate the remote control(s) or the wall station. Install the wall station out of reach of children and away from all moving parts of the door. The door must be clearly visible from the wall station. A moving garage door could injure someone under it. Only activate the door when it is properly adjusted, when it can be seen clearly, and when there are no obstructions to the door travel.

WARNING

IMPORTANT SAFETY INSTRUCTIONS


Garage doors are large and heavy objects that move with the help of springs under high tension and electric motors. Since moving objects, springs under tension, and electric motors can cause injuries, your safety and the safety of others depends on you reading the information in this installation manual. If you have questions or do not understand the information presented, call Linear PRO Access Technical Support at 1-800-543-1236.

TO REDUCE THE RISK OF SEVERE INJURY OR DEATH TO PERSONS, REVIEW THESE INSTALLATION SAFETY STEPS BEFORE PROCEEDING


- 1 READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS.
- 2 Never let children operate or play with door controls. Keep the remote control away from children.
- 3 Always keep the moving door in sight and away from people and objects until it is completely closed. NO ONE SHOULD CROSS THE PATH OF THE MOVING DOOR.
- 4 NEVER GO UNDER A STOPPED, PARTIALLY OPEN DOOR.
- 5 Test the door monthly. The garage door MUST reverse on contact with a 1-1/2 inch high object (ir 2 x 4 board laid flat) on the floor. After adjusting either the force or the limit of travel, retest the door opener. Failure to adjust the opener properly increases the risk of severe injury or death.
- 6 For products having an emergency release, when possible, use the emergency release only when door is closed. Use caution when using this release with the door open. Weak or broken springs are capable of increasing the rate of door closure and increasing the risk of severe injury or death.
- 7 KEEP GARAGE DOORS PROPERLY BALANCED. See user's manual. An improperly balanced door increases the risk of severe injury or death. Have a qualified service person make repairs to cables, spring assemblies, and other hardware.
- 8 For operator systems equipped with an unattended operation feature, the following statement shall be included: "This operator system is equipped with and unattended operation feature. The door could move unexpectedly. NO ONE SHOULD CROSS THE PATH OF THE MOVING DOOR".
- 9 **SAVE THESE INSTRUCTIONS.**

USING THE GARAGE DOOR OPERATOR


Opening the Door

- 1 **With the door in view**, press the wall station's UP/DOWN ARROW button, the button assigned to the opener on the remote control, or enter a valid access code and press  on a wireless keypad.
- 2 When the opener is activated, the opener's light will turn on and the door will begin to open.
- 3 The door will open until the open limit is reached. If an obstacle is encountered while the door is opening, opener's light flashes four times and the door will stop.
- 4 The opener's light will stay on for about five minutes after the door stops.

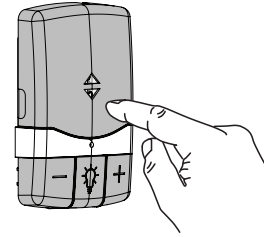
Closing the Door

- 1 With the door in view, press the wall station's button or the button assigned to the opener on the remote control, or enter a valid access code and press  on a wireless keypad.
- 2 When the opener is activated, the opener's light will turn on and the door will begin to close.
- 3 The door will close until the close limit is reached. If an obstacle is encountered, the door will stop and reverse to open and the opener's light flash four times. If the safety beam is interrupted during closing, the door will stop and reverse to open and the opener's light will flash three times.
- 4 The opener's light will stay on for about five minutes after the door stops.

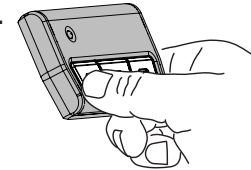
Stopping the Door Mid-travel


- 1 The door can be stopped immediately at any time by pressing the wall station's UP/DOWN ARROW button, the remote control's push button, or press the  button on a wireless keypad (if the wireless keypad was used to start the door).
- 2 The next time the opener is activated, the door will move in the opposite direction.

WALL STATION
PRESS THE
UP/DOWN ARROW



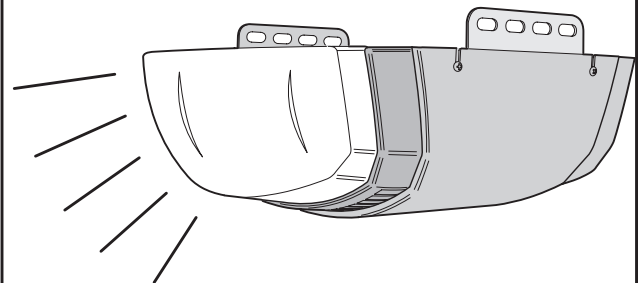
REMOTE CONTROL
PRESS THE BUTTON
PROGRAMMED FOR
SPECIFIC DOOR



WIRELESS KEYPAD
ENTER AN ACCESS
CODE AND PRESS
THE  KEY



WHEN OPENER IS ACTIVATED LIGHT WILL
REMAIN ON FOR ABOUT 5 MINUTES



LIGHT FLASHES FOUR (4) TIMES AND
OPENER STOPS IF DOOR TRAVEL
IS OBSTRUCTED WHILE OPENING

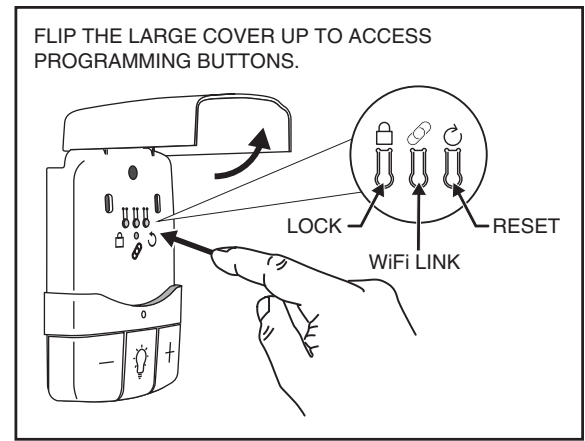
LIGHT FLASHES THREE (3) TIMES,
OPENER STOPS AND OPENS IF
PHOTO BEAM IS INTERRUPTED OR
DOOR TRAVEL IS OBSTRUCTED
WHILE CLOSING

Vacation Lock for Additional Security

- 1 Open the wall station's cover to access the Programming Buttons. Press the LOCK (🔒) button to prevent remote controls from opening the door after the door is completely closed. When the Vacation Lock is activated, the remote controls can close the door, but not open it. The door can still be opened or closed by using the wall station's UP/DOWN ARROW pushbutton.

NOTE: To signal that the vacation switch is locked, the opener's light will flash and the alarm will sound five times if a remote control is activated in an attempt to open the door.

- 2 Press the wall station's LOCK (🔒) button again to unlock and return the operator to normal operation.



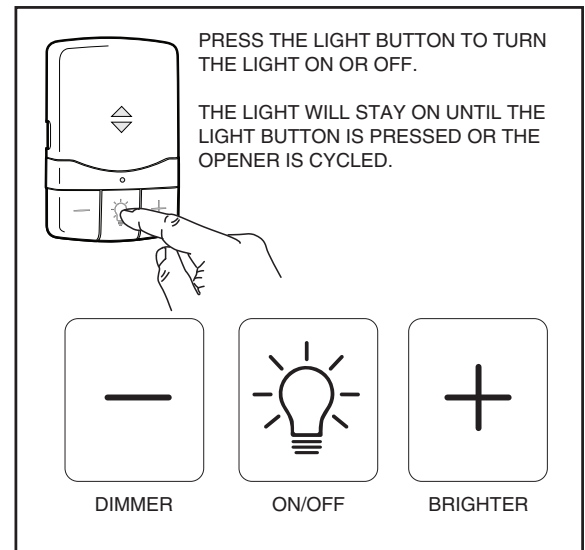
Wall Station Reset

If you change your home router or password you will need to RESET your Wall Station.

- 1 To do a Wall Station RESET press the WiFi Link (🔗) button for 10 seconds, the RED LED blinks and then turns solid RED. The Wall Station is now ready to re-link to a new or updated home router.
- 2 To re-boot the Wall Station for software updates, press the RESET (🔄) button.

Controlling the Opener's Light

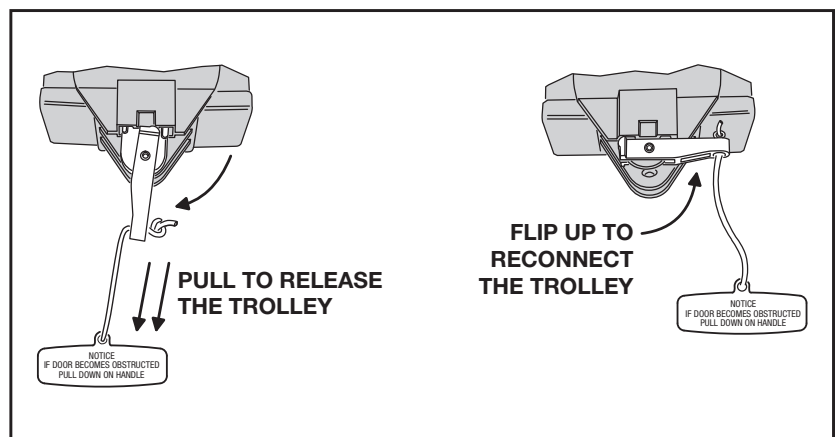
- 1 The opener's light can be turned ON by pushing the wall station's on/off (💡) button. The light will stay on until the button is pressed again or the opener is cycled.
- 2 To DECREASE the light brightness press the dimmer (-) button.
- 3 To INCREASE the light brightness press the brighter (+) button.



MANUAL DISCONNECT

Disconnecting the Door from the Opener

- 1 With the door in any position (preferably closed), carefully pull the red release handle. USE CAUTION IF THE DOOR IS OPEN, THE DOOR MAY DROP.
- 2 The disconnected door can be opened or closed manually.
- 3 To reconnect the opener, flip the release lever up. Raise or lower the door manually until the opener reconnects.



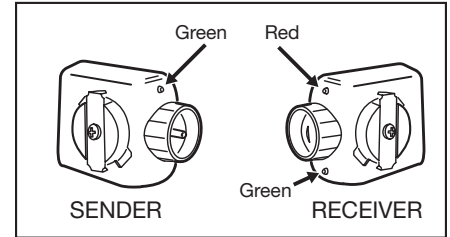
TESTING THE SAFETY BEAM

WARNING

- Photo beams **MUST** be installed on the garage door to prevent serious injury or death.
- This required safety reversing sensor **MUST NOT** be disabled at any time.
- Photo beams should be installed no higher than 6" above the floor.

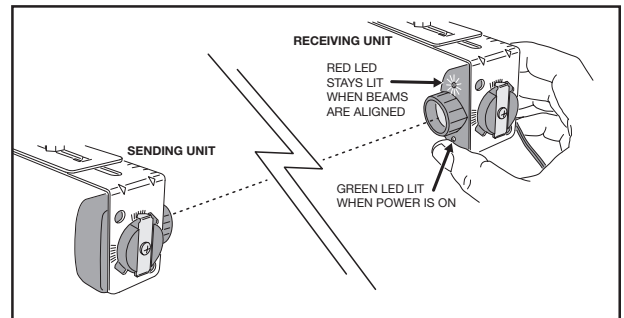
The safety beam has two components, a sender and a receiver. The sender produces a narrow infrared beam that travels across the bottom of the door opening to the infrared receiver. If an object blocks the infrared beam while the door is closing, the door will stop, then reverse and fully open (the opener's light will flash three times).

As a safety feature, the opener will ignore signals from all remote controls if the door is open and the infrared safety beam is blocked or out of alignment. In this case, the door can be forced closed by pressing and holding the wall station's up/down arrow pushbutton (be sure the door area is in clear view).



Safety Beam Test

- 1 Check that the opener has power. The green lights on the sender and receiver should be lit.
- 2 If the receiver's green light is on, but the red light is off, the receiver has power but is not detecting the infrared beam from the sender. The red light might flash when the beam is partially detected. This can be caused by mis-alignment or something blocking the beam. Adjust the safety beam sender and receiver while watching the receiver's red light (stay out of the beam while aligning it). When the red light stays on, rotate the sender towards the ceiling and stop when the red light on the receiver begins to flicker. Rotate the sender back towards a horizontal position with the floor and stop as soon as the red light on the receiver lights solid. The beam is now properly aligned.



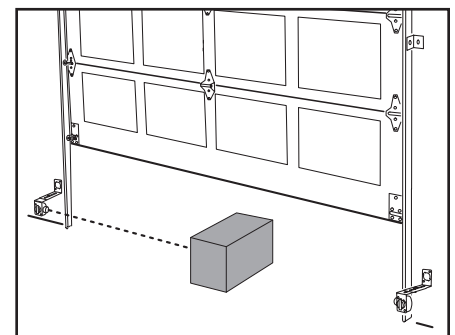
SAFETY BEAM INDICATOR TABLE

GREEN ON	POWER ON
GREEN OFF	POWER OFF
RED ON	BEAM OK - NO BLOCKAGE
RED OFF	BEAM BLOCKED OR MIS-ALIGNED
RED FLASHING	BEAM ALIGNED POORLY

NOTE: If the receiver's red light remains off, check for: 1) Dirt on the receiver's lens, 2) Sunlight shining into the receiver's lens, 3) A short in the safety beam wiring (from staples or at the opener terminals).

- 3 • Press the remote control button to open the garage door.
 - Place a box in the path of the safety beams.
 - Press the remote control button to close the door. The door will not move and the opener's lights will flash and beep.
- 4 The garage door operator will not close if the beams are misaligned or obstructed.

NOTE: If the door remains idle for 5 minutes, the beam light will turn off to save power. The beam power turns on for 5 minutes when door moves down to the fully closed position. The beam power can be restored for 5 minutes by pressing the light button.



IMPORTANT: If the garage door closes when the safety beam is obstructed, call a professional garage door technician.

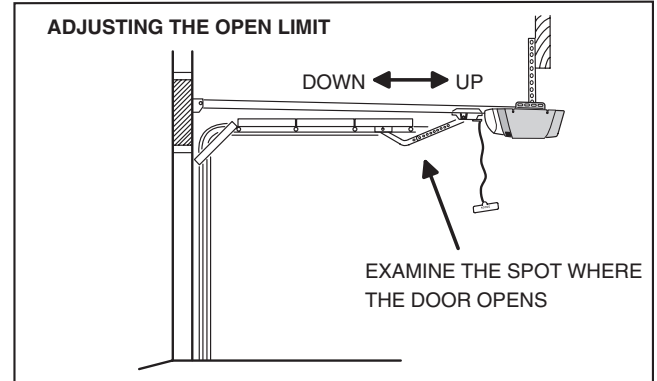
ADJUSTING THE OPEN AND CLOSE LIMITS

The limit settings control how far the door will open or close. The limits should be set so the door opens even with door opening, and closes at the floor level.

If required, use the following steps to adjust the limits. After beginning to adjust the limits, if no buttons are pressed for one minute, the opener will return to normal operation.

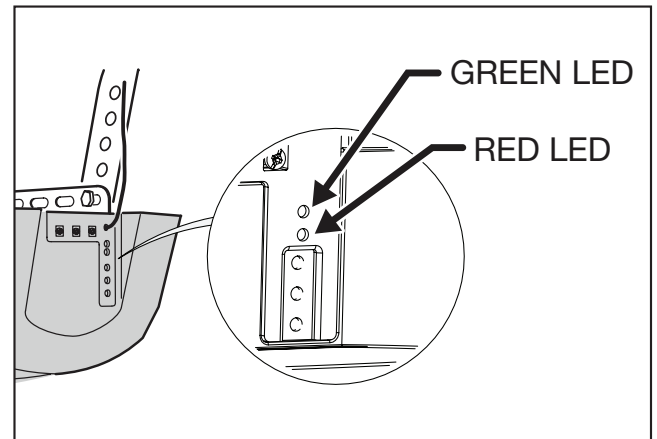
Adjusting the Open Limit

- 1 Use the wall station or a remote control to move the door to the open limit position.
- 2 On the back of the opener, press both the UP and LEARN buttons for three seconds. The green indicator and opener's light will flash twice then stay on.
- 3 Use the UP and DOWN buttons to jog the door at slow speed to fine-tune the open limit position.
- 4 When the door is at the proper open limit position, press the LEARN button to store the setting and exit setup. The green indicator and the opener's light will flash two times.

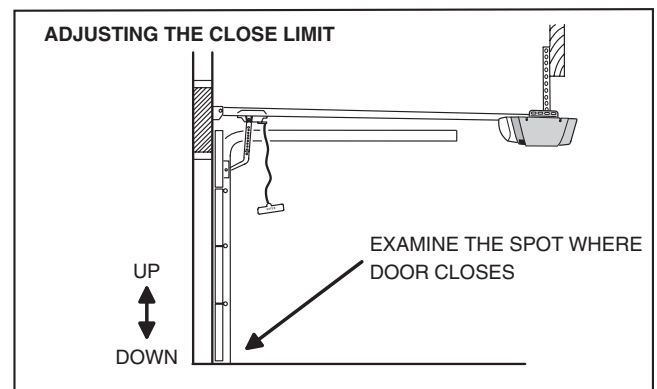


Adjusting the Close Limit

- 1 Use the wall station or a remote control to move the door to the close limit position.
- 2 On the back of the opener, press both the DOWN and LEARN buttons for three seconds until red indicator and opener's light will flash twice then stay on.
- 3 Use the UP and DOWN buttons to move the door at slow speed to fine-tune the close limit position.
- 4 When the door is at the proper close limit position, press the LEARN button to store the setting and exit setup. The red indicator and the opener's light will flash two times.



NOTE: If the opener is field reset, both the open and close limits must be adjusted and the automatic door force setup must be completed for proper operation.

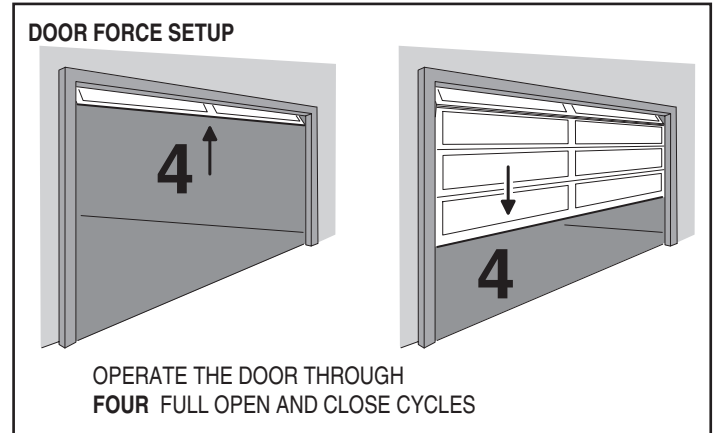


AUTOMATIC DOOR FORCE SETUP – normally not used

The opener automatically measures the door force throughout the entire travel of the door each time the opener cycles. The opener will automatically adjust to changing door hardware conditions over time due to weather and wear. Your installer has used these steps during setup of the opener. You can also perform these steps at any time.

Automatic Door Force Setup

- 1 Be sure that the trolley latch is up and the door is connected to the opener.
- 2 Operate the door through **four (4)** complete open and close cycles.

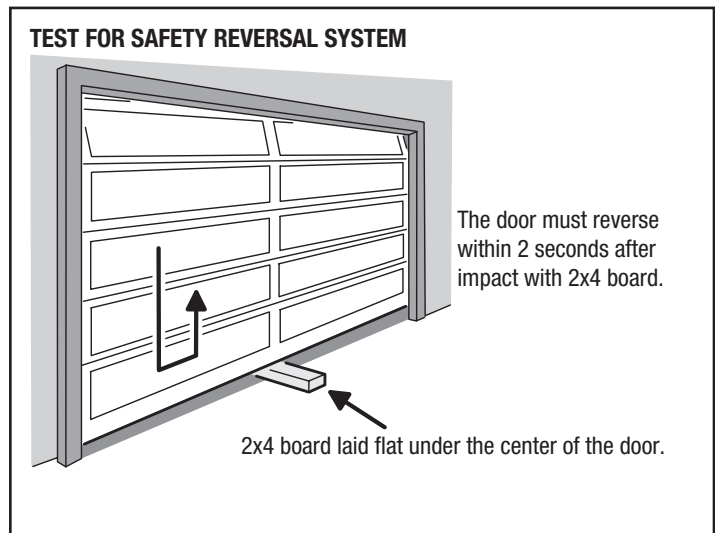


SAFETY REVERSAL SYSTEM TEST

The opener determines that there is an obstruction if a higher than expected amount of force is detected during a door cycle. If an obstruction is encountered during a closing cycle, the opener and door will stop then fully open. If an obstruction is encountered during an opening cycle, the opener and door will stop.

Safety Reversal System Test

- 1 Lay a 2 x 4 board flat on the floor where it will be struck by the center of the door as it closes.
- 2 Verify that the door reverses when it strikes the board. The door must reverse within two seconds after striking the board.



PROGRAMMING REMOTE CONTROLS

The opener is supplied with a three-button remote control (the second and third buttons can be used to control an additional openers or gates). Additional single and multi-button remote controls can be purchased. The short wire on the back of the opener serves as an antenna for the remote controls. Do not cut off the wire or the remote controls will not operate well.

To Add or Remove a Remote Control

- 1 Press the opener's LEARN button. The opener's light and red light will flash once and turn on for about 15 seconds. A remote control must be added or removed while the red light is still on.
- 2 Press the remote control button you want to program. The opener's light and the red light will flash once if a remote control was added, or the opener's light and the red light will flash four times if a remote control was removed.
- 3 Repeat Steps 1 & 2 for any additional remote control controls.

To Remove All Remote Controls

CAUTION: This will remove ALL transmitters and keypad codes from the operators memory.

- 1 Press and hold the opener's LEARN button for ten seconds or more.
- 2 Release the LEARN button. The red light and opener's light will blink three times signaling that all of the remote controls in the opener's memory were erased. The red light will turn off, then turn on for 15 seconds. A remote control can be entered during this time using the steps above.

Testing

- 1 Before testing the remote control, straighten out the opener's antenna wire so it points up.
- 2 Stand clear of the door, press the remote control's button and verify that the opener starts. PRESS THE REMOTE CONTROL'S BUTTON AGAIN TO STOP THE DOOR MID-TRAVEL.

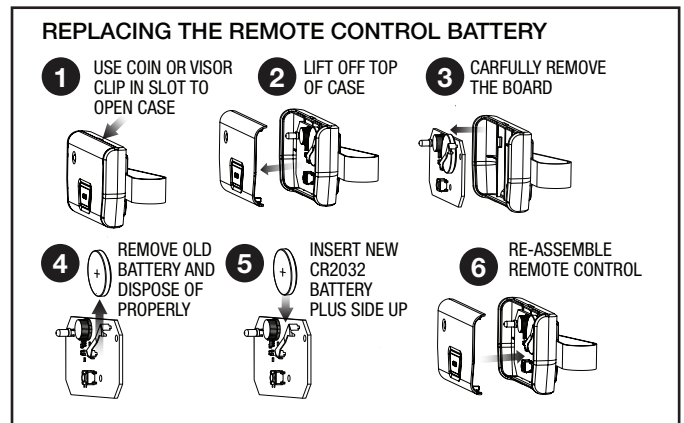
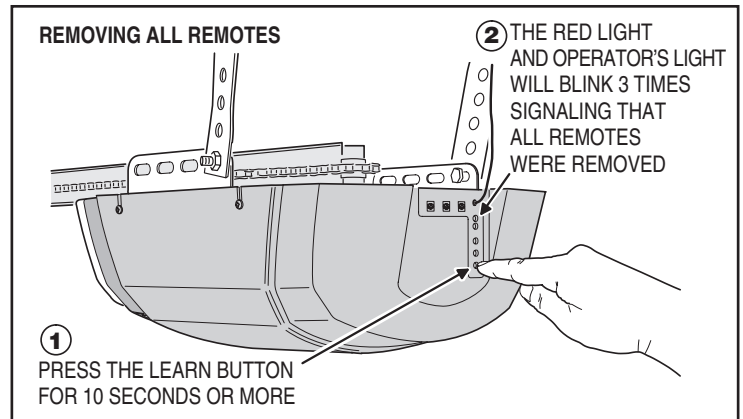
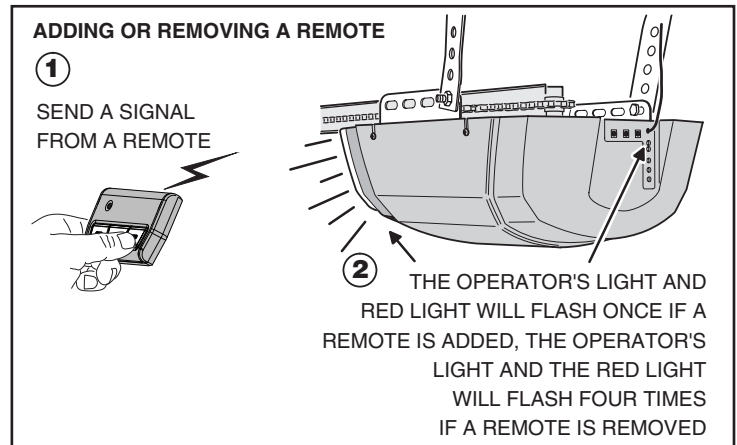
Replacing a Remote Control's Battery

When the red light on the remote control glows dimly, or fails to light at all when the remote control is activated, the battery needs replacing.

Follow the steps in the diagram and use caution to keep batteries away from children.

Replace old battery with a fresh CR2032 Lithium battery. Properly dispose of old batteries. Many electronic stores and supermarkets have battery recycling bins.

Never dispose of batteries in fire because they could explode.




PROGRAMMING WIRELESS KEYPAD CODES

The optional wireless keypad is designed for use with automatic garage door and gate openers.

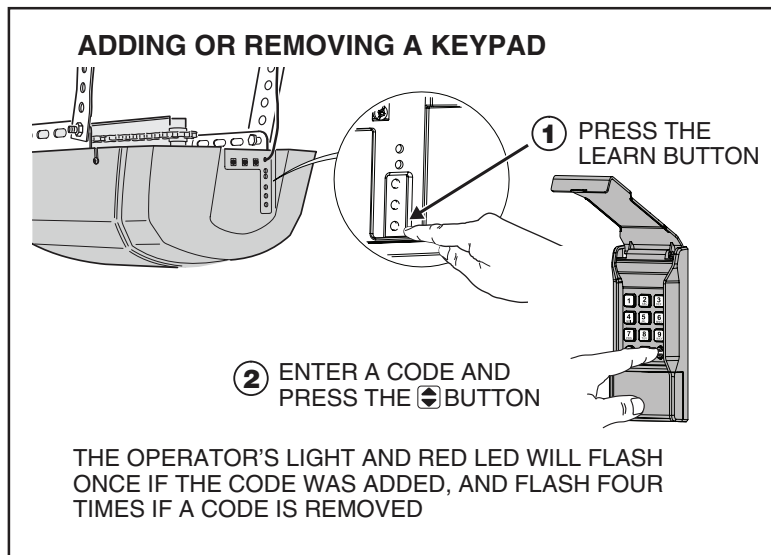
To Add or Remove a Wireless Keypad Code

1 Press the opener's LEARN button. The opener's light and red light will flash once and turn on for about 15 seconds. A wireless keypad code must be added or removed while the red light is still on.

2 While the RED LED is lit, enter a 1-6 digit code into the keypad. Press and hold the keypad's  button until the opener beeps and the light blinks once.

The opener's light and the red light will flash once if a keypad code was added, or the opener's light and the red light will flash four times if a keypad code was removed.

3 Repeat Steps 1 & 2 for any additional codes.



Replacing the Keypad's Batteries

Follow the steps in the diagram and use caution to keep batteries away from children.

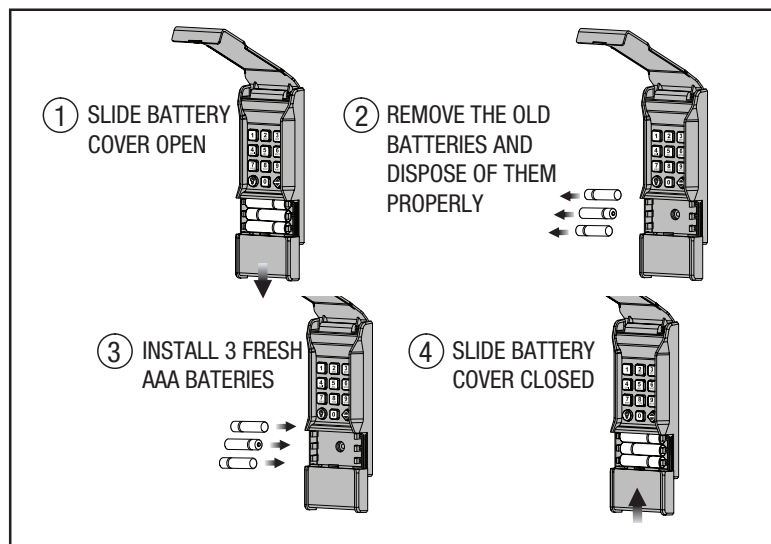
Replace old batteries with fresh AAA Alkaline batteries.

Properly dispose of old batteries.

Many electronic stores and supermarkets have battery recycling bins.

Alkaline batteries can be safely disposed of with normal household waste.

Never dispose of batteries in fire because they could explode.



WARNING

KEEP BATTERIES OUT REACH OF CHILDREN. Swallowing batteries can lead to serious injury or death. If you suspect someone has swallowed a battery, go to the hospital immediately. Do not induce vomiting or eat or drink anything.

For more information, call the National Battery Ingestion Hotline: 202-625-3333.

SETTING UP THE WALL STATION

This Wall Station allows operation of the light and door using the buttons, but it does much more when paired with our Android or iOS application. It can operate your garage door, control lights and inform you of people coming and going, all while you are on the go.

Requirements

To use the Wall Station with the app you will need:

- a Wi-Fi network with internet connectivity,
- a strong Wi-Fi signal in the garage where you are installing the Wall Station and
- an Android or iOS phone.

Test Wi-Fi Signal Strength with Your Smart Phone

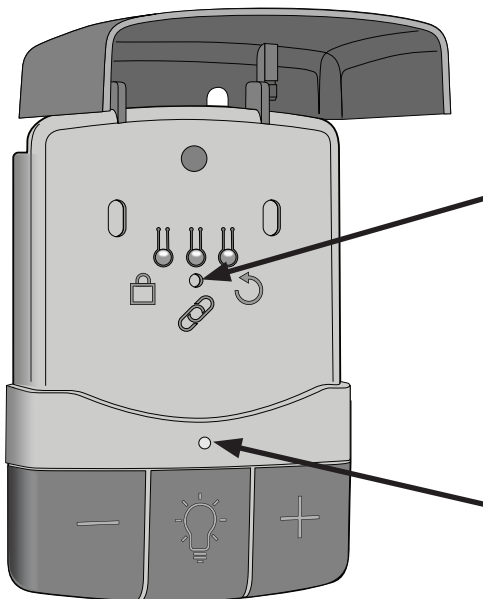
It is paramount that the Wall Station receives strong signal from your home's Wi-Fi router.

If you have 2 or 3 bars on your phone from the Wi-Fi network, the signal is strong and you can proceed. If not, use one of these options to extend your Wi-Fi network's range.

- Move your Wi-Fi router closer to the garage.
- Purchase a Wi-Fi range extender.



LEDs on the Wall Station



The Wall Station has two LEDs that convey information at a glance.

The top LED provides information on the vacation mode.

Vacation Mode LED	
ON	Normal operation
FLASHING	Vacation mode enabled

The bottom LED indicates the state of the Wi-Fi connection and device.

Wi-Fi Connectivity LED	
RED	Not connected to access point
YELLOW	Performing update
GREEN	Connected to access point

Smart Control app Installation

Use your smart phone to visit the app store and install the application. On initial use you'll be asked to register and create an account. Once complete, sign in with your new account information.

Add Your Device

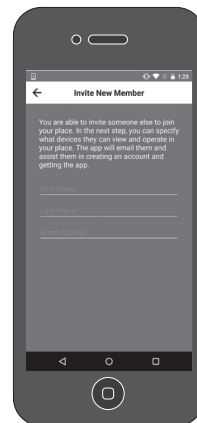
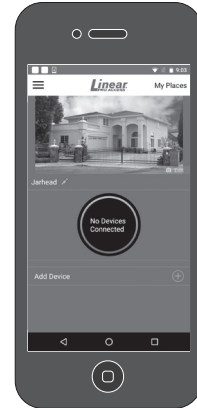
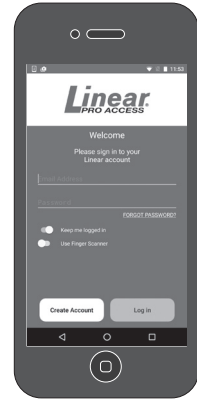
You'll need to be near the Wall Station to add your devices (garage door and light). Begin by tapping the plus sign at the bottom right of the screen. The app will walk you through the process from there. When complete two devices will show in your app site — a garage door and a light.

Use the app

The app's main screen indicates the current state of the garage door and allows operation. If your garage door is fully closed, the app will show the door fully closed. If the garage door is partially or fully open, the app will show the door open.

To close or open the garage door, tap the garage door icon. Likewise, tap the light icon to turn the garage door light on or off.

For a detailed view of the device, single tap a device icon. From here you can adjust the brightness of the light, and you can view a history of who operated the device.



CAUTION

Please consider the age, maturity and capability of users before inviting them as members. Failure of a user to read and understand the instructions, manuals and other documentation related to this product could result in harm personal injury or property damage.

Manage Your Devices and Members

Tap the Site Menu icon (three circles stacked on top of each other) located in the top left of the screen. From here you can remove devices from your site, invite new members to join your site and remove existing members from your site.

Invite Others

To invite a new member, select the Invite New Member button at the bottom of the Site Menu.

You will be asked to set their permission level. There are three classes of members in this application:

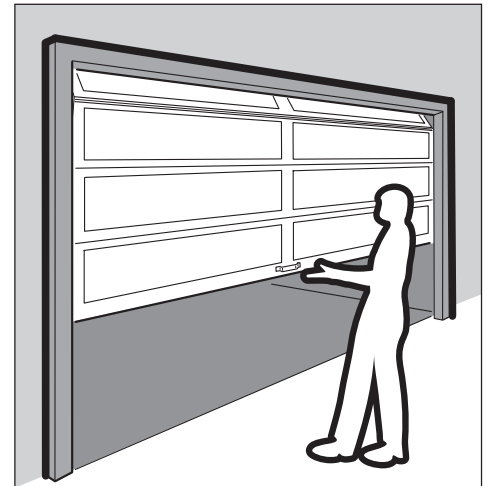
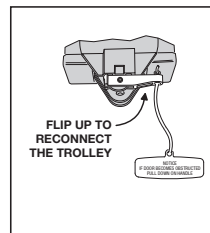
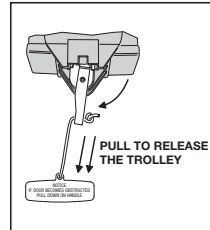
- **You**, the Garage Door app owner, who created the site and added devices.
- **Administrators**, who can invite others, set/change permissions, and operate and view all devices.
- **Regular members**, who can operate and view only specified devices.

MAINTENANCE

Weather conditions may affect the door operation which could require some re-setting of the opener's adjustments. Doors may swell and become heavier during wet periods, door hinges and rollers might bind during cold periods. To insure safe operation of the door, perform the following tests, including any additional test steps described.

Every Month

- 1 With the door closed, pull the red release handle to disconnect the opener from the door.
- 2 From outside the garage, slowly open the door manually all the way, and then close it all the way. Notice if there is any binding, sticking or rubbing. The door should move smoothly in both directions.
- 3 Raise the garage door about halfway up. Carefully release the door and see if the door balances. It should stay in place. Close the door.
NOTE: If the garage door is unbalanced or the door travel isn't smooth, have a qualified garage door professional adjust or repair the door.
- 4 To reconnect the opener, with the door closed flip the release lever up and run the opener.



After Servicing the Opener

- 1 Perform the Safety Beam Test (see page 4).
- 2 Perform the Open and Close Limit Adjustments (see page 5).
- 3 Perform the Safety Reversal System Test (see page 6).

Every 6 Months

Check the belt or chain tension.

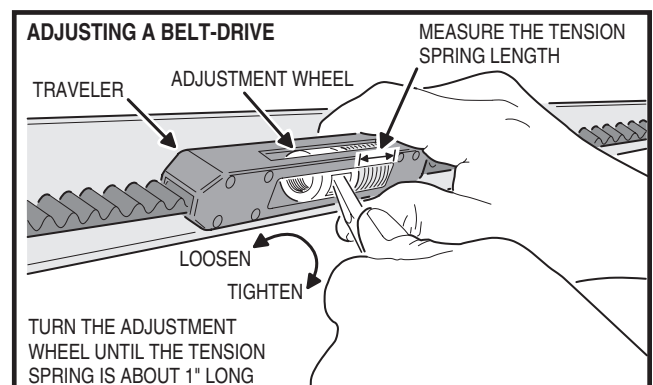
- For belt-drive rails, examine the length of the tension spring in the traveler. It should be about 1" long.
- For chain-drive rails, examine the spacing between the turnbuckle and the rail. The turnbuckle should be slightly above the bottom of the rail.

NOTE: Too much or too little chain tension will cause excessive sprocket noise.

Belt Adjustment

The tension spring in the traveler keeps the belt taut. The factory setting for the tension spring length is .9" long. If the tension spring is longer than 1", adjust the belt.

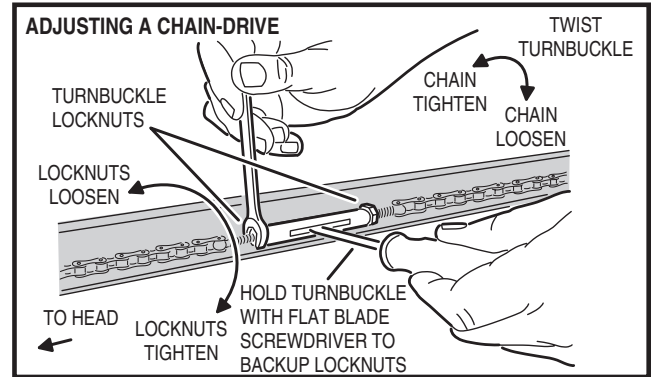
- 1 Hold the traveler so the adjustment wheel is visible through the large slot.
- 2 Use a flat blade screwdriver to turn the adjustment wheel to compress the tension spring until its length is between 0.9" and 1" long.



Chain Adjustment

If necessary, use the following steps to adjust the chain.

- 1 Hold the turnbuckle with a flat blade screwdriver and loosen the two locknuts with a 7/16" end wrench.
- 2 Twist the turnbuckle to adjust the chain tension. Adjust the chain until the turnbuckle is slightly above the rail.
- 3 Hold the turnbuckle with a flat blade screwdriver and tighten the two locknuts with a 7/16" end wrench.



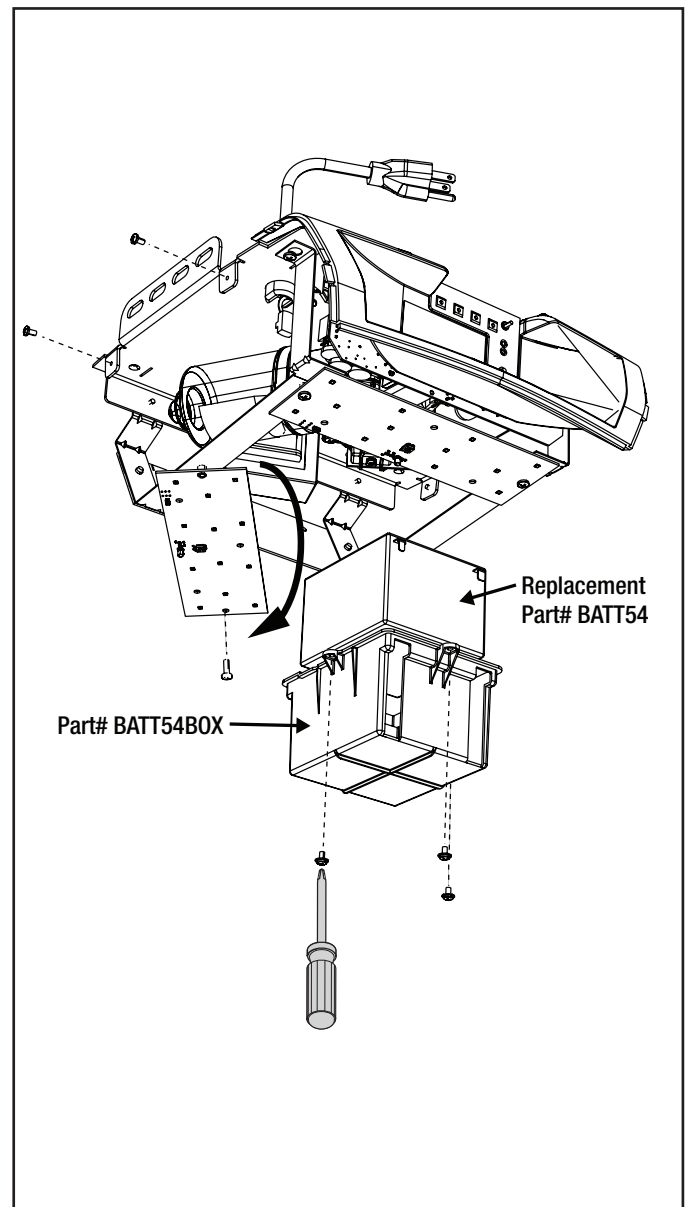
Every Year

Check the door hardware for lubrication needs. Lubricate door hinges, rollers and bearings according to door manufacturer's recommended procedures.

Replacing the Back-Up Battery

IMPORTANT: Unplug operator before proceeding.

- 1 Loosening the four housing screws and remove the housing.
- 2 Remove one screw from the circuit board beneath the battery box, disconnect any wires then carefully swing out of the way.
- 3 Remove the three screws holding the battery box and remove.
- 4 Insert the battery into the battery box and re-install the box using the three battery box screws.
- 5 Connect the battery terminal wires to the battery terminals. Make sure the RED wire is connected to the POSITIVE terminal and the BLACK wire is connected to the NEGATIVE terminal.
- 6 Reconnect the cables to the circuit board, then replace the screw to secure the board.
- 7 Replace the operator housing and tighten the 4 screws to secure the housing.



TROUBLESHOOTING

WARNING

If a battery backup is used, the opener may start moving the door even with AC power disconnected. Use Caution when servicing.

Door Operation Troubleshooting

These conditions occur when the door is in motion or while attempting to move the door. Feedback is given via light flashes and an audible alarm once the door stops travel.

Number of Flashes/Beeps	Condition	Cause	Solution
1	No Problem	Remote control entered into memory	Add any additional remote controls
2	Door won't operate	Shorted wall station wires	Check wall station wires. Be sure both are connected to the terminal screws. Check for a staple in the wall station wires. Remove any staples compressing the wire. Check for frayed wires.
3	Door won't close	Safety beam obstacle	Check for obstacles. Align the safety beams.
4	Door reverses or won't open or close	Open or close force exceeded	Check for obstruction or binding of the garage door. Adjust force factor if necessary. Perform a field reset if necessary.
5	Door won't open from remote control	Remote was activated while in vacation mode	Activate vacation mode switch on wall station to exit vacation mode.
6	Limit error	Down limit and up limit are set too close together	Re-set the open and close limits. If error occurs again, contact a qualified garage door professional.
7	Door reverses or won't open or close	Encoder has detected an error	Check for obstruction or binding of the garage door. If error occurs again, contact a qualified garage door professional.

Battery Troubleshooting

These conditions occur when battery backup is installed, and the door is stopped in the open position. Feedback is given via an audible alarm.

Number of Beeps	Condition	Cause	Solution
2	Low Battery	Battery is low	Check that AC power is connected and allow battery to charge. It will take approximately 10 hours to charge the battery.
4	No Capacity	Battery is no longer holding a charge.	Replace battery now.
5	Battery Shorted	Battery is internally shorted or battery leads are shorted.	Check battery wires for shorting. If wires are OK, replace battery now.

FCC NOTICE

Changes or modifications not expressly described in this manual or approved by the manufacturer could void the user's authority to operate the equipment. This device complies with Industry Canada and FCC Part 15. 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.

LIMITED WARRANTY

This product is warranted to the original consumer against defects in material and workmanship for:

MODEL	ELECTRONICS	MECHANICAL	MOTOR	BELT	CHAIN
LDCO850	1 year	5 years	Lifetime	Lifetime	5 years

This product is warranted to the original consumer against defects in material and workmanship for the periods mentioned above. The Manufacturer will repair, or at its option, replace, any device that it finds requires service under this warranty, and will return the repaired or replaced device to the consumer at Manufacturer's cost. Devices must be sent to Manufacturer for service at owner's expense. This warranty does not apply to damage to the product from negligence, abuse, abnormal usage, misuse, accidents, normal wear or tear or due to failure to follow Seller's instructions, or arising from improper installation, storage or maintenance. In no event will Manufacturer be responsible for incidental, compensatory, punitive, consequential, indirect, special or other damages. The remedies provided by this warranty are exclusive. Some states do not allow the exclusion or limitation of incidental and consequential damages, so the above limitation or exclusion may not apply to you. Any warranties implied by law are limited to the time periods set forth above. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

For warranty service and shipping instructions contact Manufacturer at the phone number shown below. In order to be protected by this warranty, save your proof of purchase and send a copy with equipment should repair be required. All products returned for warranty service require a Return Product Authorization Number (RPA#). Contact Technical Services at (800)543-1236 for an RPA# and other important details.

