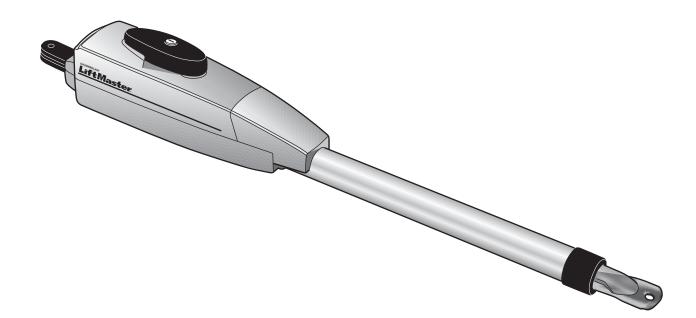


OWNER'S MANUAL MODEL LA400 Medium duty swing gate operator





Serial # Primary Arm

Serial # Secondary Arm _____

Serial # Box _____

Installation Date _____



TABLE OF CONTENTS

OPERATOR SPECIFICATIONS

Tools Needed for Installation	2
Carton Inventory	3
Additional Items Needed for Installation	3
Operator Dimensions and Specifications	3
UL325 Classifications	4

OPERATOR WARNINGS

Safety Installation Information	
Suggested Entrapment Protection Device Locations	
Warnings and Precautions7	
Warning Sign Placement7	

INSTALLATION

Gate Setup	8
Pull-to-Open Bracket Mounting Instructions	9
Push-to-Open Bracket Mounting Instructions	
(for use with Accessory Kit 50-19503)	10-11
Control Box Mounting	12
Control Box Mounting with U-Bolts	12

WIRING

Connect Arm to Control Box13
Earth Ground Rod Installation13
Control Wiring14

BASIC CONTROL BOARD SETUP

Set Dip Switch for Gate Type16
Programming Remote17
Wire Stop Button17
Optional Control Devices
Force and Timer to Close
Program Limits
DIP Switch Settings

OPERATION AND MAINTENANCE

Maintenance.23Battery Replacement.24Manual Release.25
ACCESSORIES
WIRING DIAGRAM
TROUBLESHOOTING
REPAIR PARTS
WARRANTY POLICY AND SERVICE

A WARNING

Mechanical

A WARNING

Electrical

CAUTION

When you see these Safety Symbols and Signal Words on the following pages, they will alert you to the possibility of *serious injury* or *death* if you do not comply with the warnings that accompany them. The hazard may come from something mechanical or from electric shock. Read the warnings carefully. When you see this Signal Word on the following pages, it will alert you to the possibility of damage to your gate and/or the gate operator if you do not comply with the cautionary statements that accompany it. Read them carefully.

IMPORTANT NOTE

- BEFORE attempting to install, operate or maintain the operator, you must read and fully understand this manual and follow all safety instructions.
- DO NOT attempt repair or service of your commercial door and gate operator unless you are an Authorized Service Technician.

TOOLS NEEDED FOR INSTALLATION

During assembly, installation and adjustment of the operator the tools listed below will be needed.

- Wrench or Socket Set
- Phillips Head Screwdriver
- C Clamps
- Level
- Small Screwdriver
- T25 Torx Head Screwdriver

CARTON INVENTORY

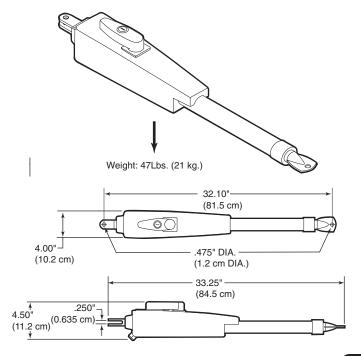
HARDWARE KIT LA400 (K77-19130)		CONTROL BOX LA400 (LA-CONTROL)		
DESCRIPTION	QTY	DESCRIPTION	QTY	
Post Bracket	1	Control Box	1	
Pull to Open Bracket	1	Hardware Bag	1	
Hex Bolt 5/16"-18 X 1-1/2" Square Neck Carriage Bolt 3/8"-16 X 6"	5 2	MISCELLANEOUS		
Hex Nut 3/8"-16	5	Linear Actuator Arm - Model LA400-1K (1) or 2 (LA400-2K)	
Hex Nut 5/16"-18	5	Warning Sign	2	
Flat Washer 5/16"	5	Battery	2	
Flat Washer 3/8"	5	Plug-In Transformer	1	
Lock Washer 5/16"	5	LA400-S		
Lock Washer 3/8"	5			
Gate Mounting Bracket	1	Extension Cable - Six Conductor	40' (12.2 m)	
Hairpin Clip	4	Junction Box - IP56	1	
Pin	2	Phillips Head Mounting Screws	4	
Hex Bolt 3/8"-16 X 1-1/2"	1	Anchors	4	
Bolt 2-3/4"	2	Terminal Block - Twelve Connectors	1	

NOTE: Carton inventory is based on a Single Operator. For Primary (Gate 1) and Secondary (Gate 2) installation the carton inventory is doubled except for control box (1).

ADDITIONAL ITEMS NEEDED FOR INSTALLATION

	Permanent fasteners for warning sign				
	Earth Ground Rod (Optional)				
Power Wire: 120Vac (Stranded Copper Wire)				Power Wire: 24Vac Trans	former (Stranded Copper Wire)
Wire Gauge Length		R	Wire Gauge	Length	
16 100' (30 m)		IN -	14	500' (152 m)	
10	1000' (305 m)			12	1000' (305 m)

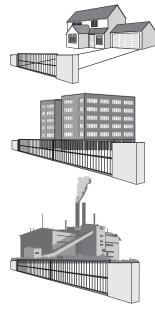
OPERATOR DIMENSIONS AND SPECIFICATIONS



Main Supply (Motor)	24Vdc
Current Consumption	2A
Power Consumption	48 Watts
Battery Charger Supply	26Vac, 29VA or 36Vdc, 40VA
Solar Panel Supply (Optional)	27.4V, 9W (Minimum)
Maximum Gate Width	16 ft. (4.9 m)
Maximum Gate Weight	550 Lbs. (249.5 kg)
Protection Class	NEMA 3R
Travel Speed 14-18 sec	onds for a 90 degree opening
Rated Operating Time	4 Minutes
Temperature	-20°C to + 50°C
	-4°F to + 122°F
Main Supply (Control) Dedica	ted Circuit 120V~/60Hz
Absorbed Power	0.75 Watts
Protection Fuse Gate 1	ATC 15A
Protection Fuse Gate 2	ATC 15A
Protection Fuse Battery	ATC 20A

UL325 MODEL CLASSIFICATIONS

The LA400 is intended for use with vehicular swing gates. The opener can be used in Class I, Class II and Class III applications.



CLASS I – RESIDENTIAL VEHICULAR GATE OPERATOR

A vehicular gate operator (or system) intended for use in a home of one-to four single family dwelling, or a garage or parking area associated therewith.

CLASS II – COMMERCIAL/GENERAL ACCESS VEHICULAR GATE OPERATOR

A vehicular gate operator (or system) intended for use in a commercial location or building such as a multi-family housing unit (five or more single family units) hotel, garages, retail store or other building servicing the general public.

CLASS III - INDUSTRIAL/LIMITED ACCESS VEHICULAR GATE OPERATOR

A vehicular gate operator (or system) intended for use in a industrial location or building such as a factory or loading dock area or other locations not intended to service the general public.

SAFETY ACCESSORY SELECTION

All UL325 compliant LiftMaster gate operators will accept external entrapment protection devices to protect people from motorized gate systems. UL325 requires that the type of entrapment protection correctly matches each gate application. Below are the four types of entrapment protection systems recognized by UL325 for use on this operator.

ENTRAPMENT PROTECTION TYPES

- Type A: Inherent obstruction sensing system, self-contained within the operator. This system must sense and initiate the reverse of the gate within two seconds of contact with a solid object.
- Type B1: Connections provided for a non-contact device, such as a photoelectric eye can be used as a secondary protection.
- Type B2: Connections provided for a contact sensor. A contact device such as a gate edge can be used for secondary protection.
- Type E: Built-in audio alarm. Examples include sirens, horns or buzzers.

NOTE: UL requires that all installations must have warning signs placed in plain view on both sides of the gate to warn pedestrians of the dangers of motorized gate systems.



UL325 ENTRAPMENT PROTECTION REQUIREMENTS

Gate Operator Entrapment Protection				
UL325 Installation	Swing and Gate Barrier (Arm) Operator			
Class	Primary Seconda Type Type			
Class I and II	А	A, B1 or B2		
Class III	A, B1 or B2	A, B1, B2 or E		

The chart above illustrates the entrapment protection requirements for each of the three UL325 classes.

In order to complete a proper installation you must satisfy the entrapment protection chart shown above. That means that the installation must have one primary means of entrapment protection and one independent secondary means of entrapment protection. Both primary and secondary entrapment protection methods must be designed, arranged or configured to protect against entrapments in both the open and close directions of gate travel.

For Example: For a slide gate system that is installed on a single-family residence (UL325 Class I) you must provide the following: As your primary type of entrapment protection you must provide Type A inherent (built into the operator) entrapment sensing and at least one of the following as your secondary entrapment protection: Type B1- Non-contact sensors such as photoelectric eyes, Type B2- Contact sensors such as gate edges.

SAFETY INSTALLATION INFORMATION

- 1. Vehicular gate systems provide convenience and security. Gate systems are comprised of many component parts. The gate operator is only one component. Each gate system is specifically designed for an individual application.
- Gate operating system designers, installers and users must take into account the possible hazards associated with each individual application. Improperly designed, installed or maintained systems can create risks for the user as well as the bystander. Gate systems design and installation must reduce public exposure to potential hazards.
- 3. A gate operator can create high levels of force in its function as a component part of a gate system. Therefore, safety features must be incorporated into every design. Specific safety features include:
 - Gate Edges

- Guards for Exposed Rollers
- Photoelectric Sensors

- Screen Mesh
- Vertical Posts

Instructional and Precautionary Signage

- 4. Install the gate operator only when:
 - a. The operator is appropriate for the construction and the usage class of the gate.
 - b. All openings of a horizontal slide gate are guarded or screened from the bottom of the gate to a minimum of 4' (1.2 m) above the ground to prevent a 2-1/4" (6 cm) diameter sphere from passing through the openings anywhere in the gate, and in that portion of the adjacent fence that the gate covers in the open position.
 - c. All exposed pinch points are eliminated or guarded, and guarding is supplied for exposed rollers.
- 5. The operator is intended for installation only on gates used for vehicles. Pedestrians must be supplied with a separate access opening. The pedestrian access opening shall be designed to promote pedestrian usage. Locate the gate such that persons will not come in contact with the vehicular gate during the entire path of travel of the vehicular gate.
- 6. The gate must be installed in a location so that enough clearance is supplied between the gate and adjacent structures when opening and closing to reduce the risk of entrapment. Swinging gates shall not open into public access areas.
- 7. The gate must be properly installed and work freely in both directions prior to the installation of the gate operator.
- 8. Controls intended for user activation must be located at least six feet (6') away from any moving part of the gate and where the user is prevented from reaching over, under, around or through the gate to operate the controls. Outdoor or easily accessible controls shall have a security feature to prevent unauthorized use.
- 9. The Stop and/or Reset (if provided separately) must be located in the line-of-sight of the gate. Activation of the reset control shall not cause the operator to start.
- 10. A minimum of two (2) WARNING SIGNS shall be installed, one on each side of the gate where easily visible.
- 11. For a gate operator utilizing a non-contact sensor:
 - a. Reference owner's manual regarding placement of non-contact sensor for each type of application.
 - b. Care shall be exercised to reduce the risk of nuisance tripping, such as when a vehicle trips the sensor while the gate is still moving.
 - c. One or more non-contact sensors shall be located where the risk of entrapment or obstruction exists, such as the perimeter reachable by a moving gate or barrier.
- 12. For a gate operator utilizing a contact sensor such as an edge sensor:
 - a. One or more contact sensors shall be located where the risk of entrapment or obstruction exists, such as at the leading edge, trailing edge and post mounted both inside and outside of a vehicular horizontal slide gate.
 - b. One or more contact sensors shall be located at the bottom edge of a vehicular vertical lift gate.
 - c. A hard wired contact sensor shall be located and its wiring arranged so the communication between the sensor and the gate operator is not subject to mechanical damage.
 - d. A wireless contact sensor such as the one that transmits radio frequency (RF) signals to the gate operator for entrapment protection functions shall be located where the transmission of the signals are not obstructed or impeded by building structures, natural landscaping or similar obstruction. A wireless contact sensor shall function under the intended end-use conditions.
 - e. One or more contact sensors shall be located on the inside and outside leading edge of a swing gate. Additionally, if the bottom edge of a swing gate is greater than 6" (152 mm) above the ground at any point in its arc of travel, one or more contact sensors shall be located on the bottom edge.
 - f. One or more contact sensors shall be located at the bottom edge of a vertical barrier (arm).

SUGGESTED ENTRAPMENT PROTECTION DEVICE LOCATIONS

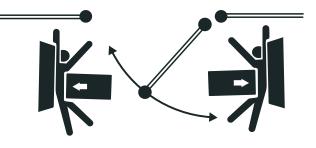
SWING GATE SYSTEM Telephone Entry System STREET Photo Eye for Open Cycle Run Twisted Wire from Loop to Operator Seal Loops Noical Ŷ. Shadow (37 mm) Interrupt -Loop Wire Layer 1/4" (6 mm) or larger Shadow loop should be positioned in direction depending on Loop of gate travel. Pull-to-open illustrated. Wire size **COMPLEX** LPics m The shadow loop input is only active when the Photo Eye for gate is in the fully open or fully closed positions. OR Close Cycle PARKING LOT **DUAL SWING GATE SYSTEM** Telephone Entry System Gate 2 Junction Box STREET Extension Cable Interrupt Photo Eye for Open Cycle Run Twisted Wire from Loop to Operator 20 Seal Loops ł 1-1/2" 1 Shadow (37 mm) roob -Loop Wire Layer Control Interrupt Box 1/4" (6 mm) or larger depending on Loop Gate 1 Wire size ¥ç Shadow loop should be positioned in direction COMPLEX of gate travel. Pull-to-open illustrated. Typical m The shadow loop input is only active when the OR gate is in the fully open or fully closed positions. Photo Eye for Close Cycle PARKING LOT

SAFETY PRECAUTIONS FOR SWING AND ORNAMENTAL "GRILL TYPE GATES"

A WARNING

To prevent SERIOUS INJURY or DEATH from a moving gate:

- Entrapment protection devices MUST be installed to protect anyone who may come near a moving gate.
- Locate entrapment protection devices to protect in BOTH the open and close gate cycles.
- Locate entrapment protection devices to protect between moving gate and RIGID objects, such as posts.
- A swinging gate shall NOT open into public access ways.

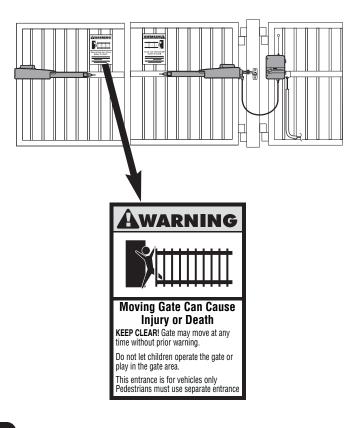


WARNING SIGN PLACEMENT

A WARNING

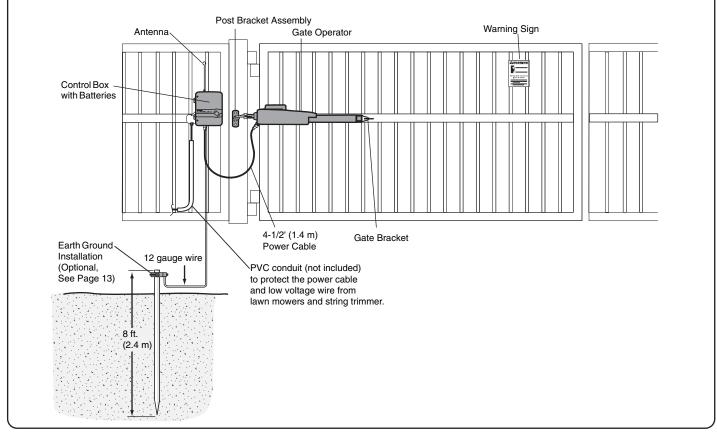
To prevent SERIOUS INJURY or DEATH from a moving gate: • Install warning signs on EACH side of gate in PLAIN VIEW.

• Permanently secure each warning sign in a suitable manner using fastening holes.

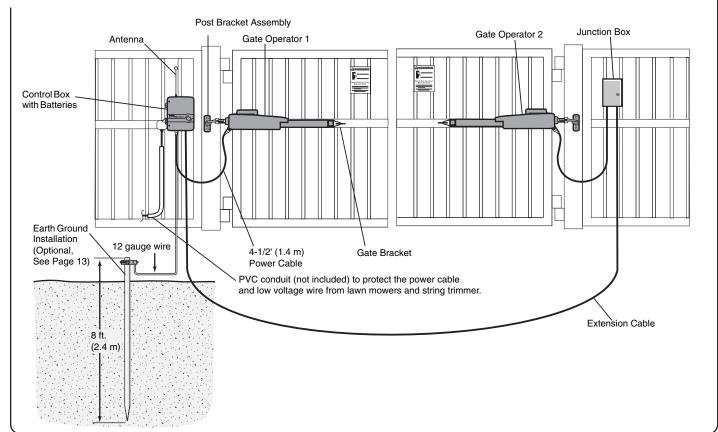


INSTALLATION

SINGLE GATE SETUP



DUAL GATE SETUP



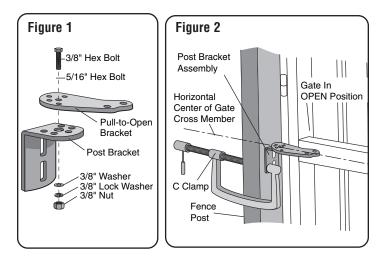
PULL-TO-OPEN BRACKET MOUNTING INSTRUCTIONS

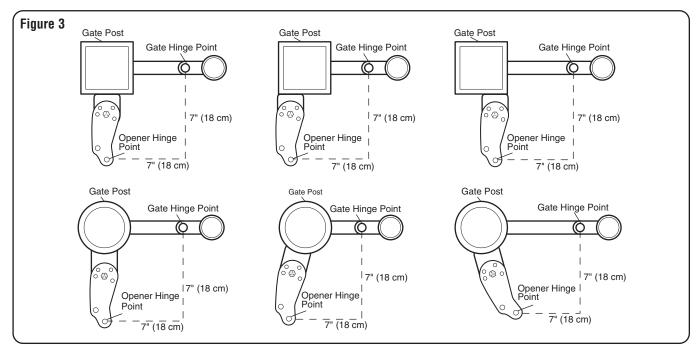
NOTE: The mounting illustrations represent a typical installation using the provided gate hardware. The gate opener may also be installed by welding it to the gate structure. **For push-to-open installation order accessory kit 50-19503**.

 Place pull-to-open bracket on top of the post bracket. Insert 3/8" hex bolt through middle hole and secure with lock washer, flat washer and nut. Insert 5/16" hex bolt through hole in pull-to-open bracket and post bracket. Secure with washer, lock washer and nut (Figure 1).

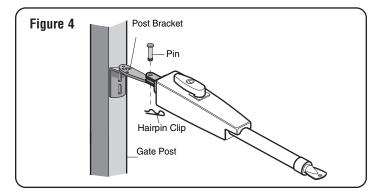
NOTE: Do not pivot bracket, bracket must be straight or you may damage your gate, operator or gate post bracket.

- 2. Determine the vertical position of the gate post bracket assembly on the gate post by aligning the gate post bracket with one of the cross members of the gate. For optimal performance, align the gate post bracket to a cross member that is as close to the vertical center of the gate post as possible. Level gate post bracket assembly and temporarily secure to gate post using C clamp (Figure 2).
- Move the gate post bracket assembly to obtain desired dimensions. Ideally, the distance between and opener hinge points should be approximately 7" (18 cm) x 7" (18 cm). Place opener against gate post and adjust the opener until the required dimension is achieved (Figure 3).



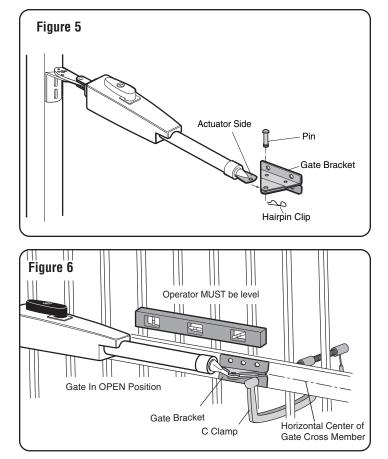


4. Attach operator to gate post bracket by inserting pull-to-open bracket into slot on the motor side of operator. Temporarily secure with pin (Figure 4).



- 5. Fasten gate bracket to the actuator side of the operator using pin. Swing operator to the desired open position (Figure 5).
- 6. Open gate to full open position (Do not exceed 100°). Adjust operator until it is level and position bracket against the cross member. Secure using C clamp (Figure 6).
- 7. Remove pins and detach operator.
- 8. Mark holes for post bracket assembly and gate bracket. Be sure to mark holes in the vertical center of post bracket slots.
- **NOTE:** All four gate bracket mounting holes must be used.
- 9. Remove brackets from gate post and cross member.
- 10. Drill 13/32" holes in marked locations for gate posts and 11/32" for gate bracket.
- Secure gate posts bracket assembly to gate post using 3/8" bolts, lock washer, flat washer and nuts. Secure gate bracket to cross member using 5/16" bolts, lock washer, flat washer and nuts.
- 12. Reattach operator to gate using pins and hairpin clips.

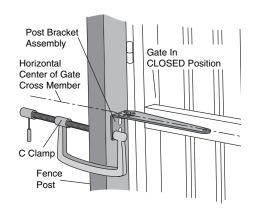
NOTE: After final limit adjustments (page 21) the gate can be opened slightly further by increasing the distance between center of gate hinge and the gate bracket by 1" (25.4 mm). Do not move the post bracket assembly.

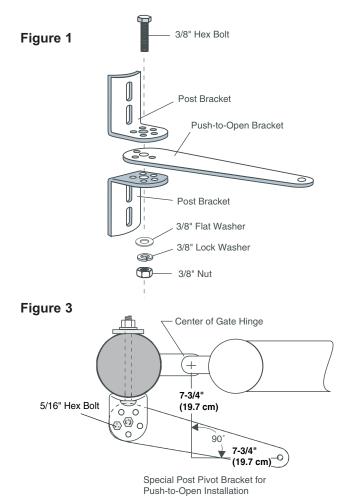


PUSH-TO-OPEN BRACKET MOUNTING INSTRUCTIONS (FOR USE WITH ACCESSORY KIT 50-19503)

- 1. Place push-to-open bracket between the two post brackets. Insert 3/8" hex bolt through middle hole and secure with lock washer, flat washer and nut (Figure 1).
- 2. Determine the vertical position of the gate post bracket assembly on the gate post by aligning the gate post bracket with one of the cross members of the gate (Figure 2). For optimal performance, align the gate post bracket to a cross member that is as close to the vertical center of the gate post as possible. Level gate post bracket, mark holes and temporarily secure to gate post using C clamp (Figure 2).
- 3. Rotate the push-to-open bracket to obtain desired dimensions (Figure 3).

Figure 2





- 4. Attach operator to gate post bracket by inserting push-to-open bracket into slot on the motor side of operator. Secure with pin (Figure 4).
- 5. Fasten gate bracket to the actuator side of the operator using pin. Swing operator to the desired closed position (Figure 4).
- 6. Position gate to full closed position. Adjust operator until it is level and position bracket against the cross member. Secure using C clamp (Figure 5).

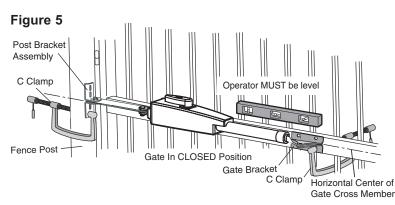
Figure 4 Pin Hex Bolt Post Bracket Flat Washer Lock Washer Nut Hairpin Clip

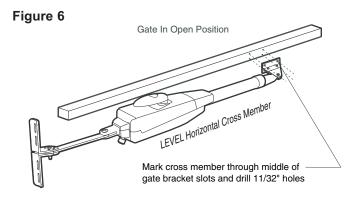
- 7. Remove pins and detach operator.
- 8. Mark holes for post bracket assembly and gate bracket. Be sure to mark holes in the vertical center of post bracket slots.

NOTE: All four mounting holes must be used.

- 9. Remove brackets from gate post and cross member.
- 10. Drill 13/32" holes in marked locations for gate posts and 11/32" for gate bracket.
- Secure gate posts bracket assembly to gate post using 3/8" bolts, lock washer, flat washer and nuts. Secure gate bracket to cross member using 5/16" bolts, lock washer, flat washer and nuts (Figures 6 & 7).
- 12. Reattach operator to gate using pins and hairpin clips.

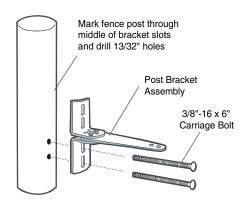
NOTE: After final limit adjustments (page 21) the gate can be closed slightly further by increasing the distance between center of gate hinge and the gate bracket by 1" (25.4 mm). Do not move the post bracket assembly.





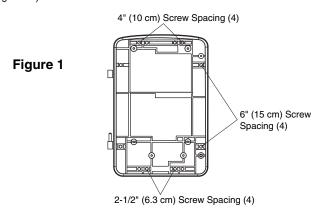
Hairpin Clip

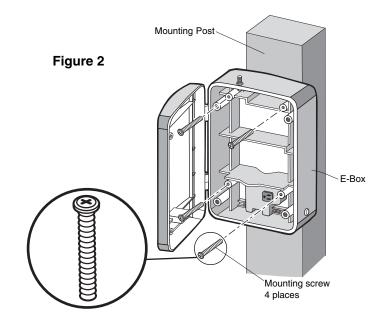




CONTROL BOX MOUNTING

- 1. Remove PCB and batteries.
- 2. Determine the spacing required for mounting and select the proper holes to be used for mounting (Figure 1).
- 3. Knockout plastic from holes using screw driver.
- Place box up against the mounting surface. Insert the screws through the mounting holes in back and secure in place (Figure 2).



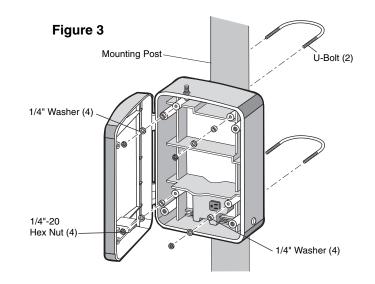


CONTROL BOX MOUNTING WITH U-BOLTS (OPTIONAL KIT)

- 1. Remove PCB and batteries.
- 2. Determine the spacing required for mounting and select the proper holes to be used for mounting (Figure 1).
- 3. Knockout plastic from holes using screw driver.
- 4. Center the box up against the mounting post. Insert the U-bolts through the mounting holes in back (Figure 3).
- 5. Once the U-Bolts are in place, insert the rubber washer, followed by the metal washer and 1/4"-20 Nut (Figure 3).
- 6. Tighten the assembly down snug after positioning it as desired.

Optional kits available are:

- 50-19509 6" (15 cm) Post Mounting
- 50-19511 4" (10 cm) Post Mounting
- 50-19512 2-1/2" (6.3 cm) Post Mounting



WIRING

To reduce the risk of SEVERE INJURY or DEATH:

- ANY maintenance to the operator or in the area near the operator MUST not be performed until disconnecting the electrical power and locking-out the power via the operator power switch. Upon completion of maintenance the area MUST be cleared and secured, at that time the unit may be returned to service.
- Disconnect power at the fuse box BEFORE proceeding. Operator MUST be properly grounded and connected in accordance with local electrical codes. **NOTE:** The operator should be on a separate fused line of adequate capacity.
- ALL electrical connections MUST be made by a qualified individual.

- DO NOT install ANY wiring or attempt to run the operator without consulting the wiring diagram. We recommend that you install an optional reversing edge BEFORE proceeding with the control station installation.
- ALL power wiring should be on a dedicated circuit and well protected. The location of the power disconnect should be visible and clearly labeled.
- ALL power and control wiring MUST be run in separate conduit.
- BEFORE installing power wiring or control stations be sure to follow ALL specifications and warnings described below. Failure to do so may result in SEVERE INJURY to persons and/or damage to operator.

All power wiring should be on a dedicated circuit and well protected.

NOTE: Calculated using NEC guidelines. Local codes and conditions must be reviewed for suitability of wire installation.

The transformer is tie-wrapped at the factory for shipping. The transformer can be plugged into a receptacle external to the control box. You can run low voltage wire between the transformer and control box. This will create more space in the control box for accessories.

Alternatively, you can connect 120Vac directly to the box, and plug the transformer to the receptacle inside the control box.

CONNECT ARM TO CONTROL BOX

Connect the wires from the operator to connector P17 for the Gate 1 operator as shown in the wiring diagram on page 26. Connect the proper color coded wire to the terminal pin as indicated. Use supplied strain relief.

If connecting a second arm, follow the same instructions on connector P16.

EARTH GROUND ROD INSTALLATION (OPTIONAL)

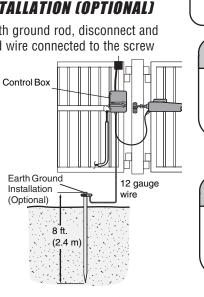
When installing the optional earth ground rod, disconnect and remove the green/yellow ground wire connected to the screw

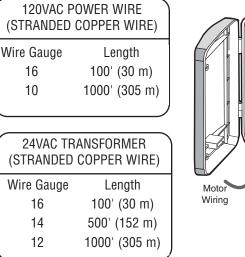
terminal of the printed circuit board. For proper operation, the earth ground rod should not be connected to the ground of your power wiring.

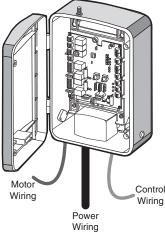
Ensure the power wiring ground connection remains securely connected to the green screw on the outlet plate.

The earth ground rod must be located within 3 feet (0.9 m) of the operator. Use the proper type earth ground rod for your area.

Attach earth ground rod wire to the screw terminal of the printed circuit board marked ${\bf m}$.







CAUTION

To AVOID damaging gas, power or other underground utility lines, contact underground utility locating companies BEFORE digging more than 18" (46 cm) deep.

CAUTION

To AVOID damaging plug-in transformer, it MUST be enclosed in a suitable weatherproof enclosure and provided with proper weatherproof fixtures.

CONTROL WIRING

.iftMaste

6

6

VHI 6 RED 6

DIAGNOSTIC <

SET OPEN :0;

();0;

OVLI

GATE 1

CLOSE LEARN

GATE 2

BIPAR

57

USE DEDICATED CIRCUIT

.

LOSE

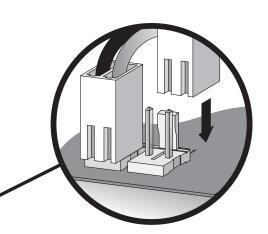
> 24 VAC/ SOLAR

INPUT

OR

CAUTION

To reduce the risk of FIRE or INJURY to persons, use ONLY Chamberlain part #K74-30762 for replacement batteries.



BATTERY

MOV2

The main source of power for the operator is the batteries. The batteries can be charged in circuit by using a charging transformer or solar panels.

CHARGING

The 24Vac input can accept a charging transformer (26Vac, 29VA or 36Vdc, 40VA).

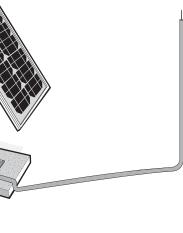
SOLAR PANELS

Optional solar panels may be used to charge the batteries. SOLKIT12V (UL Listed with Class 2 outputs)

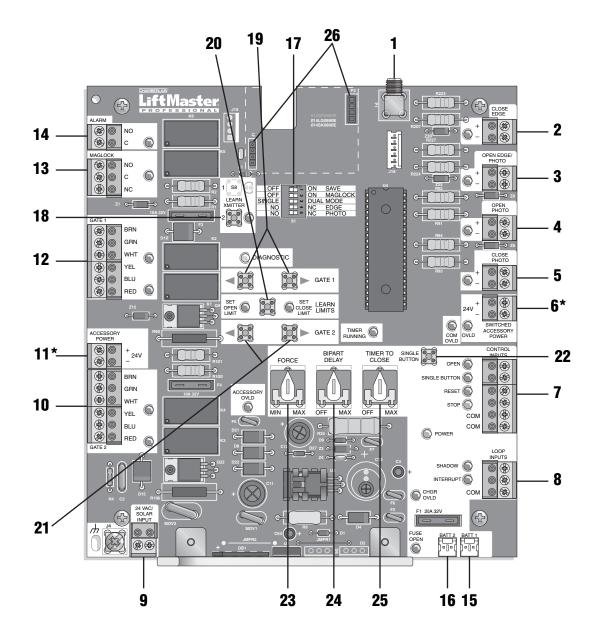
CAUTION

To AVOID damaging plug-in transformer, it MUST be enclosed in a suitable weatherproof enclosure and provided with proper weatherproof fixtures.

To AVOID damaging control board, DO NOT use the solar panel and the plug-in transformer at the same time.



BASIC CONTROL BOARD SETUP



ITEM	DESCRIPTION	FUNCTION	ITEM	DESCRIPTION	FUNCTION
1	Connector P1	Antenna Input	14	Connector P15	Alarm
2	Connector P6	Close Edge	15	Connector	Battery 1
3	Connector P8	Open Edge/Photo	16	Connector	Battery 2
4	Connector P7	Open Photo	17	Dip Switch	S1
5	Connector P9	Close Photo	18	Pushbutton	Learn Xmitter - Program Remote
6	Connector P12	Switched Accessory Power*	19	Pushbuttons	Gate 1 - Jog Learn Limit
7	Connector P10	Control Inputs	20	Pushbutton	Learn Limits
8	Connector P11	Loop Inputs	21	Pushbuttons	Gate 2 - Jog Learn Limit
9	Connector P5	24Vac/Solar Input	22	Pushbutton	Single Button
10	Connector P16	Gate 2	23	Potentiometer	Force
11	Connector P13	Accessory Power*	24	Potentiometer	Bi-Part Delay
12	Connector P17	Gate 1	25	Potentiometer	Timer to Close
13	Connector P14	Maglock/Solenoid	26	Connector	Receiver

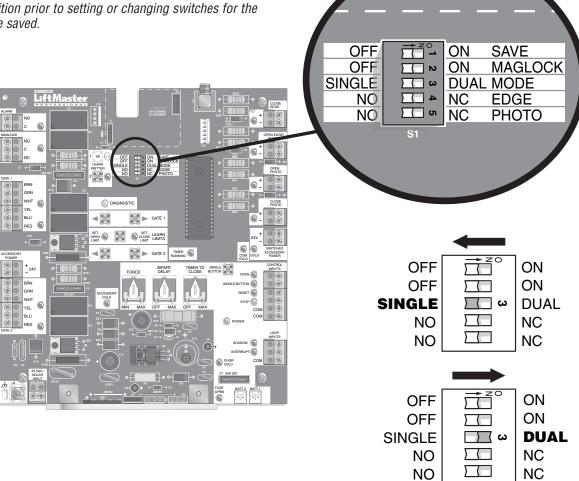
15

*Maximum 300 mA combined output

SET DIP SWITCH FOR GATE TYPE

- 1. The Save switch must be set to the OFF position prior to setting or changing the switches.
- 2. Set switch to Single for single gate installation. For Dual (Gate 1 and 2) installation set switch on Dual.
- 3. Set the Save switch to ON to save the setting.

NOTE: When setting switches S2-5, the Save switch must be in the OFF position prior to setting or changing switches for the change to be saved.



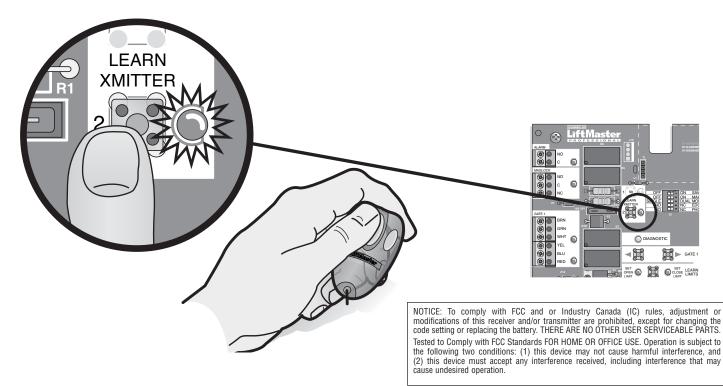
PROGRAMMING REMOTE

- 1. Press LEARN XMITTER button (LED will light up).
- 2. Press remote button, the LED will flash, alarm output will activate twice.
- 3. Repeat steps 1 and 2 until all remotes are programmed (50 remotes maximum).

NOTE: For highest level of security, we recommend the Security $+^{\circ}$ line of products.

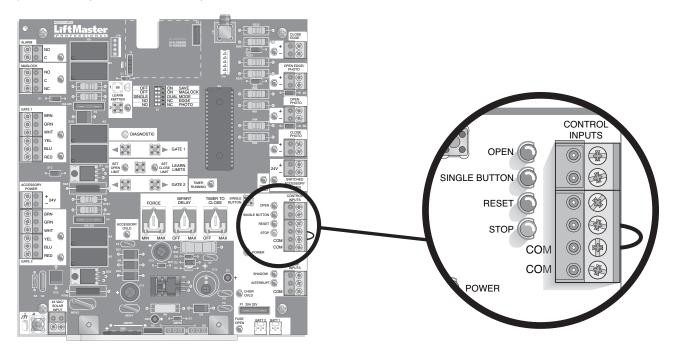
COMPATIBLE REMOTES - 315MHz

Passport™ Remote	Security H [®] Remotes
CPT13	370LM
CPT23	371LM
CPT33	372LM
Security + ® Keyless Entry	373LM
377LM	374LM



WIRE STOP BUTTON (OPTIONAL)

A jumper wire is factory installed between the stop and common input. **Stop (N/C)** - Stop only (does not reset alarm).



OPTIONAL CONTROL DEVICES

SBC (Single Button Control) Input (N/O)

This input will command the gate to OPEN / STOP / CLOSE / STOP in sequence.

Reset Control Input (N/O)

The control box has a factory installed internal reset button. These terminals are intended for use with a single reset button that is installed within line of sight of the gate. This input functions to reset the alarms. This input will NOT stop the gate.

Open (N/O) - Opens only or reverses a closing gate.

OPEN

RESET

STOP

-

SET SPEN

< [:..]

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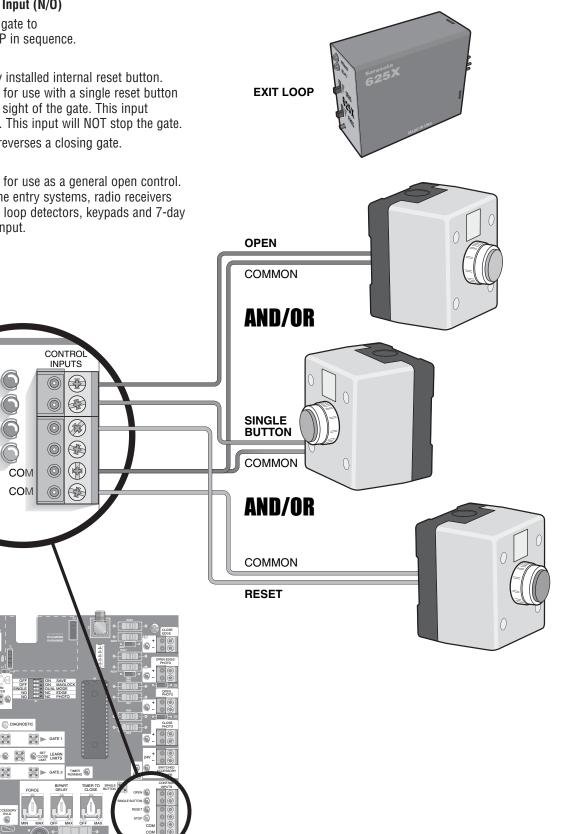
212 0

SINGLE BUTTON

POWER

Open Input and Exit Loop

These terminals are intended for use as a general open control. Accessories such as telephone entry systems, radio receivers (open only applications), exit loop detectors, keypads and 7-day timers may be wired to this input.



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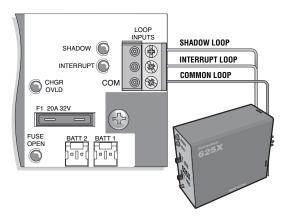
LOOP INPUTS (P11)

Shadow Loop Input Terminal and Common

This input protects cars by preventing the gate from moving off of the open or close limit when the shadow loop input is active.

Interrupt Loop Input Terminal and Common

This input functions to reverse a closing gate to the open limit. Latching this input will reset the timer to close.



PHOTO/EDGE INPUTS (P6-7-8 and 9) Terminal P6 – Close Safety Edge

This input will reverse a closing gate. It will disable the Timer-to-Close if that feature has been enabled. Activating this input while the gate is opening will have no effect.

Order part number LA400-BOX to enclose safety electronics.

Terminal P8 – Open Safety Edge/Photo Eye

If an Open Edge device or a Retro-Reflective Photo Eye has been connected to Terminal P8, then this input will reverse an opening gate for 2 seconds then stop. Activating this input with an Open Edge device or a Retro-Reflective Photo Eye connected to Terminal P8 while the gate is closing will have no effect.

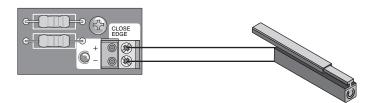
If a Chamberlain Pulsing Photo Eye has been connected to Terminal P8, then this input will pause an opening gate until the obstruction has been removed. Upon removing the obstruction, the gate will continue to open. Activating this input with a Chamberlain Pulsing Photo Eye connected to Terminal P8 while the gate is closing will have no effect.

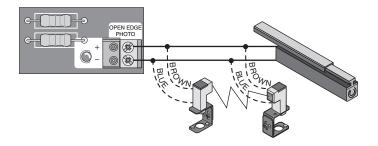
Terminal P7 – Open Safety Photo Eye

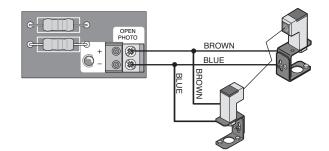
This input will pause an opening gate until the obstruction has been removed. Upon removing the obstruction, the gate will continue to open. Activating this input while the gate is closing will have no effect.

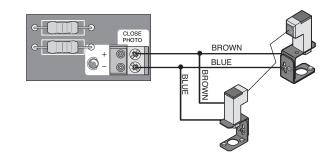
Terminal P9 - Close Safety Photo Eye

This input will reverse a closing gate to the open limit. Activating this input while the gate is opening will have no effect. The Timer-to-Close will not reactivate at the open limit.







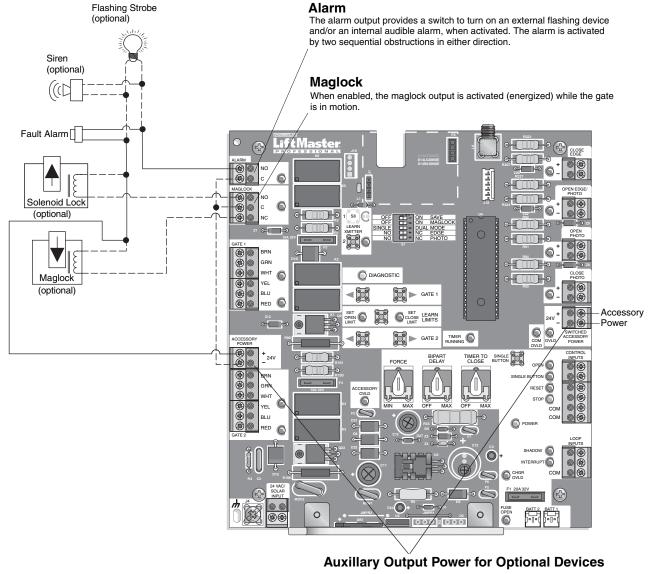


SAFETY ACCESSORIES FOR SECONDARY ENTRAPMENT PROTECTION

The following devices are acceptable for Safety Accessories for secondary entrapment protection. These devices have been tested with the LA400 to meet the requirements of UL325 and UL991.

PHOTO-ELECTRIC CONTROLS			
MODEL	DESCRIPTION	VOLTAGE	
CPS-LN4	Emitter, receiver and mounting brackets - 30' (9 m) Ranges	+24Vdc	
AOMRON	24 Volt Photocell/Electric Eye - 30' (9 m) Ranges		
SENSING EDGES			
MODEL	DESCRIPTION	VOLTAGE	
G65MG0204	Miller MG020 2-wire electric edge for gates. Sensitized on three sides. Requires mounting channel.	+24Vdc and 24Vac	
G65MG0205	Miller MG020 2-wire electric edge for gates. Sensitized on three sides. Requires mounting channel.	+24Vdc and 24Vac	
G65MGR205	Miller MGR20 2-wire electric edge in 5' (1.5 m) lengths for 2" (5 cm) round post.	+24Vdc and 24Vac	
G65MGS205	Miller MGR20 2-wire electric edge in 5' (1.5 m) lengths for 2" (5 cm) square post.	+24Vdc and 24Vac	

MAGLOCK/ALARM



(2) +24Vdc Outputs (P13 and P12) have been provided for optional devices

FORCE AND TIMER TO CLOSE

FORCE CONTROL

Set the force control such that the unit will complete a full cycle of gate travel but will reverse off an obstruction without applying an unreasonable amount of force.



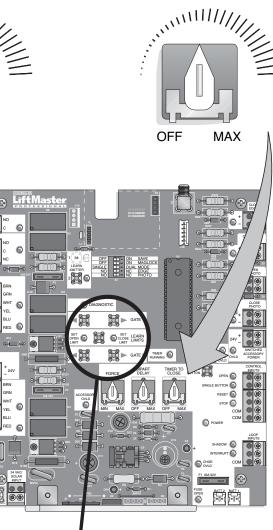


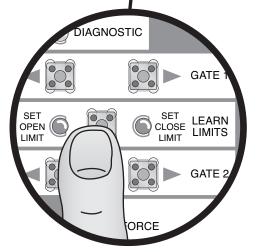
Set the BI-PART DELAY to desired setting. The range is 0 to 8 seconds, 0 seconds is OFF.



TIMER TO CLOSE ENABLE

Set the TIMER TO CLOSE to desired setting. The range is 0 to 180 seconds, 0 seconds is OFF.





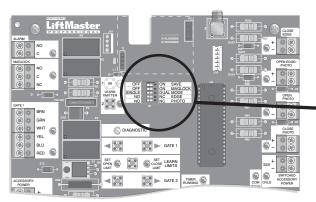
PROGRAM LIMITS

- 1. Turn Bi-Part switch to desired setting. Set to "Off" for single gate applications.
- 2. Press the "LEARN LIMITS" button.
- 3. The "SET OPEN LIMIT" LED will blink.
- 4. Use the "Gate 1" buttons to move Gate 1 to the desired open position. Repeat if Gate 2 is present using "Gate 2" buttons.
- 5. Press the "LEARN LIMITS" button to set the Open Limit for gate(s).
- 6. The "SET OPEN LIMIT" LED will turn off. The "SET CLOSE LIMIT" LED will blink.
- 7. Use the "Gate 1" buttons to move Gate 1 to the desired close position. Repeat if Gate 2 is present using "Gate 2" buttons.
- 8. Press the "LEARN LIMITS" button to set the close limit for gate(s).
- 9. The "SET CLOSE LIMIT" LED will turn off. The limits are set.
- Using programmed remote or single button input (SBC) run the gate(s) from the close limit to the open limit. After reaching the open limit, run the gate(s) to the close limit. This will learn the force in the open and close direction.
- 11. If the learned force is not high enough, manually adjust the force control as described above.

NOTE: After final limit adjustments the gate can be opened slightly further by increasing the distance between center of gate hinge and the gate bracket by 1" (25.4 mm). Do not move the post bracket assembly.

NOTE: Any following SBC or remote inputs will move the gate.

DIP SWITCH SETTINGS



SAVE SWITCH S1-1

This switch (S1-1) is used to save the settings for switches 2 through 5.

NOTE: When setting switches S2-5 the save switch must be in the off position prior to setting or changing switches for the change to be saved.

MAG DELAY ENABLE

This switch (S1-2) enables the Mag Lock feature. On an open command there will be a .5 second delay before the motor starts, to allow the Maglock to release.

MODE DUAL/SINGLE

This switch (S1-3) sets the mode as Dual or Single (See Programming section for mode).

SAFETY INPUTS

Swing gates allow four safety inputs. A DIP switch is required for determining between N/O and N/C edges and N/O and N/C eyes.

EDGE INPUT

Set switch (S1-4) to the following settings:

N/O Edge (Active Close) = 8.2K, 10K Edge, N/O dry contact edge

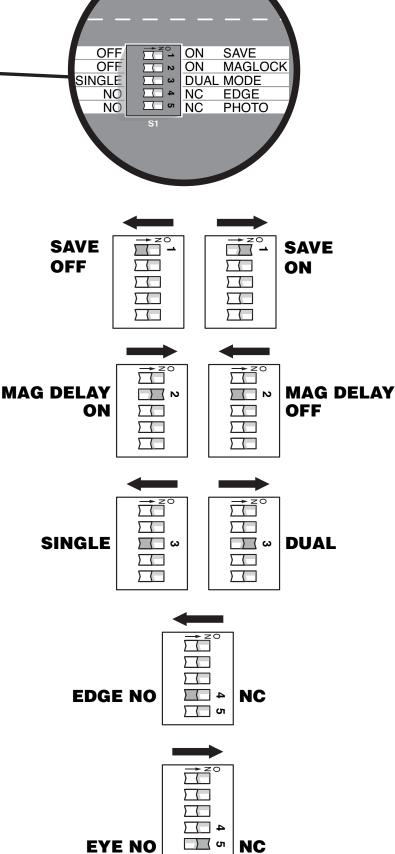
N/C Edge (Active Open) = N/C dry contact edge

NOTE: Monitored Edges should be set in the N/O position, as the activation condition is shorting the terminals.

EYE INPUT

This switch (S1-5) differentiates between N/O and N/C dry contact photoelectric eye inputs.

NOTE: Pulsing Chamberlain photoelectric eyes will automatically learn in N/O mode.



OPERATION AND MAINTENANCE

IMPORTANT SAFETY INSTRUCTIONS

To reduce the risk of SEVERE INJURY or DEATH:

- 1. READ AND FOLLOW ALL INSTRUCTIONS.
- 2. NEVER let children operate or play with gate controls. Keep the remote control away from children.
- 3. ALWAYS keep people and objects away from the gate. NO ONE SHOULD CROSS THE PATH OF THE MOVING GATE.
- 4. Test the gate operator monthly. The gate MUST reverse on contact with a rigid object or stop when an object activates the non-contact sensors. After adjusting the force or the limit of travel, retest the gate operator. Failure to adjust and retest the gate operator properly can increase the risk of INJURY or DEATH.
- 5. Use the emergency release ONLY when the gate is not moving.
- 6. KEEP GATES PROPERLY MAINTAINED. Read the owner's manual. Have a qualified service person make repairs to gate hardware.
- 7. The entrance is for vehicles ONLY. Pedestrians MUST use separate entrance.
- 8. Disconnect ALL power BEFORE performing ANY maintenance.
- 9. ALL maintenance MUST be performed by a LiftMaster professional.

10. SAVE THESE INSTRUCTIONS.

MAINTENANCE

			CHECK	AT LEAST O	NCE EVERY
DESCRIPTION	TASK	MONTH	3 MONTHS	6 MONTHS	12 MONTHS
External entrapment protection systems	Check for proper operation	•			
Gate warning signs	Make sure they are present		•		C C
Manual disconnect	Check and operate			•	Complete
Gate	Inspect for wear or damage			•	
Accessories	Check all for proper operation			•	Check
Electrical	Inspect all wire connections			•	Čk (
Frame bolts	Check for tightness			•	Out
Total unit	Inspect for wear or damage			•	

NOTES:

- 1. Disconnect power before servicing.
- 2. Severe or high cycle usage will require more frequent maintenance checks.
- *3. Inspection and service should always be performed anytime a malfunction is observed or suspected.*
- 4. When servicing, please do some "house cleaning" of the operator and the area around the operator. Pick up any debris in the area. Clean the operator as needed.
- 5. It is suggested that while at the site voltage readings be taken at the operator. Using a Digital Voltmeter, verify that the incoming voltage to the operator it is within ten percent of the operators rating.

CAUTION

To reduce the risk of FIRE or INJURY to persons, use ONLY Chamberlain part #K74-30762 for replacement batteries.

A WARNING

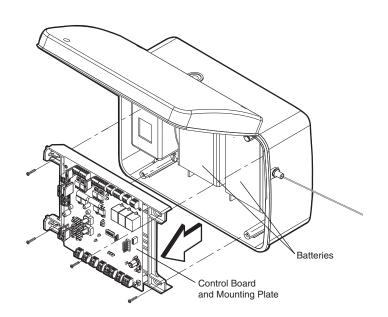
To avoid SERIOUS personal INJURY or DEATH from electrocution, DISCONNECT electrical power to operator BEFORE proceeding.

BATTERY REPLACEMENT

- 1. Disconnect power to operator.
- 2. Open the control box cover.
- 3. Remove all quick connect terminals in use to the control board. Remember location of all wire connections for reinstallation.
- 4. Remove control board and mounting plate.
- 5. Disconnect terminals leads to both batteries.
- 6. Replace both batteries and connect red wires to the positive (+) terminals (red). Connect black wires to the negative (-) terminals (black).
- 7. Install control board and mounting plate.
- 8. Reconnect all quick connect terminals to the control board.
- 9. Close cover of control box.
- 10. Reconnect power to operator.

CAUTION

To reduce the risk of FIRE or INJURY to persons, use ONLY Chamberlain part #K74-30762 for replacement batteries.



MANUAL RELEASE

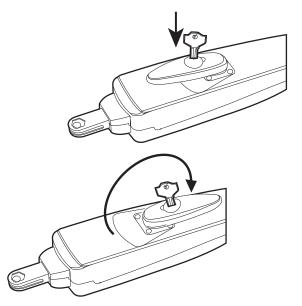
The drive mechanism can be released. The gate can then be operated manually (power failure). With a new drive mechanism, the release action may sometimes feel stiff/jerky. This is normal and has no effect on function.

Release

- 1. Insert the key into the lock.
- 2. Turn the key counter-clockwise 180°.
- 3. Turn the release lever counter-clockwise 180°.
- 4. Done! Operator is in manual mode.

Engage

- 1. Turn the release lever clockwise 180°. This engages the motor.
- 2. Turn the key clockwise 180°. This locks the release lever.
- 3. Remove the key and store in a safe place.
- 4. Done! Back in automatic mode.



LA400 SWING GATE ACCESSORIES



02101

370LM

373LM

Solar Panel Kit with battery box:

Improved solar solution with battery box (battery not included).

Steel enclosure wired station will allow for a Open, Close, Stop command of the gate.



EMX202

SECURITY+[®] Keyless Entry:

Enables homeowner to operate gate by entering a password on a specially designed keyboard. Also can add a temporary password for visitors or service persons. This temporary password can be limited to a programmable number of hours or entries.

Vehicle Detecting Driveway Probe:

One piece outdoor buried vehicle motion detector with sensing probe is housed in a small relay type housing. Provides for free exit.



3-Button Mini-Remote Control with SECURITY+®:

1-Button Station:

With key ring and fastening strip.

3-Button SECURITY+® Remote

Control:

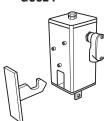
Includes visor clip.

GC824

Gate Solenoid Lock:

Heavy all steel construction. Failsafe operation keeps gate locked if power is lost. Can be welded onto gate or post. 115V operation, solenoid-activated release. Can be released in case of an emergency.







Remote Antenna Mounting Kit: Kit contains antenna bracket and 15' (4.6 m) of cable. Recommended for increasing the effective range of transmitters.

GC838	
	. 0

50-19509

50-19511

50-19512

Magnetic Gate Lock:

Incredible 1,200 Lb. holding force. Operates on 12 or 24Vdc. Low power consumption. Universal mounting holes for ease of installation. Automatically releases when power is lost.

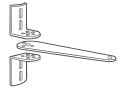
6" Post Mounting Kit for control box

4" Post Mounting Kit for control box

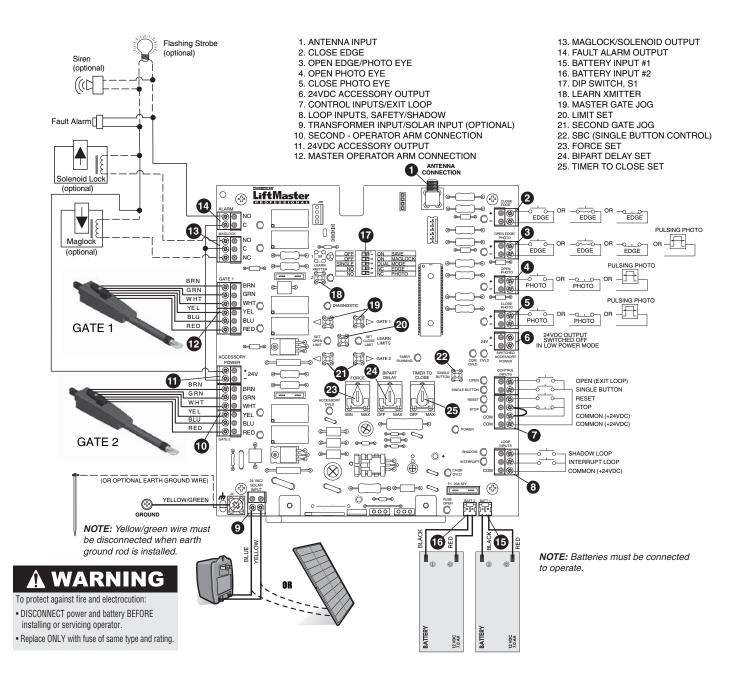
2 1/2" Post Mounting Kit for control box

50-19503

Push to Open Bracket



WIRING DIAGRAM



TROUBLESHOOTING

FAULT	POSSIBLE CAUSE	FIX
OPERATOR IS DEAD When power is supplied to the control board, no LED turns ON.	 Battery fuse is blown. Battery or Run Transformer connection is loose. Dead battery. Bad control board. 	 Replace battery fuse. Use only 20A, ATC style fuse. Check battery and transformer connections. Measure voltage across battery > 23V. Replace control board.
OPERATOR DOES NOT RUN Unit does not respond to a Radio command.	 Low battery. Radio (remote) not programmed. STOP button connection loose. STOP LED is OFF. There is an obstruction blocking photoelectric eyes in direction of movement. Safety edge is damaged or on an obstruction. Interrupt loop is obstructed. Bad control board. Motor fuse is blown. 	 Measure voltage across battery > 23V. See Programming Remote section for programming instructions. Check STOP button connections (STOP and COM) to make sure they are secure. Check gate area to ensure photoelectric eyes are not blocked. Check gate area to ensure safety edge is not resting on an obstruction. Check safety edge wiring and connections. Check gate area to ensure path is unobstructed. Replace control board. Replace motor fuse. Use only 15A, ATC style fuse.
OPERATOR DOES NOT RUN Unit does not respond to SBC command.	 Low battery. SBC button connection loose. STOP button connection loose. STOP LED is OFF. Obstruction is blocking the photoelectric eyes in the direction of movement. The safety edge is damaged or on an obstruction. Interrupt loop is obstructed. Bad control board. Motor fuse is blown. 	 Measure voltage across battery > 23V. Check SBC and COM connections to ensure they are secure. Check STOP button connections (STOP and COM) to make sure they are secure. Check gate area to ensure photoelectric eyes are not blocked. Check gate area to ensure safety edge is not resting on an obstruction. Check safety edge wiring and connections. Check gate area to ensure path is unobstructed. Replace control board. Replace motor fuse. Use only 15A, ATC style fuse.
MOTOR DOES NOT RUN Relays 'click' when Radio or SBC signal is given, but the operator does not move.	 Bad motor. Cable wiring between control and operator arm disconnected or loose. Bad control board. Batteries not connected. 	 Replace motor. Replace control board. Replace control board. Connect batteries.
GATE STOPS AND REVERSES RIGHT AFTER IT STARTS MOVING	 A fault has occurred. Force set too low. 	 Check gate for obstructions. Adjust FORCE setting until gate completes a full open/close cycle without reversing. The force setting may need to be adjusted in cold weather, as the gate will not move as freely.
GATE STOPS RUNNING RIGHT AFTER IT STARTS MOVING (BATTERY RUN)	 Battery voltage low or near low voltage cut-off. 	➤ Charge batteries. If problem persists, they may be near the end of their life. Replace batteries. <i>NOTE:</i> Replace both batteries at the same time. Use only Chamberlain part #K74-30762 for replacement batteries.
	2) A fault has occurred.	 Check gate for obstructions.
GATE OPENS BUT DOES Not close	 An input is continuously activated. Entry system output is connected to the Open input, and is "stuck" opening. 	 Verify that all inputs are functioning properly. Verify Entry system connections and operation.

TROUBLESHOOTING

FAULT	POSSIBLE CAUSE	FIX
GATE RUNS TOO SLOW	1) Open and Close Limits are set too close together.	If the Open and Close Limits are set within the ramp down distance of each other, the gate will run at slow speed all the time.
	 The gate is starting within the ramp down distance from the Open or Close Limit. 	Gate will run slow to limits if motion is started within the ramp-down distance from the limit.
GATE DOES NOT CLOSE	1) Verify that the Timer-to-Close is turned OFF.	► Verify that the Timer-to-Close is ON and set.
AUTOMATICALLY	 2) Gate opened by an obstruction reversal. 3) The Interrupt Loop is obstructed. 	► Check gate area to ensure path is unobstructed.
	4) Obstructed close photoelectric eye or ed5) The Open input is "stuck".	 Check the Open Loop area to ensure all obstructions are removed. If an external opening device or entry or entry system is attached, check for proper operation of that system.
GATE WON'T STAY OPEN WHEN USING FIRE INPUT Fire Input switch should be a constant contact key switch connected to Open Loop input (Open only).	1) Fire Input switch is a momentary contact.	Make sure the Fire Input switch is constant contact. If it is not, replace with a constant contact switch.
INTERRUPT LOOP DOES	1) Bad loop sensor or loop detector.	► Replace loop sensor or loop detector.
NOT ACT PROPERLY	2) Bad connection between loop sensor, loop detector, and the control board.	► Check connections to make sure they are secure.
EXIT LOOP (FREE EXIT) DOES NOT OPEN GATE	 Bad loop sensor or detector. Bad connection between the loop sensor, loop detector, and the control board. 	 Replace loop sensor or loop detector. Check connections to make sure they are secure.
	3) The Shadow Loop is obstructed.4) An Open photoelectric eye or safety edge is obstructed.	 Check the gate area to make sure all obstructions are removed. Check the gate area to make sure all obstructions are removed.
MAGLOCK DOES NOT WORK Maglock does not hold gates locked	 Bad connection between the Maglock, its power supply, and the control board. Bad Maglock or Maglock power supply. Large gap between gates. Bad control board. 	

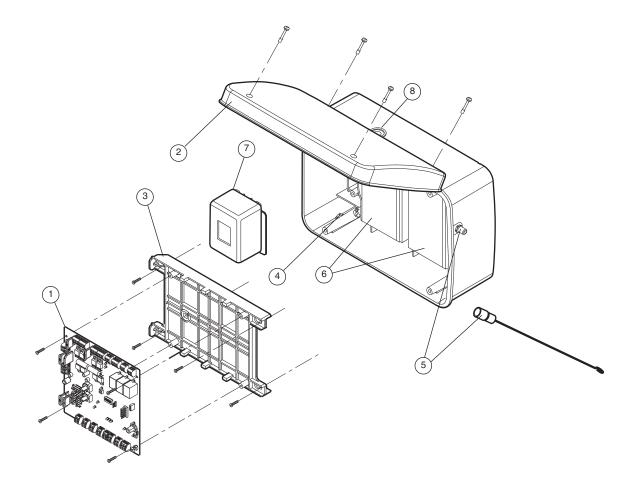
DIAGNOSTIC CODES

# OF BLINKS	MEANING
1	No Stop Switch Connected
2	Gate 1 Arm Disengaged
3	Gate 2 Arm Disengaged
4	Both Gate Arms Disengaged
5	RPM Reversal
6	Force Reversal
7	Processor Reset
8	ROM Check Failed
9	RAM Check Failed
10	EEPROM Check Failed

REPAIR PARTS

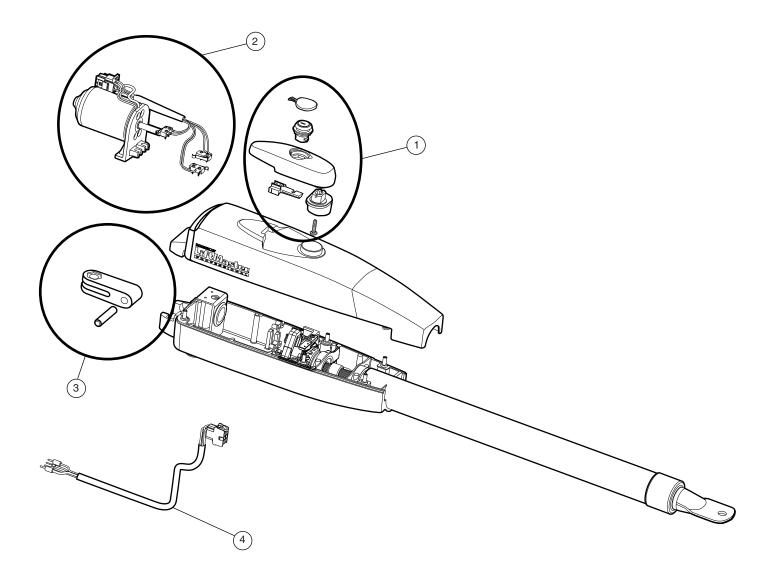
Refer to the parts lists below for replacement parts available for your operator. If optional modifications and/or accessories are included with your operator, certain components may be added or removed from these lists.

CONTROL BOX LA400-CONT					
ITEM	PART #	DESCRIPTION	QTY		
1	K001A6039	Control Board	1		
2	K75-15480	Control Box & Cover			
		with Gasket	1		
3	K75-30764	Control Board Bracket	1		
4	K23-19380	Reset Switch	1		
5	K74-19499	Antenna	1		
6	K74-30762	Battery	2		
7	K74-30763	Transformer	1		
8	K76-19446	Alarm	1		
Not Shown	K74-30941	ATC Fuse Kit Includes			
		20 Amp (1), 15 Amp (2)			



REPAIR PARTS

PART # 11ASWG-442SA	DESCRIPTION Release Lever	QTY
14SWG-442SA	Release Lover	-
	הפונמסט בפעטו	
1ASWG-438SA	Motor with Limit Switch Harness	1
1ASWG-0014SA	Rear Connector	1
1ASWG-489	Cable 24V with Connector	1
1ASWG-0119	Release Key	1
 -	1ASWG-438SA 1ASWG-0014SA 1ASWG-489	1ASWG-438SAMotor with Limit Switch Harness1ASWG-0014SARear Connector1ASWG-489Cable 24V with Connector



OPERATOR NOTES

WARRANTY POLICY AND SERVICE

LIFTMASTER® TWO YEAR LIMITED WARRANTY

The Chamberlain Group, Inc. warrants to the first retail purchaser of this product, for the structure in which this product is originally installed, that it is free from defect in materials and/or workmanship for a period of two years from the date of purchase. The proper operation of this product is dependent on your compliance with the instructions regarding installation, operation, maintenance and testing. Failure to comply strictly with those instructions will void this limited warranty in its entirety.

If, during the limited warranty period, this product appears to contain a defect covered by this limited warranty, call 1-800-528-2806, toll free, before dismantling this product. Then send this product, pre-paid and insured, to our service center for warranty repair. You will be advised of shipping instructions when you call. Please include a brief description of the problem and a dated proof-of-purchase receipt with any product returned for warranty repair. Products returned to Seller for warranty repair, which upon receipt by Seller are confirmed to be defective and covered by this limited warranty, will be repaired or replaced (at Seller's sole option) at no cost to you and returned pre-paid. Defective parts will be repaired or replaced with new or factory-rebuilt parts at Seller's sole option.

ALL IMPLIED WARRANTIES FOR THE PRODUCT, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE TWO YEAR LIMITED WARRANTY PERIOD SET FORTH ABOVE, AND NO IMPLIED WARRANTIES WILL EXIST OR APPLY AFTER SUCH PERIOD. Some States do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. THIS LIMITED WARRANTY DOES NOT COVER NON-DEFECT DAMAGE, DAMAGE CAUSED BY IMPROPER INSTALLATION, OPERATION OR CARE (INCLUDING, BUT NOT LIMITED TO ABUSE, MISUSE, FAILURE TO PROVIDE REASONABLE AND NECESSARY MAINTENANCE, UNAUTHORIZED REPAIRS OR ANY ALTERATIONS TO THIS PRODUCT), LABOR CHARGES FOR REINSTALLING A REPAIRED OR REPLACED UNIT, OR REPLACEMENT OF BATTERIES.

THIS LIMITED WARRANTY DOES NOT COVER ANY PROBLEMS WITH, OR RELATING TO, THE GARAGE DOOR OR GARAGE DOOR HARDWARE, INCLUDING BUT NOT LIMITED TO THE DOOR SPRINGS, DOOR ROLLERS, DOOR ALIGNMENT OR HINGES. THIS LIMITED WARRANTY ALSO DOES NOT COVER ANY PROBLEMS CAUSED BY INTERFERENCE. ANY SERVICE CALL THAT DETERMINES THE PROBLEM HAS BEEN CAUSED BY ANY OF THESE ITEMS COULD RESULT IN A FEE TO YOU.

UNDER NO CIRCUMSTANCES SHALL SELLER BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES ARISING IN CONNECTION WITH USE, OR INABILITY TO USE, THIS PRODUCT. IN NO EVENT SHALL SELLER'S LIABILITY FOR BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE OR STRICT LIABILITY EXCEED THE COST OF THE PRODUCT COVERED HEREBY. NO PERSON IS AUTHORIZED TO ASSUME FOR US ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF THIS PRODUCT.

Some states do not allow the exclusion or limitation of consequential, incidental or special damages, so the above limitation or exclusion may not apply to you. This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

