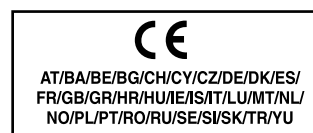


GB Instructions – Garage Door Operator Model ML700-GB,
ML750-GB and ML850-GB

**WARNING: DAMAGE MAY OCCUR TO DOOR OR OPERATOR IF
IR PROTECTOR SYSTEM IS NOT INSTALLED. PROTECTOR SYSTEM
MUST BE INSTALLED FOR PROPER FUNCTIONING OF THE OPENER.
SEE PROTECTOR SYSTEM INSTALLATION STEPS.**



Start by Reading These Important Safety Instructions



Failure to comply with the following instructions may result in serious personal injury or property damage.

- Read these instructions carefully
- The garage door opener is designed and tested to offer reasonable safe service provided it is installed and operated in strict accordance with the instructions in this manual.



These safety alert symbols mean **WARNING** – a personal safety or property damage instruction. Read these instructions carefully.

Warning: If your garage has no service entrance door, Model 1702EML Outside Quick Release must be installed. This accessory allows manual operation of the garage door from outside in case of power failure.



Keep garage door balanced. Do not let the garage door opener compensate for a binding or sticking garage door. Sticking or binding doors must be repaired. Garage doors, door springs, cables, pulleys, brackets and their hardware are under extreme tension and can cause serious personal injury. **Do not attempt to loose, move or adjust them.** Call for garage door service.



Do not wear rings, watches or loose clothing while installing or servicing a garage door opener.



To avoid serious personal injury from entanglement, **remove all ropes connected to the garage door** before installing the door opener.



Installation and wiring must be in compliance with your local building and electrical codes. **Connect the power supply cord only to properly earthed mains.**



Lightweight doors of fiberglass, aluminum or steel must be substantially reinforced to avoid door damage. (See page 3.) The best solution is to check with your garage door manufacturer for an opener installation reinforcement kit.



The safety reverse system test is very important. Your garage door **MUST** reverse on contact with a 40mm obstacle placed on the floor. Failure to properly adjust the opener may result in serious personal injury from a closing garage door. **Repeat the test once a month and make any needed adjustments.**



This unit should not be installed in a damp or wet space.



Door must not extend over public byway during operation.



The Protector System must be installed when the force at the edge of the closing door force exceeds 400N (40kg). Excessive force will interfere with the proper operation of the Safety Reverse System or damage the garage door.



Permanently fasten the **caution label** adjacent to the wall-mounted door control button as a reminder of safe operating procedures.



Disengage all existing garage door locks to avoid damage to garage door.



Install the lighted door control button (or any additional push buttons) **in a location where the garage door is visible, at a height of at least 1.5m and out of the reach of children. Do not allow children to operate push button(s) or remote control(s).** Serious personal injury from a closing garage door may result from misuse of the opener.



Activate opener only when the door is in full view, free of obstructions and opener is properly adjusted. No one should enter or leave the garage while the door is in motion. Do not allow children to play near the door.



Use manual release **only** to disengage the trolley and, if possible, **only** when the door is closed. **Do not use the red handle to pull the door open or closed.**



Disconnect electric power to the garage door opener before making repairs or removing covers.

This product is provided with a power supply cord of special design which, if damaged, must be replaced by a power supply cord of the same type; such a power supply cord may be obtained and fitted by a specialist.

1-GB

Contents	Page	Illustration
Safety Rules	1	
Before you Begin	1	
Door Types	1	.....1
Tools Required	2	.....2
Hardware Provided	2	.....3
Completed Installation	2	.....4
Assembly	2	.....5-11
Installation	2-4	.....12-21
Install the Protector System™	4-5	.....22
Programming your Opener & Remote ..	5	.....23
Programming your Keyless Entry	6	.....24

Adjustment	6	.....25-26
Test the Safety Reversal System	6	.....27
Special Features of the ML700-GB, ML750-GB and ML850-GB ..	7	.....28
Quick Release	7	.....29
Accessories	7	.....30
Replacement Parts	7	.....31-32
Having a Problem?	8	
Care of your Opener	9	
Maintenance of your Operator	9	
Operation of your Opener	9	
Specifications	10	

Before You Begin

1. Look at the wall or ceiling above the garage door. The header bracket must be securely fastened to structural supports.
2. Do you have a finished ceiling in your garage? If so, a support bracket and additional fastening hardware (not supplied) may be required.
3. Depending on your door's construction, you might need a special door arm. See your dealer.
4. Do you have an access door in addition to the garage door? If not, Model 1702EML Outside Quick Release Accessory is required.

1 Door Types

- A. One-Piece Door with Horizontal Track Only.
- B. One-Piece Door with Horizontal and Vertical Track – Special door arm (**E, The Chamberlain Arm™**) and the Protector System™ (29 (8)) required. See your dealer.
- C. Sectional Door with Curved Track – See **20B** – connect door arm. The Protector System™ (29 (8)) is required for doors that are over 2.5m in height.
- D. Canopy door – Special door arm (**E, The Chamberlain Arm™**) and the Protector System™ (29 (8)) required. See your dealer.
- E. The Chamberlain Arm™ for use on door types B and D.

2 Tools Required

3 Hardware Provided

- | | |
|----------------------------|-------------------------------|
| (1) Hex Bolt (4) | (13) Hex Nut (7) |
| (2) Clevis Pin (1) | (14) Ring Fastener (3) |
| (3) 8mm Carriage Bolt (3) | (15) Rail Grease (1) |
| (4) Wood Screws (8) | (16) Lock Nut (1) |
| (5) Sheet Metal Screws (2) | (17) Metric Tapping Screw (4) |
| (6) Clevis Pin (2) | (18) Hex Screw (3) |
| (7) Rope | (19) Spring (1) |
| (8) Handle | (20) Flat Washer (2) |
| (9) Insulated Staples (10) | (21) Stop Bolt (1) |
| (10) Anchor (2) | (22) Carriage Bolt (2) |
| (11) Concrete Anchor (6) | (23) Wing Nut (2) |
| (12) Lock Washer (7) | |

4 Completed Installation

As you proceed with the assembly, installation and adjustment procedures in this manual, you may find it helpful to refer back to this illustration of a completed installation.

- | | |
|--------------------------|--------------------------------------|
| (1) Header Sleeve | (9) Light Lens |
| (2) Idler Pulley Bracket | (10) Manual Release
Rope & Handle |
| (3) Trolley | (11) Curved Door Arm |
| (4) Rail | (12) Straight Door Arm |
| (5) Chain/Belt | (13) Door Bracket & Plate |
| (6) Hanging Bracket | (14) Header Bracket |
| (7) Power Cord | (15) Trolley Release Arm |
| (8) Opener | |

ASSEMBLY SECTION

IMPORTANT: If you have a canopy door, you need to use the instructions packed with *The Chamberlain Arm™ Accessory* in conjunction with this Owner's Manual when assembling the rail.

5 Assemble the Rail

Grease inside edges of rail sections using grease (1). Place rail pieces (2) on flat surface for assembly. All four rail sections are interchangeable. Slide rail brace (3) onto rail section. Connect rail by sliding rail brace onto next rail section. Tap rail assembly (4) on piece of wood (5) until rail sections are flush. Repeat with remaining rail sections.

6 Install the Chain/Belt

Remove chain/belt from carton and lay chain out on floor (do not allow chain/belt to twist).

A. Chain: Push pins of master link bar (3) through chain link (4) and hole in back end of trolley (5). Push cap (2) over pins and onto notches. Slide clip-on spring (1) over cap and onto pin notches until both pins are securely locked in place.

NOTE: If needed, use chain extension link parts to increase chain/cable length (6A).

B. Belt: Hook the trolley connector (6) into the slot (7) on the trolley (8).

7 Insert Trolley & Idler Pulley Bracket into Rail

Slide idler pulley bracket (1) and inner trolley (2) into back (opener) end of rail assembly (3), be sure to insert idler pulley bracket as shown. Arrow on trolley (7) must face toward front (header) end of rail (4). Push idler pulley bracket toward front (header) end of rail (4). Insert carriage bolt (5) into bolt cut out in the idler pulley bracket (6).

8 Attach Trolley to Rail

Slide outer trolley (1) into back (opener) end of the rail assembly (2), be sure end with trolley release arm (3) is heading in direction of opener. Slide outer trolley down rail until it engages with inner trolley.

9 Fasten Rail to Opener and Install Chain/Belt

Remove four washered bolts (1) from top of opener. Place rail (2) on opener, flush with stop (3) on top of opener. Wrap chain/belt (4) over sprocket (5). Push idler pulley bracket assembly toward front of the rail to eliminate excess slack in chain/belt. Align bolt holes on brackets (6) with bolt holes on opener. Secure brackets to opener with previously removed bolts. Tighten bolts securely. **The opener sprocket teeth must engage the chain/belt.**

CAUTION: Use only those bolts mounted in the top of opener. Use of any other bolts will cause serious damage to opener.

10 Attach Sprocket Cover

Place sprocket cover (1) on top of the opener (2), secure with screws (3). Insert stop bolt (4) into trolley stop hole (5), secure with washer (6) and nut (7).

11 Install Header Sleeve and Tighten Chain/Belt

Slide header sleeve (1) onto rail (5). Slide flat washer (3), spring (2) and washer (3) onto carriage bolt (4). Thread nut (6) onto carriage bolt until finger tight. Use an open end wrench (7) to tighten nut until the chain/belt is not against the inside surface of the rail. See image (8).

INSTALLATION SECTION

Wear protective goggles when working overhead to protect your eyes from injury.

Disengage all existing garage door locks to avoid damage to the garage door.

To avoid serious personal injury from entanglement, remove all ropes connected to the garage door before installing the opener.

It is recommended that the opener be installed 2,1m (7 feet) or more above the floor where space permits.

12 Position the Header Bracket

The header bracket must be rigidly fastened to a structural support of the garage. Reinforce the wall or ceiling with a 40 mm (1-1/2") board if necessary. Failure to comply may result in improper operation of safety reverse system.

You can attach the header bracket either to the header wall (1) or to the ceiling (3). Follow the instructions which will work best for your particular requirements.

With the door closed, mark the vertical centerline (2) of the garage door. Extend line onto header wall above the door.

Open door to highest point of travel. Draw an intersecting horizontal line (4) on header wall 5 cm (2") above high point to provide travel clearance for top edge of door.

2-GB

13 Install the Header Bracket

NOTE: Refer to vertical center and horizontal lines created in step 12 for proper placement of header bracket.

- A. Wall Mount:** Center the header bracket (1) on the vertical center line (2) with the bottom edge of the header bracket on the horizontal line (4) (with the arrow pointing toward the ceiling). Mark all of the header bracket holes (5). Drill 4,5 mm (3/16") pilot holes and fasten the header bracket with wood screws (3).
- B. Ceiling Mount:** Extend vertical center line (2) onto the ceiling. Center the header bracket (1) on the vertical mark no more than 150 mm (6") from the wall. Make sure the arrow is pointing toward the opener. Mark all of the header bracket holes (5). Drill 4,5 mm (3/16") pilot holes and fasten the header bracket with wood screws (3). For concrete ceiling mount, use concrete anchors (6) provided.

14 Attach Rail to Header Bracket

Position opener on garage floor below the header bracket. Use packing material to protect the cover. Raise rail until holes in the header sleeve and holes in the header bracket align. Join with clevis pin (1). Insert ring fastener (2) to secure.

NOTE: To enable the rail to clear sectional door springs, it may be necessary to lift opener onto a temporary support. The opener must either be secured to a support or held firmly in place by another person.

15 Position the Opener

NOTE: A 25mm (1") board (1) is convenient for setting an ideal door-to-rail distance (unless headroom is not sufficient).

Raise the opener onto a stepladder. Open garage door. Place a 25mm (1") board (1) laid flat on the top section of door near the centerline as shown. Rest the rail on the board.

If the raised door hits the trolley, pull down on the trolley release arm to disconnect the inner and outer trolley sections. The trolley can remain disconnected until connecting door arm to trolley is completed.

16 Hang the Opener

The opener must be securely fastened to a structural support of the garage.

Three representative installations are shown. Yours may be different. Hanging brackets (1) should be angled (Figure A) to provide rigid support. On finished ceilings, (Figure B) attach a sturdy metal bracket (not supplied) (4) to a structural support before installing the opener. For concrete ceiling mount, (Figure C), use concrete anchors (5) provided.

On **each** side of opener measure the distance from the opener to the structural support (or ceiling).

Cut both pieces of the hanging bracket to required lengths. Flatten one end of each bracket and bend or twist to fit the fastening angles. **Do not bend at the bracket holes.** Drill 4,5mm (3/16") pilot holes in the structural supports (or ceiling). Attach brackets to supports with wood screws (2).

Lift opener and fasten to hanging brackets with screw, lock washer and nut (3). Check to make sure rail is centered over the door. REMOVE 25mm (1") board. Operate door manually. If door hits the rail, raise header bracket. Use rail grease and lubricate bottom surface of rail (6).

17 Attach Emergency Release Rope & Handle

Thread one end of rope (1) through hole in top of red handle so "NOTICE" reads right side up as shown (3). Secure with an overhand knot (2). Knot should be at least 25mm (1") from end of the rope to prevent slipping.

Thread other end of rope through hole in release arm of the outer trolley (4). Adjust rope length so that handle is 1,8m (6 feet) above the floor. Secure with an overhand knot.

NOTE: If it is necessary to cut rope, heat seal cut end with a match or lighter to prevent fraying.

Connect Electric Power

TO AVOID INSTALLATION DIFFICULTIES, DO NOT RUN THE GARAGE DOOR OPENER UNTIL INSTRUCTED TO DO SO.

Connect the door opener only to an outlet controlled by a double pole switch.

18 Install Light

Gently pull lens (2) downward until the lens hinge is in the fully open position. Do not remove the lens. Install a 24V/21W maximum light bulb (1) in the socket as shown. The light will turn on and remain lit for 2-1/2 minutes when power is connected. After 2-1/2 minutes it will turn off. Reverse the procedure to close the lens.

Replace burned out bulbs with rough service light bulbs.

19 Fasten Door Bracket

If you have a canopy garage door, a door arm conversion kit is required. Follow the installation instructions included with the replacement door arm. Exercise care in removing and assembling arm conversion kit. Keep fingers away from the sliding parts.

NOTE: Horizontal and vertical reinforcement is needed for lightweight garage doors.

Sectional and One-Piece Door Installation Procedure:

Door bracket (1) has left and right side fastening holes. If your installation requires top and bottom fastening holes use both the door bracket and door bracket plate (2) as shown.

- Center door bracket (with or without door bracket plate, as required) at the top inside face of door as shown. Mark holes.
- A. Wooden doors**
Drill 8mm holes (5/16") and fasten the door bracket with nut, lock washer, and carriage bolt (3).
- B. Sheet metal doors**
Fasten with wood screws (4).
- C. One-piece door optional**
Fasten with wood screws (4).

20 Assemble Door Arm

A. ONE-PIECE DOOR INSTALLATION:

Fasten the straight (1) and curved (2) door arm sections together to the longest possible length (with a 2 or 3 hole overlap) using hardware (3,4 and 5). With the door closed connect the straight door arm section (1) to the door bracket with clevis pin (6). Secure with ring fastener (7). Disconnect the inner and outer trolley. Slide the outer trolley back toward the opener and join the curved arm (2) to the connector hole in the trolley (8) with clevis pin (6). It may be necessary to lift the door slightly to make the connection. Secure with ring fastener (7).

NOTE: When setting the up limit, the door should not have a "backward" slant when fully open. A slight backward slant (9) will cause unnecessary bucking and/or jerking operation as the door is being opened or closed from the fully open position.

B. SECTIONAL DOOR INSTALLATION:

Connect according to Figure B, then proceed to Step 21.

3-GB

21 Install Door Control

Locate door control where the garage door is visible, away from door and door hardware and out of the reach of children. Mount at least 1,5 m (5 feet) above the floor

Serious personal injury from a moving garage door may result from misuse of opener. Do not allow children to operate the door control or remote control transmitter.

Permanently fasten the caution label permanently to the wall near the door control as a reminder of safe operating procedures.

There are 2 screw terminals (1) on the back of the door control (2). Strip about 6mm (1/4") of insulation from bell wire (4). Separate wires enough to connect the white/red wire to RED terminal screw 1 and the white wire to WHT terminal screw 2.

Fasten the door control to an inside garage wall with sheet metal screws (3) provided. Drill 4mm (5/32") holes and use anchors (6) if installing into drywall. A convenient place is beside the service door and out of reach of children.

Run the bell wire up the wall and across the ceiling to the garage door opener. Use insulated staples (5) to secure wire. The receiver quick connect terminals are located behind the light lens of the opener. Connect the bell wire to the terminals as follows: white/red to red (1) and white to white (2).

Operation of the Door Control

Press to open or close door. Press again to stop door while moving.

21A. Using Multi-function Door Control: Press push bar (1) to open or close door. Press again to stop door while it is moving.

Light Feature: Press Light button (2) to turn opener light on or off. If you turn it on and then activate opener, light will remain on for 2-1/2 minutes. Press again to turn it off sooner. Light button will not control the opener lights when door is in motion.

Lock Feature: Prevents operation of door from portable remote controls. However, door will open and close from Door Control push button, Outside Keylock and Keyless Entry Accessories.

- **To Activate:** Press and hold Lock button (3) for 2 seconds. Push button light will flash as long as Lock feature is on.
- **To turn off:** Press and hold Lock button (3) again for 2 seconds. Push button light will stop flashing. Lock feature will also turn off whenever "LEARN" button on opener control panel is activated.

22 Install the Protector System™

In order to operate this unit, the Protector System™ MUST be installed.

The Protector System™ provides an additional measure of safety against a small child being caught under a garage door.

It uses an invisible beam which, when broken by an obstruction, causes a closing door to open and prevents an open door from closing and is strongly recommended for homeowners with young children.

Installing the Brackets

Be sure power to the opener is disconnected.

Install and align brackets so sensors will face each other across garage door, with beam no higher than 6" (15 cm) above floor. They may be installed in one of three ways, as follows.

A. Garage door track installation (preferred):

- Slip curved arms over rounded edge of each door track, with curved arms facing door (1). Snap into place against side of track (2). It should lie flush, with lip hugging back edge of track.

If your door track will not support bracket securely, wall installation is recommended.

B. Floor installation (Figure 4):

- Use wood blocks or extension brackets (See Accessories) to elevate sensor brackets so lenses will be no higher than 6" (15 cm) above floor (1).
- Carefully measure and place right and left assemblies at same distance out from wall. Be sure all door hardware obstructions are cleared.
- Fasten to floor with concrete anchors as shown (2).

C. Wall installation (Figure 2 & 3):

- Place bracket against wall with curved arms facing door (1). Be sure there is enough clearance for sensor beam to be unobstructed.
- If additional depth is needed, an extension bracket (See Accessories) or wood blocks can be used (2).
- Use bracket mounting holes as a template to locate and drill (2) 3/16" diameter pilot holes on wall at each side of door, no higher than 6" (15 cm) above floor (3).
- Attach brackets to wall with lag screws (Not provided).
- If using extension brackets or wood blocks, adjust right and left assemblies to same distance out from mounting surface. Make sure all door hardware obstructions are cleared.

D. Mounting and Wiring the Safety Sensors

Slide a 1/4"-20x1/2" carriage bolt head into slot on each sensor (1). Use wing nuts to fasten sensors to brackets, with lenses pointing toward each other across door (2). Be sure lens is not obstructed by a bracket extension (3).

- Finger tighten wing nuts.
- Run wires from both sensors to opener. Use insulated staples to secure wire to wall and ceiling.
- Strip 7/16" (11 mm) of insulation from each set of wires (4). Separate white and white/black wires sufficiently to connect to opener quick-connect terminals. Twist like colored wires together (5). Insert wires into quick-connect holes: white to white (3) and white/black to grey (4).

4-GB

Aligning the Safety Sensors

Plug in opener. Indicator lights in both *sending* and *receiving eyes* will *glow steadily* if wiring connections and alignment are correct.

Sending eye orange indicator light will glow regardless of alignment or obstruction. If green indicator light in *receiving eye* is off, dim, or flickering (and invisible light beam path is not obstructed), alignment is required.

- Loosen *sending eye* wing nut and readjust, aiming directly at *receiving eye*. Lock in place.
- Loosen *receiving eye* wing nut and adjust sensor until it receives sender's beam. When green indicator light *glows steadily*, tighten wing nut.

Troubleshooting the Safety Sensors

1. If the *sending eye* indicator light does not *glow steadily* after installation, check for:
 - Electric power to the opener.
 - A short in the white or white/black wires. These can occur at staples, or at opener connections.
 - Incorrect wiring between sensors and opener.
 - A broken wire.
2. If the *sending eye* indicator light *glows steadily* but the *receiving eye* indicator light doesn't:
 - Check alignment.
 - Check for an open wire to the *receiving eye*.
3. If the *receiving eye* indicator light is dim, realign either sensor.

NOTE: When the invisible beam path is obstructed or misaligned while the door is closing, the door will reverse. If the door is already open, it will not close. The opener lights will blink 10 times.

23 Program your Opener & Remote

Activate the opener only when door is in full view, free of obstruction and properly adjusted. No one should enter or leave garage while door is in motion. Do not allow children to operate push button(s) or remote(s). Do not allow children to play near the door.

Your garage door opener receiver and remote control transmitter are set to a matching code. If you purchase additional remote controls, the garage door opener must be programmed to accept the new remote code.

Program the Receiver to Match Additional Remote Control Codes: Using the orange "LEARN" Button

1. Press and release the orange "learn" button on the opener. The learn indicator light will glow steadily for 30 seconds (1).
2. Within 30 seconds, press and hold the button on the hand-held remote that you wish to operate your garage door (2).
3. Release the button when the opener light blinks. It has learned the code. If the light bulb is not installed, two clicks will be heard (3).

Using the Multi-Function Door Control:

1. Press and hold the button on the hand-held remote that you wish to operate your garage door (4).
2. While holding the remote button, press and hold the LIGHT button on the Multi-Function Door Control (5).
3. Continue holding both buttons while you press the push bar on the Multi-Function Door Control (all three buttons are held) (6).
4. Release buttons when the opener light blinks. It has learned the code. If the light bulb is not installed, two clicks will be heard (7). Now the opener will operate when the remote control push button is pressed. If you release the remote control push button before the opener light flashes, the opener has not learned the code.

To Erase all Remote Control Codes

To deactivate any unwanted remote, first erase all codes: Press and hold the orange "learn" button on opener until the learn indicator light goes out (approximately 6 seconds). All previous codes are now erased. Reprogram each remote or keyless entry you wish to use.

3-Channel Remote:

If provided with your garage door opener, the large button is factory programmed to operate it. Additional buttons on any rolling code 3-channel remote or mini-remote can be programmed to operate this or other rolling code garage door openers.

24 Program your Keyless Entry

Activate the opener only when door is in full view, free of obstruction and properly adjusted. No one should enter or leave garage while door is in motion. Do not allow children to operate push button(s) or remote(s). Do not allow children to play near the door.

NOTE: Your new Keyless Entry must be programmed to operate your garage door opener.

Program the Receiver to Match Additional Remote Control Code Using the orange "LEARN" Button:

1. Press and release the orange "learn" button (1) on opener. The learn indicator light will glow steadily for 30 seconds.
2. Within 30 seconds, enter a four digit personal identification number (PIN) of your choice on the keypad (2), then press and hold the ENTER button.
3. Release the button when the opener light blinks (3). It has learned the code. If the light bulb is not installed, two clicks will be heard.

NOTE: This method requires two people if the Keyless Entry is already mounted outside the garage.

Using the Multi-Function Door Control:

1. Enter a four digit personal identification number (PIN) of your choice on the keypad, then press and hold ENTER.
2. While holding the ENTER button, press and hold the LIGHT button on the Multi-Function Door Control.
3. Continue holding the ENTER and LIGHT buttons while you press the push bar on the Multi-Function Door Control (all three buttons are held).
4. Release buttons when the opener light blinks. It has learned the code. If the light bulb is not installed, two clicks will be heard.

ADJUSTMENT SECTION

25 Setting the Limits

Travel limits regulate the points at which the door will stop when moving up or down. Follow the steps below to set the limits.

To program the travel limits:

1. Open the light lens. Press and hold the black button (1) until the yellow indicator light (3) starts flashing slowly and then release.
2. Push and hold the black button (1) until the door reaches the desired open position. Adjust the position of the door by using the black (1) and orange (2) buttons. Black moves the door UP, orange moves the door DOWN.
3. Push the programmed remote control (4) or push bar on the door control that was shipped with your opener. This sets the full UP (open) position. The door will travel to the floor and reverse back to the UP (open) position. The opener has learned its travel limits.

Check to be sure the door is high enough for your vehicle. Adjust if necessary.

4. The indicator light (3) will stop flashing when the limits have been learned.

If the door reverses before it reaches the floor repeat steps 1-3 immediately. If this does not set the limits, proceed to #15 of the *Having a Problem?* section and follow the instructions for setting the limits manually.

The force MUST be learned in order to properly complete the setting of the limits.

NOTE: The worklight blinks 10 times whenever the Limits Setting routine fails. If you get this error, proceed to #15 of the *Having a Problem?* section and follow the instructions for setting the limits manually.

26 Setting the Force

The force setting button is located behind the light lens of the opener. The force setting regulates the amount of power required to open and close the door.

1. Open the light lens. Locate the orange button (2).
2. Push the orange button (2) twice to enter unit into Force Adjustment Mode. The LED (3) (indicator light) will flash quickly.
3. Push the programmed remote control (4) or push bar on the door control that was shipped with your opener. The door will travel to the DOWN (close) position. Push the remote control (4) again, the door will travel to the UP (open) position.

The LED (3) (indicator light) will stop flashing when the force has been learned.

The door must travel through a complete cycle, UP and DOWN, in order for the force to be set properly. If the unit cannot open and close your door fully, inspect your door to insure that it is balanced properly and is not sticking or binding.

27 Test the Safety Reverse System

The safety reverse system test is important. Garage door must reverse on contact with a 40mm obstacle laid flat on the floor. Failure to properly adjust opener may result in serious personal injury from a closing garage door. Repeat test once a month and adjust as needed.

Procedure: Place a 40mm obstacle (1) laid flat on the floor under the garage door. Operate the door in the **down** direction. The door must reverse on the obstruction. If the door **stops** on the obstruction, remove obstruction and repeat *Setting the Limits step 25. Repeat test.* When the door reverses on the 40mm obstacle, remove the obstruction and run the opener through a complete travel cycle. Door **must not** reverse in closed position. If it does, repeat *Setting the Limits and Force steps 25 and 26* and repeat safety reverse test.

Place 20kg at the center of the door and ensure that the door will not move up more than 500mm.

6-GB

28 Special Features

A. Door within a door connection

Open light lens. Locate auxiliary quick connect terminals. Insert bell wire into quick connect terminals 8 and 7

B. Flashing light connection

The flashing light can be installed anywhere. Connect light leads to quick connect terminals 6 and 5. Terminal 5 is ground.

29 Quick Release

As you proceed with the installation of Model 1702EML Outside Quick Release, refer to door types shown in Figures A, B, C and D:

Figure A: One-piece door with horizontal track only

Figure B: One-piece door without track

Figure C: Sectional Door with curved track

Figure D: Canopy and one-piece door with horizontal and vertical track with "The Chamberlain Arm" installed

Locate the Quick Release on the outside of your garage door (2).

For doors **A, B and C**, center the Quick Release (1) below the opener door bracket (3). For door style **D**, locate Quick Release (1) approximately 10cm on either side of the door's centerline.

For one-piece doors *without track* (**B**), position lock 35-60cm below top of door. For all other door types (**A, C and D**), position the lock 50-75cm below the top of the door (refer to illustrations). **If door construction is metal, refer to special instructions contained in the "NOTE".**

Figure E – Install Outside Quick Release:

Fasten template **G** at marked location. From outside of door, drill a 19mm diameter hole for the lock (1) and two 6,5mm side holes (2) for the 1/4"-20x2-1/2" mounting bolts (4). **Drill all holes completely through the door.**

Uncoil cable attached to end of tumbler. Guide cable (3) through the 19mm diameter hole from outside the door. Insert lock assembly and position flush with door.

Insert the two mounting bolts into the side holes from outside of door. Fasten from the inside with 1/4" washers (5) and hex nuts (6). Tighten nuts securely.

NOTE: On a metal door, the template must be positioned so that all the drilled holes will pass through the inside reinforcement stile of the door, if possible.

Figure F – Remove rope from trolley release arm (1). Place free cable loop (2) over one pin of the master link outside bar (3) as shown. Securely tie a loop (4) at free end of release rope and place over second pin in outside bar (5).

Push pin holding cable loop through hole in the release arm of the trolley. Push cap (6) onto the pins and into pin notches (7). Be sure cable loop and manual rope are secured to pins. Slide clip-on spring (8) over cap and lock onto pin notches.

Refer to Figures A, B, C and D; use plastic ties (4) to *loosely* secure the excess cable to door arm.

To Operate the Quick Release: Insert the key into lock and turn clockwise. Remove the key **AND** tumbler from the lock. Pull firmly on the cable. **Do not pull on the key or tumbler.** The outer trolley will disconnect from the inner trolley so the door can be opened manually.

Trolley sections will reconnect automatically when the opener is started. Replace tumbler in the lock. Turn the key counterclockwise. Remove the key.

30 Accessories

- | | |
|----------------------|---------------------------------------|
| (1) Model 84330EML | Single-Function Remote Control |
| (2) Model 84333EML | 3-Function Remote Control |
| (3) Model 84335EML | 3-Function Mini Remote Control |
| (4) Model 8747EML | Keyless Entry System |
| (5) Model 845EML | Multi-Function Door Control Panel |
| (6) Model 760EML | Outside Keylock |
| (7) Model 1702EML | Outside Quick Release Lock |
| (8) Model 770EML | The Protector System™ |
| (9) Model 1703EML | The Chamberlain Arm™ |
| (10) Model FLA230EML | Flashing Light Kit |
| (11) Model 75EML | Lighted Door Control Button |
| (12) Model 1EML | Door Handle Quick Release |
| (13) Model 34EML | 2-Position Key Switch (Flush Mount) |
| Model 41EML | 2-Position Key Switch (Surface Mount) |

NOT SHOWN

Model MDL100EML Mechanical Door Latch Kit

WIRING INSTRUCTIONS FOR ACCESSORIES

Outside Keylock – To opener terminals: Red-1 and White-2

Protector System™ – To opener terminals: White-3 and Grey-4

Door Control Panel – To opener terminals: Red-1 and White-2

31 32 Replacement Parts

HAVING A PROBLEM?

1. Opener doesn't operate from either door control or remote:

- Does the opener have electric power? Plug lamp into outlet. If it doesn't light, check the fuse box or the circuit breaker. (Some outlets are controlled by a wall switch.)
- Have you disengaged all door locks? Review installation instruction warnings on page 1.
- Is there a build-up of ice or snow under door? The door may be frozen to ground. Remove any obstruction.
- The garage door spring may be broken. Have it replaced.

2. Opener operates from remote but not from door control:

- Is door control button lit? If not, remove the bell wire from the opener terminals. Short the red and white terminals by touching both terminals at the same time with a piece of wire. If the opener runs, check for a faulty wire connection at the door control, a short under the staples, or a broken wire.
- Are wiring connections correct? Review page 4.

3. Door operates from door control but not from remote:

- Replace battery if necessary.
- If you have two or more remotes and only one operates, review Program Your Opener, Remote and Keyless Entry steps 22 and 23.
- Is the door control button flashing? The opener is in lock mode. If you have a Multi-Function Door Control, push and hold the Lock button for 2 seconds. The door control button will stop flashing.

4. Remote has short range:

- Is battery installed?
- Change the location of the remote control on the car.
- A metal garage door, foil-backed insulation or metal siding will reduce the transmission range.

5. Door reverses for no apparent reason and opener light doesn't blink:

- Is something obstructing the door? Pull manual release handle. Operate door manually. If it is unbalanced or binding, call for professional garage door service.
- Clear any ice or snow from garage floor area where garage door closes.
- Repeat Setting Limits and Force, see adjustment steps 25 and 26. Repeat safety reverse test after adjustment is complete.

6. Door reverses for no apparent reason and opener light blinks for 5 seconds after reversing:

Check The Protector System™ (if you have installed this accessory). If the light is blinking, correct alignment.

7. Opener noise is disturbing in living quarters of home:

If operational noise is a problem because of proximity of the opener to the living quarters, Vibration Isolator Kit 41A3263 can be installed. This kit was designed to reduce the "sounding board effect" and is easy to install.

8. The garage door opens and closes by itself:

Make sure remote push button is not stuck "on".

9. Door stops but doesn't close completely:

Repeat Setting the Limits, see adjustment step 25.

Repeat safety reverse test after any adjustment of door arm length, close force or down limit.

10. Door opens but won't close:

- Check The Protector System™ (if you have installed this accessory). If the light is blinking, correct alignment.
- If opener light does not blink and it is a new installation, repeat Setting the Limit and Force steps 25 and 26.

Repeat the safety reverse test after the adjustment is complete.

11. Opener light does not turn on:

Replace light bulb (24V/21W maximum). Replace burned out bulbs with rough service light bulbs.

12. Opener strains:

Door may be unbalanced or springs are broken. Close door and use manual release rope and handle to disconnect trolley. Open and close door manually. A properly balanced door will stay in any point of travel while being supported entirely by its springs. If it does not, call for professional garage door service to correct the problem.

13. Opener motor hums briefly, then won't work:

- Garage door springs are broken. SEE ABOVE.
- If problem occurs on first operation of opener, door is locked. Disable door lock.

Repeat safety reverse test after adjustment is complete.

14. Opener won't activate due to power failure:

- Pull manual release rope and handle down to disconnect trolley. Door can be opened and closed manually. When the power is restored, pull the manual release handle straight back. The next time the opener is activated, the trolley will reconnect.
- The Outside Quick Release accessory (if fitted) disconnects the trolley from outside the garage in case of power failure.

15. Setting the limits manually:

1. Press and hold the black button until the yellow indicator light starts flashing slowly then release.
2. Push and hold the black button until the door reaches the desired UP (open) position. Adjust the position of the door by using the black and orange buttons. Black moves the door UP (open) and orange moves the door DOWN (close).

Check to be sure the door opens high enough for your vehicle.

3. Push the remote control or door control. This sets the UP (open) limit and begins closing the door. **Immediately press either the orange or the black button.** The door will stop.

Adjust the desired DOWN (close) limit position using the black and orange buttons. Check to be sure the door is fully closed without applying excessive pressure on the rail (rail should not bow upwards and the chain/belt should not sag or droop below the rail). Push the remote control or door control. This sets the DOWN (close) limit and begins opening the door.

NOTE: If neither the black or the orange button is pressed before the door reaches the floor, the GDO will attempt an Automated Limit Setting, reversing the door off the floor and stopping at the set Up limit. If the worklight does not blink 10 times, limits setting has been successful and doesn't need to be manually done; the DOWN limit will be set to the floor.

Regardless of setting the limits automatically or manually, the force MUST be learned in order to properly complete the setting of limits. Refer to section 26, Setting the Force.

4. Open and close the door with the remote control or door control 2 or 3 times.
 - If the door does not stop in the desired UP (open) position or reverses before the door stops at the DOWN (close) position, repeat Setting the limits manually one more time.
 - If the door stops in both the desired UP (open) and DOWN (close) positions, proceed to *Test the Safety Reversal System*.



CARE OF YOUR OPENER

When properly installed, opener will provide high performance with a minimum of maintenance. The opener does not require additional lubrication.

Limit and Force Settings: These settings must be checked and properly set when opener is installed. Weather conditions may cause some minor changes in the door operation, requiring some re-adjustments, particularly during the first year of operation.

Refer to *Setting the Limits and Force* on page 5. Follow the instructions carefully and **repeat the safety reverse test after any adjustment.**

Remote Control: The remote control may be secured to a car sun visor with the clip provided. Additional remotes can be purchased at any time for use in all vehicles using garage. Refer to Accessories. Any new remotes must be programmed into the opener.

Remote Control Battery: The lithium batteries should produce power for up to 5 years. If transmission range lessens, replace battery.

To Change Battery: To replace batteries, use the visor clip or screwdriver blade to pry open the case. Insert batteries *positive side up*. To replace cover, snap shut along both sides. Do not dispose of the old battery with household waste. Take batteries to a proper disposal center.

MAINTENANCE OF YOUR OPENER

Once a Month:

- *Repeat safety reverse test.* Make any necessary adjustments.
- *Manually operate door.* If it is unbalanced or binding, call for professional garage door service.
- *Check to be sure door opens and closes fully.* Set Limits and/or Force if necessary.

Once a Year:

Oil door rollers, bearings and hinges. The opener does not require additional lubrication. Do not grease the door tracks. **Grease rail and trolley once a year.**

OPERATION OF YOUR OPENER

Your opener can be activated by any of the following devices:

- **The Lighted Door Control Button.** Hold the button down until door starts to move.
- **The Outside Keylock or Keyless Entry System** (if you have installed either of these accessories).
- **The Remote Control Transmitter.** Hold the push button down until the door starts to move.

Opening the Door Manually:

Door should be fully closed if possible. Weak or broken springs could allow an open door to fall rapidly. Property damage or serious personal injury could result.

The door can be opened manually by pulling the release handle down and back (toward the opener). To reconnect the door, pull the release handle straight down.

Do not use the manual release handle to pull the door opener or closed.

When the Opener is Activated by Remote Control or Lighted Door Control Button:

1. If open, the door will close. If closed, the door will open.
2. If closing, the door will stop.
3. If opening, the door will stop (allowing space for entry and exit of pets and for fresh air).
4. If the door has been stopped in a partially open or closed position, it will reverse direction.
5. If an obstruction is encountered while closing, the door will reverse.
6. If an obstruction is encountered while opening, the door will reverse and stop.
7. The optional Protector System™ uses an invisible beam which, when broken by an obstruction, causes a closing door to open and prevents an open door from closing. It is **STRONGLY RECOMMENDED** for homeowners with young children.

Allow a 15 minute cooling period after 5 continuous operations of the opener.

The opener light will turn on: 1. when opener is initially plugged in; 2. when the power is briefly interrupted; 3. when the opener is activated.

The light turns off automatically after 2-1/2 minutes. Bulb size is 24V/21W maximum.

9-GB

SPECIFICATIONS

Input Voltage.....230-240 VAC, 50Hz
Max. Pull Force700N (ML700-GB, ML750-GB)
.....800N (ML850-GB)
Power115W (ML700-GB, ML750-GB)
.....125 (ML850-GB)
Standby-by
power rating @ 230V.....5.5W (ML700-GB, ML750-GB, ML850-GB)
Normal Torque7Nm (ML700-GB, ML750-GB)
.....8Nm (ML850-GB)

Motor

Type.....DC gearmotor permanent lubrication

Drive Mechanism

DriveChain/belt with two-piece trolley on
steel rail.
Length of Travel.....Adjustable to 2,3m (7-1/2 feet)
Travel Rate5"-7" (127-178mm) per second
Lamp.....On when door starts, off 2-1/2 minutes
after stop.
Door LinkageAdjustable door arm. Pull cord trolley release.

Safety

PersonalPush button and automatic reversal in **down**
direction. Push button and automatic stop in
up direction.
Electronic.....Automatic force adjustment
ElectricalTransformer overload protector and low
voltage push button wiring.
Limit DeviceOptical RPM/Passpoint detector.
Limit AdjustmentElectronic, Semi and Fully Automatic.
Start Circuit.....Low voltage push button circuit.

Dimensions

Length (Overall).....3,2m (122-1/2")
Headroom Required30mm
Hanging Weight32 lb (14,5 kg)

Receiver

Memory Registers12
Operating Frequency.....433.92MHz

SPECIAL NOTE: Chamberlain strongly recommends that the protector system be installed on all garage door openers.



GARAGE DOOR OPENER WARRANTY

GB

Chamberlain GmbH warrants to the first retail purchaser of this product that the product shall be free from any defect in materials and/or workmanship for a period of 24 full months (2 years) from the date of purchase. The motor is warrantied to be free from defects in materials and/or workmanship for a period of: ML850-GB, 60 full months (5 years); ML750-GB, 48 full months (4 years); ML700-GB, 36 full months (3 years) from the date of purchase. Upon receipt of the product, the first retail purchaser is under obligation to check the product for any visible defects.

Conditions: The warranty is strictly limited to the reparation or replacement of the parts of this product which are found to be defective and does not cover the costs or risks of transportation of the defective parts or product.

This warranty does not cover non-defect damage caused by unreasonable use (including use not in complete accordance with Chamberlain's instructions for installation, operation and care; failure to provide necessary maintenance and adjustment; or any adaptations of or alterations to the products), labor charges for dismantling or reinstalling of a repaired or replaced unit or replacement batteries.

A product under warranty which is determined to be defective in materials and/or workmanship will be repaired or replaced (at Chamberlain's option) at no cost to the owner for the repair and/or replacement parts and/or product. Defective parts will be repaired or replaced with new or factory rebuilt parts at Chamberlain's option.

If, during the warranty period, the product appears as though it may be defective, contact your original place of purchase.

This warranty does not affect the purchaser's statutory rights under applicable national legislation in force nor the purchaser's rights against the retailer arising from their sales/purchase contract. In the absence of applicable national or EU legislation, this warranty will be the purchaser's sole and exclusive remedy, and neither Chamberlain nor its affiliates or distributors shall be liable for any incidental or consequential damages for any express or implied warranty relating to this product.

No representative or person is authorized to assume for Chamberlain any other liability in connection with the sale of this product.

Declaration of Conformity



Automatic garage door openers, as stated, are in conformity to the applicable sections of EN55014-1 (2000), EN55014-2 (1997), EN61000-3-2 (2000), EN61000-3-3 (1995), EN 301 489-3 (V1.3.1), EN 300 220-3 (V1.1.1), EN60335-1 (1994), and EN60335-2-95 (2000).

Per the provisions of the European Directives, 89/336/EEC, 73/23/EEC and 1999/5/EC, including all amendments:

Model:.....ML700-GB, ML750-GB, ML850-GB

Manufacturer The Chamberlain Group, Inc.
845 Larch Avenue
Elmhurst, Illinois 60126
USA

All technical file information for the operator and its accessories is held at The Chamberlain Group and will be made available at the request of the authorities should the need arise.

Declaration of Incorporation

A power door operator must not be put into service until it has been completely and safely assembled and installed, with appropriate size and weight of door, in accordance with both the door and operator manufacturers' instructions using suitable connection arms, appropriate safety devices, and the complete installation has been declared in conformity with the provisions of the Machinery Directive, 89/392/EEC. Power operator and door combinations have been verified by TUV-Rheinland to conform with the provisions of EN12453 and EN60335-2-95.

Door Types: Canopy, Fully Retracting or Sectional

Operator Type	Maximum Area (m2)	Installer: Indicate Installed Door Size	Maximum Weight (kg)	Installer: Indicate Installed Door Weight
ML700, ML750	12.5		100	
ML850	13.5		110	

Other Requirements: Operators used in the following installations must also be installed with the items noted below.

Door Type	Accessory	Installer: Indicate if "not applicable" or if the item is installed
Canopy	The Chamberlain Arm	
Canopy	The Protector System	
Sectional, 3m high	The Protector System	

These declarations are made by:

<p><i>Barbara P. Kelkhoff</i></p> <p>B. P. Kelkhoff Manager, Regulatory Affairs</p> <p>Chamberlain GmbH D-66793 Saarwellingen April, 2004</p>	<p>_____ Installer Name/Signature</p> <p>_____ Company Name</p> <p>_____ Address</p> <p>_____ Date</p>
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