

LINEAR

MODEL LDC0801

BELT-DRIVE OR CHAIN-DRIVE DC MOTOR GARAGE DOOR OPENER

HOMEOWNER'S INSTRUCTIONS

PROFESSIONAL INSTALLATION BY:

For Sectional Type Doors

IMPORTANT SAFETY NOTES

Please read the instructions carefully! This garage door opener is designed to provide safe and reliable service if installed and tested as described in these instructions. A garage door is the largest mechanical appliance in a residence. Care must be taken to prevent injury or death during installation and operation of the garage door and garage door opener.

THE FOLLOWING FORMATS ARE USED FOR SAFETY NOTES IN THESE INSTRUCTIONS.

WARNING

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

CAUTION

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

IMPORTANT USER SAFETY INSTRUCTIONS

WARNING

A MOVING GARAGE DOOR CAN CAUSE INJURY OR DEATH! TO REDUCE THE RISK OF DEATH OR SEVERE INJURY:

- 1 READ AND FOLLOW ALL INSTRUCTIONS.
- 2 Use this operator only with sectional overhead doors no more than 10 ft. tall.
- 3 NEVER LET CHILDREN OPERATE, OR PLAY WITH DOOR CONTROLS! KEEP REMOTE CONTROL AWAY FROM CHILDREN!
- 4 Always keep 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.
- 5 NEVER GO UNDER A STOPPED, PARTIALLY OPEN DOOR.
- 6 Test door opener monthly. The garage door MUST reverse on contact with a 1-1/2 inch object (or a 2x4 board laid flat at the center of the door) on the floor. If adjusting either the force or the limit of travel, re-test the door opener. Failure to adjust the opener properly may cause severe injury or death.
- 7 If possible, use the red emergency release handle only when the door is closed. Use caution when using this release with the door open. Weak or broken springs may cause the door to fall rapidly, causing injury or death.
- 8 KEEP GARAGE DOORS PROPERLY BALANCED. (See Garage Door Opener Maintenance) An improperly balanced door could cause severe injury or death. Have a qualified service person make repairs to cables, spring assembly and other hardware.
- 9 **SAVE THESE INSTRUCTIONS.**

1 Using the Garage Door Opener

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 START/STOP on a remote 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 (opener's light flashes four times) while the door is opening, 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 UP/DOWN ARROW button or the button assigned to the opener on the remote control, or enter a valid access code and press START/STOP on a remote 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 (opener's light flashes four times), or the safety beam is interrupted (opener's light flashes three times) during closing, the door will stop, then re-open.
- 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 pushbutton, or press the START/STOP button on a remote keypad (if the remote keypad was used to start the door).

- 2 The next time the opener is activated, the door will move in the opposite direction.

Vacation Lock for Additional Security

- 1 Slide the wall station's LOCK switch to the locked position to prevent remote controls from opening the door after the door is completely closed. The remotes 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 and red light will flash five times if a remote is activated in an attempt to open the door.

- 2 Slide the wall station's LOCK switch to the unlocked position to return the opener to normal operation.

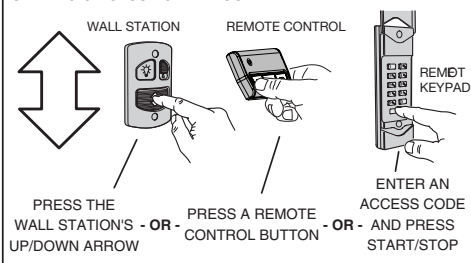
Controlling the Opener's Light

- 1 The opener's light can be lit by pushing the wall station's LIGHT button. The light will remain on until the LIGHT button is pressed again or the opener is cycled.
- 2 If the opener's light is on, pushing the wall station's LIGHT button will turn the opener's light off.

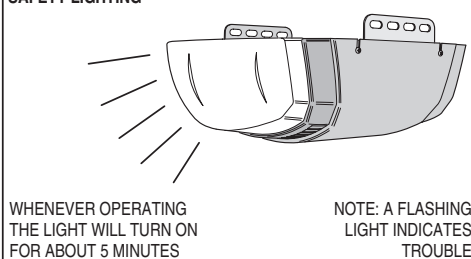
Disconnecting the Door from the Opener

- 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.

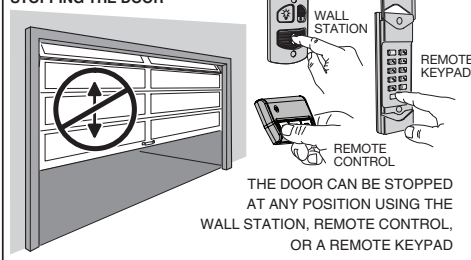
OPENING OR CLOSING THE DOOR



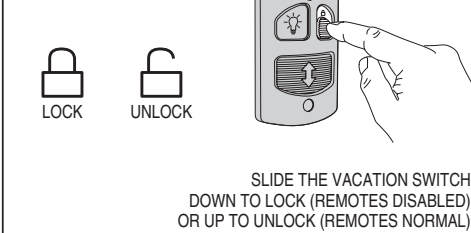
SAFETY LIGHTING



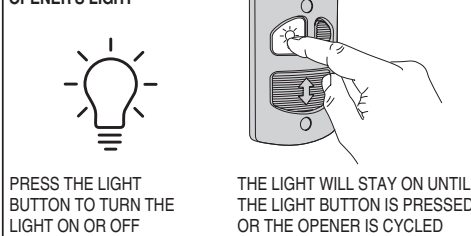
STOPPING THE DOOR



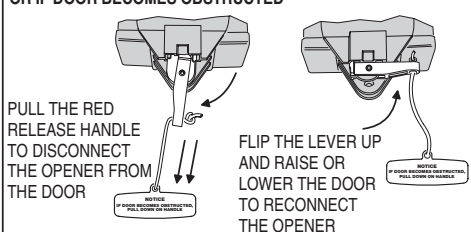
PREVENTING REMOTES FROM OPENING THE DOOR



CONTROLLING THE OPENER'S LIGHT



IN CASE OF POWER FAILURE OR IF DOOR BECOMES OBSTRUCTED



2 Remote Controls

This opener is supplied with a three-button remote control (the second and third buttons can be used to control an additional opener or gate if it contains a Linear MegaCode™ receiver). 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.

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. A moving garage door could injure or kill someone under it. Activate the opener only when the door is clearly visible, free of obstructions and adjusted properly.

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 must be added or removed while the red light is still on.
- 2 Send a signal from a remote. The opener's light and the red light will flash once if a remote was added, or the opener's light and the red light will flash four times if a remote was removed.
- 3 Repeat Steps 1 & 2 for any additional remote controls.

To Remove all Remote Controls

- 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 remotes 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 Step 2 above.

Testing

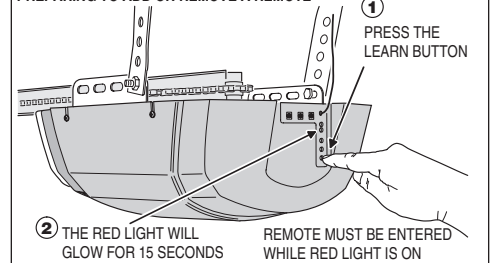
- 1 Before testing the remote control, straighten out the opener's antenna wire so it points up.
- 2 Stand clear of the door, press the remote control's button and verify that the opener starts.

Replacing a Remote Control's Batteries

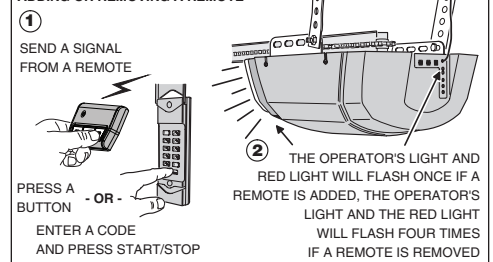
When the red light on the remote glows dimly, or fails to light at all when the remote is activated, the batteries need replacing.

- 1 Open the remote's case and remove the circuit board.
- 2 Replace old batteries with two Type 2032 batteries.
- 3 Re-assemble the remote.

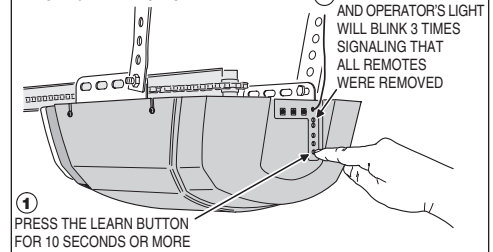
PREPARING TO ADD OR REMOVE A REMOTE



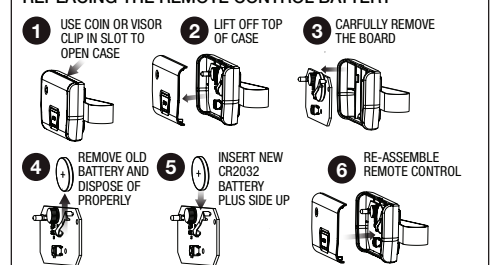
ADDING OR REMOVING A REMOTE



REMOVING ALL REMOTES



REPLACING THE REMOTE CONTROL BATTERY



3 Garage Door Opener 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, flip the release lever up and run the opener.
 - 5 Perform the Safety Beam Test (Section 4).
 - 6 Perform the Safety Reversal System Test as described in Section 8.

After Servicing the Opener

- 1 Perform the Safety Beam Test (Section 4).
- 2 Perform the Open and Close Limit Adjustments (Section 5).
- 3 Perform the Safety Reversal System Test (Section 8).

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 rail.

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

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.

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 .9" and 1" long.

Every Year

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

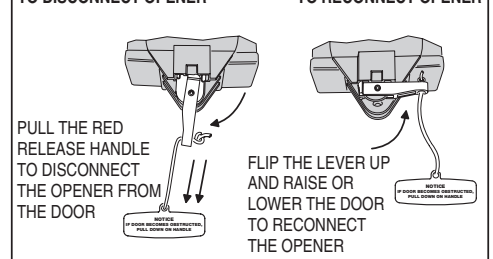
WARNING

Garage door hardware (springs, cables, brackets, pulleys, etc.) are under extreme pressure and tension. DO NOT ATTEMPT TO LOOSEN, TIGHTEN OR ADJUST ANY DOOR HARDWARE. CALL A QUALIFIED GARAGE DOOR INSTALLATION PROFESSIONAL!

WARNING

The garage door opener must not be installed and used on an unbalanced door. The opener's internal door force sensor will not function properly on an unbalanced door. Risk of serious injury or death may result.

TO DISCONNECT OPENER



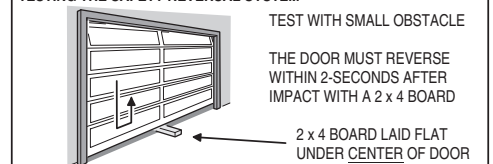
CHECKING THE DOOR BALANCE



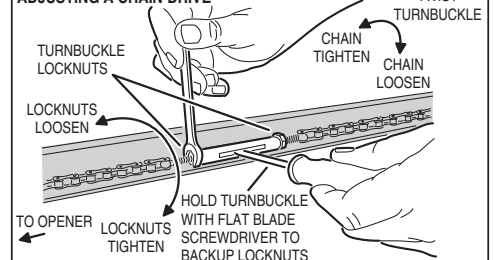
WARNING

Always perform the entire Safety Reversal System Test (see Section 8) after making any adjustments to the opener.

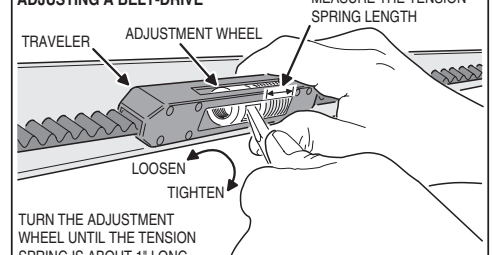
TESTING THE SAFETY REVERSAL SYSTEM



ADJUSTING A CHAIN-DRIVE



ADJUSTING A BELT-DRIVE



4 Testing the Infrared Safety Beam

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).

WARNING
With the door closed, disengage the trolley from the chain during these alignment tests by pulling the red release handle.

Safety Beam Test

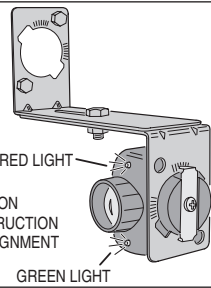
- 1 Check that the opener has power. The green lights on the sender and receiver should be lit.
- 2 If the receiver's green light is on, but the red light is off, the receiver has power but is not detecting the infrared beam from the sender. The red light might flash when the beam is partially detected. 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.

WARNING
Serious injury or death from a closing garage door may result because of failure to test and adjust safety reverse system. Repeat this test monthly and adjust as needed.

SAFETY BEAM INDICATORS

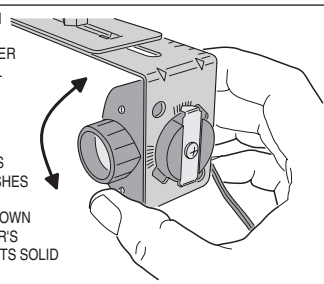
GREEN LIGHT
ON = POWER ON
OFF = POWER OFF

RED LIGHT
ON = BEAM ALIGNED, NO OBSTRUCTION
OFF = BEAM NOT ALIGNED, OR OBSTRUCTION
BLINKING = BEAM NEEDS BETTER ALIGNMENT

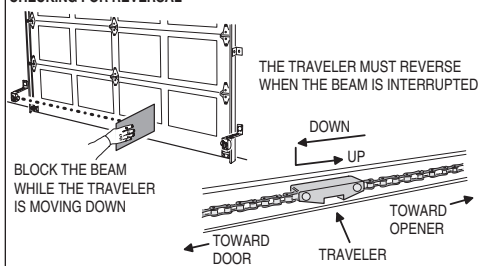


ADJUSTING THE BEAM

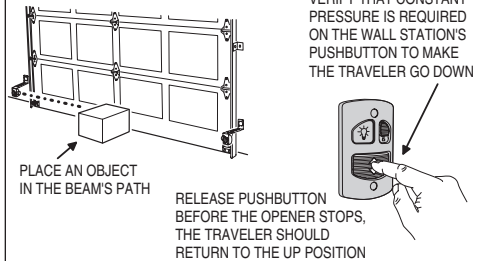
1. ADJUST THE SENDER AND RECEIVER UNTIL THE RED INDICATOR LIGHTS SOLID
2. ADJUST SENDER UP UNTIL RECEIVER'S RED INDICATOR FLASHES
3. ADJUST SENDER DOWN JUST UNTIL RECEIVER'S RED INDICATOR LIGHTS SOLID



CHECKING FOR REVERSAL



CHECKING FORCED CLOSURE FEATURE



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 With the door closed and the opener disengaged from the door, press the wall station's UP/DOWN ARROW button to move the traveler (the part on the belt or chain that the trolley engages with) to the up position (away from the door). **NOTE: Do not cycle the opener to full travel without the door connected.**

4 Push the wall station's UP/DOWN ARROW button again. While the traveler is moving to the down position (toward the door), block the safety beam. **THE TRAVELER MUST STOP, THEN REVERSE TO THE UP POSITION.** The opener's light and red light should flash three times.

5 Place an object in the path of the safety beam. Check that constant pressure is required on the wall station's UP/DOWN ARROW button to cause the traveler to move toward the down position. Release the pushbutton *before* the opener stops; check that the traveler returns to the up position.

NOTE: The garage door opener will not respond to a CLOSE command from a remote control if the safety beam is blocked.

6 To reconnect the opener, flip the release lever up. Raise the door manually until the opener reconnects.

5 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 just short of any door stops, 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

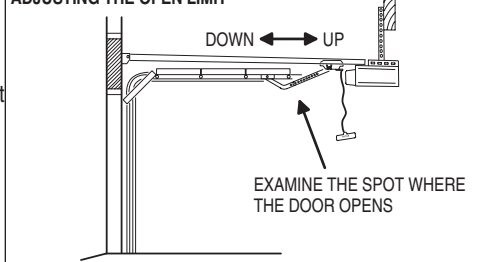
- 1 Use the wall station or a remote control to move the door to the open limit position.
- 2 On the back of the opener, press both the UP and LEARN buttons for three seconds. The green indicator and opener's light will flash twice then stay on.
- 3 Use the UP and DOWN buttons to jog the door at slow 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

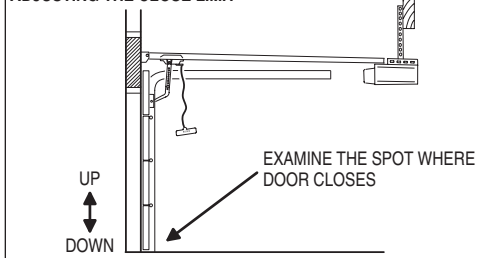
- 1 Use the wall station or a remote control to move the door to the close limit position.
- 2 On the back of the opener, press both the DOWN and LEARN buttons for three seconds. The red indicator and opener's light will flash twice then stay on.
- 3 Use the UP and DOWN buttons to jog the door at slow speed to fine-tune the 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.

CAUTION
Set the open and close limits carefully. Setting the limits beyond the distance that the door can travel could cause damage to the door, the door hardware, or opener.

ADJUSTING THE OPEN LIMIT



ADJUSTING THE CLOSE LIMIT



6 Replacing the Opener's Lamp

If the opener's safety lamp fails to light manually or when the opener is cycled, the light bulb needs replacing. Use the following steps to replace the light bulb.

- 1 Remove the light cover to expose the light bulb and lamp socket.
- 2 Replace the light bulb with a 100 watt maximum rough service bulb (sometimes called a garage door bulb).
- 3 Reattach the light cover.
- 4 Press the wall station's lamp button to test the lamp.

7 Automatic Door Force Setup

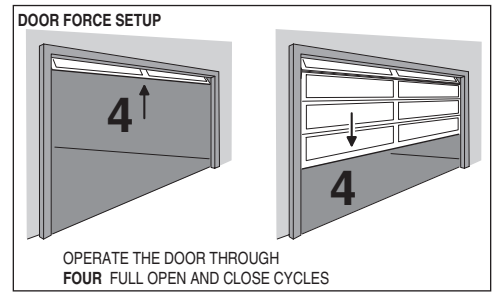
The opener automatically measures the door force throughout the entire travel of the door each time the opener cycles. The opener will automatically adjust to changing door hardware conditions over time due to weather and wear. Your installer has used these steps during setup of the opener. You can also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

WARNING
STAY CLEAR OF THE DOOR DURING THIS PROCEDURE!

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 complete open and close cycles.

CAUTION
Do not cycle the opener full travel without the door connected. The automatic door force setting will adjust to the unloaded condition and may trip the safety system when the door is reconnected.



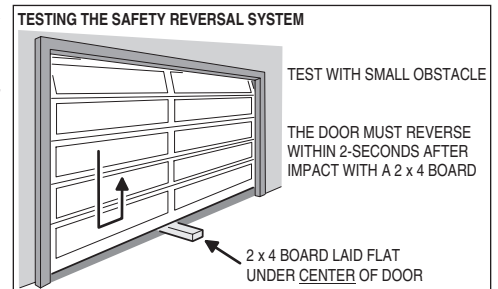
8 Safety Reversal System Test

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.

WARNING
Always perform the Safety Reversal System Test after making any adjustments to the opener. **PERFORM THE SAFETY REVERSAL SYSTEM TEST MONTHLY!**



9 Adjusting the Force Factor (Installation Option, Normally Not Used)

The opener uses the peak force measured during each of the last four complete cycles plus a "force factor" to calculate the maximum allowed force setting for the current door cycle. If the calculated maximum force setting is exceeded during the current door cycle, the opener reacts to the obstruction. As door hardware conditions change over time with weather and wear, the calculation of the maximum door force setting using the four cycle running average will compensate for the current conditions of the installation.

Changing the Force Factor Setting

As an installation option, the opener's "force factor" can be adjusted to change the amount of pressure exerted on an obstacle before the opener reacts to the obstruction.

- 1 Press both the UP and DOWN buttons for three seconds. The red and green indicators and opener's light will flash twice.
- 2 Use the UP or DOWN buttons to set the force factor. Pressing the UP button *increases* the force factor, pressing the DOWN button *decreases* the force factor.

FORCE FACTOR INDICATOR TABLE

GREEN ON	LOW FORCE FACTOR
RED & GREEN ON	MEDIUM FORCE FACTOR
RED ON	HIGH FORCE FACTOR

3 After selecting the force factor, press the LEARN button to store the setting and exit setup. The red and green indicators and the opener's light will flash two times. (If the force factor is not set within one minute, the opener will return to normal operation at its previous force factor setting.)

4 After changing the force factor setting, perform the Safety System Reversal Test.

10 Field Reset

In installations where the door spring, door, or hardware is being replaced, and the opener was already programmed for the old door, reset the opener using the following steps.

- 1 Press and hold down the UP, DOWN, and LEARN buttons at the same time for ten seconds. The red and green indicators and the opener's light will flash twice.
- 2 Release the buttons. The opener will reset force setting and erase all set limits, **but will still retain all programmed remote controls in memory.**

3 AFTER PERFORMING A FIELD RESET, BOTH THE OPEN AND CLOSE LIMITS MUST BE ADJUSTED AND THE AUTOMATIC DOOR FORCE SETUP COMPLETED BEFORE THE OPENER WILL FUNCTION.

11 Troubleshooting

LAMP FLASHES TROUBLE CODE	PROBLEM	CAUSE	REMEDY
1 FLASH	No problem	Remote control entered into memory	Add any additional remote controls (MegaCode™ type only)
2 FLASHES	Door won't close	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.
3 FLASHES	Door won't close	Safety beam obstacle	Check for obstacles. Align the safety beam (Section 4)
4 FLASHES	Door reverses or won't open or close	Open or Close force exceeded	Check for obstruction or binding of garage door. Perform field reset (Section 8) if necessary.
5 FLASHES	Door won't open from remote control	Remote was activated while vacation switch was locked	Unlock vacation switch on wall station
6 FLASHES	Motor ran longer than 30 seconds	Mechanical or electronic failure	Call your local garage door professional
7 FLASHES	Limit error	Encoder has detected error or down limit set above up limit.	Re-set the open and close limits. If error occurs again, call your local garage door professional.

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
LDC0801	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. Nortek Security & Control (NSC) 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 NSC's cost. Devices must be sent to NSC 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 NSC 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 NSC 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 NSC Technical Services at 1-800-421-1587 for an RPA# and other important details.