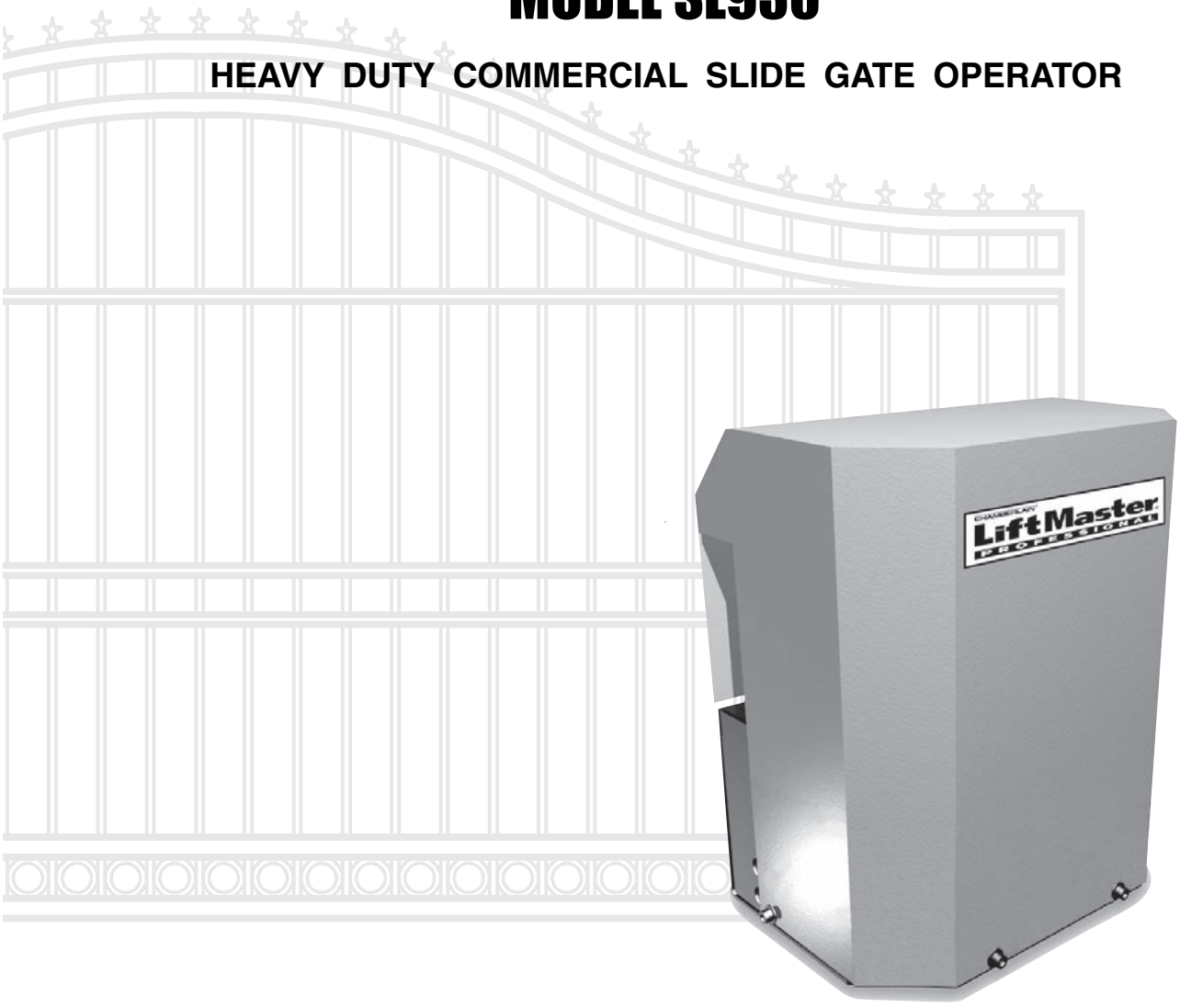
CHAMBERLAIN®

LiftMaster®

PROFESSIONAL

MODEL SL930

HEAVY DUTY COMMERCIAL SLIDE GATE OPERATOR



2 YEAR WARRANTY

Serial # _____
(located on electrical box cover)

Installation Date_____

MODEL SL930 IS FOR VEHICULAR PASSAGE GATES ONLY AND IS NOT INTENDED FOR PEDESTRIAN PASSAGE GATE USE

INTERTEK ETL LISTED US

TABLE OF CONTENTS

IMPORTANT NOTES

- 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.

⚠ WARNING

Mechanical

⚠ 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.

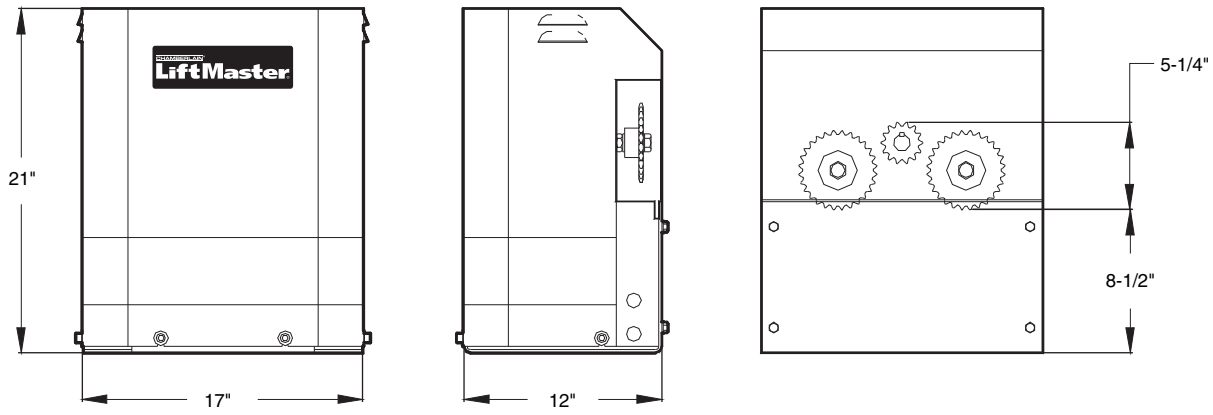
CARTON INVENTORY

Before beginning your installation, check that all components were provided and received undamaged. Refer to list below for factory provided parts.

- **OPERATOR**
- **OWNER'S MANUAL**
- **HARDWARE KIT SL930 (K77-40335)**
  Complete with:

Description	Qty.
Allen Wrench 5/16"	1
Straight Connector	1
Take-Up Bolt 3/8-16 x 6"	2
Round U-Bolt 3/8-16 x 2"	2
Square U-Bolt 3/8-16 x 2"	2
Screw #1/4-14 x 3/4	2
Hex Nut 3/8-16	8
Lock Washer 3/8"	4
Masonry Bolt 3/8-16 x 3"	4
Flat Washer 13/16"	8

OPERATOR SPECIFICATIONS



The following models are not currently ETL approved: SL930-DC-BB

OPERATOR DIMENSIONS

Height: 21" Width: 17" Depth: 12"

SHIPPING WEIGHT

170 lbs.
Options: Steel Mounting Stand: 23 lbs.

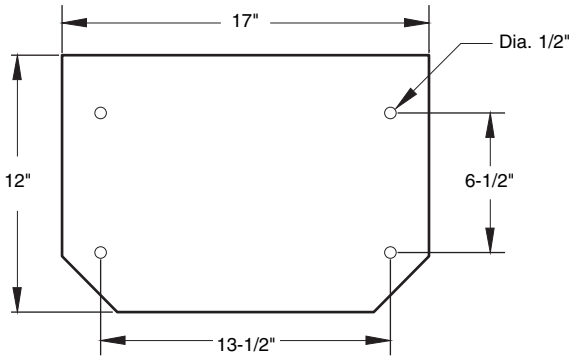
POWER REQUIREMENT

Dedicated 115 Volt AC (+/- 10V), 5 AMP Power Circuit

APPLICATIONS

- Maximum Gate Weight: 1,500 lbs.
- Maximum Gate Length: 40 ft.
- Maximum Track Grade: 5 % (1 ft. rise over 20 ft. run)
- Maximum Gate Speed: 10"/sec.

BASE PLATE HOLE PATTERN



OPERATOR SPECIFICATIONS

OPERATOR FEATURES

CIRCUIT BOARD

The SL930 uses the Full Systems Capability circuit board, a powerful control system. This circuit board operates on 12 ~ 18 Volts and can deliver power to the motor through high power switching. The limit switch input terminals require the use of normally open type limit switches. These switches are used to accurately stop the gate operator in the open and closed positions. To safeguard the operator from damage that could result from limit switch or system protection failure, the Full Systems Capability circuit board has a built-in maximum run timer which will allow the operator to run for approximately 300 seconds and then shut off automatically. The Full Systems Capability circuit board has an adjustable gate sensitivity feature which will stop or reverse the gate if the gate is pushing harder than normal because of an obstruction.

GATE SENSITIVITY

The SL930 Full Systems Capability circuit board has a built-in system protection feature which when adjusted properly will deliver only enough power to the motor to overcome the resistance of the gate. The amount of power that the circuit board will deliver can be adjusted for both directions of travel to accommodate the various gate weights that the SL930 operator is recommended for (see page 3).

OPERATION

The SL930 Full Systems Capability can operate in a AUTO CLOSE TIMER (TIMER ON) or a PUSH-TO-OPEN/PUSH-TO-CLOSE (TIMER OFF) mode of operation. In the AUTO CLOSE TIMER mode of operation the operator is given a command to open the gate and hold it open until the input is released and until the auto close timer has elapsed at which point the operator will close the gate automatically. In the PUSH-TO-OPEN/PUSH-TO-CLOSE mode of operation each time a signal is sent to the operator, it will cause it to do the opposite of what it did before. (i.e., If the gate is closed, it will start opening, if it is open, it will start closing: If it is closing, it will REVERSE TO OPEN, if it is opening, it will REVERSE TO CLOSE.)

CONTROLS

The SL930 Full Systems Capability works with the following control devices: Key switches, Push buttons (separate or intercom), numerical key pads and any peripheral equipment which can supply normally open or normally closed contacts as well as optional remote controls and receiver (specified by and available from the manufacturer). These contacts can be connected to the operator input terminals to perform the opening, close, safety, or the stop functions.

AUTO CLOSE TIMER

The operator comes factory preset with the auto close timer turned OFF. The auto close timer will close the gate automatically after a specific amount of time has elapsed. The amount of time can be easily adjusted between 0 and 45 seconds by turning a small “pot” located on the right edge of the circuit board (see page 22). The timer can be disabled or activated by flipping a single switch located on the top right edge of the circuit board. If the timer will be used it is recommended that some type of supplementary safety device be installed. If more time is required, there is an extended timer available from the manufacturer allowing up to 100 additional seconds.

MANUAL RELEASE SWITCH

This simple on-off switch is built into the operator. In an emergency, EVEN WITH THE POWER OFF, the gate can be pushed open manually after flipping the switch from Operate to Release.

GATE SENSITIVITY ADJUSTMENT

The amount of force necessary to stop the gate can be adjusted to conform to the various sizes and weights of any particular gate. When adjusting the sensitivity, the operator can be given only as much energy as is necessary to overcome the resistance of the gate. If the gate should strike an obstruction in either direction, the gate will reverse. If the gate should again strike an obstruction before reaching a limit, the gate will stop, remain stopped, and will sound an alarm (see page 22).

MASTER AND SECOND

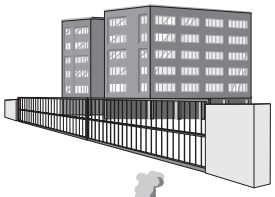
Some very large entrances may require the use of two gates. If this is the case, the two gates can be easily automated using the “master and second” configuration. This configuration uses two gates and two operators in ONE driveway. The operators used are two regular SL930 Full Systems Capability operators. One of which is of standard “right hand operation” and the other which is easily converted to “left hand operation” by flipping a single switch located at the top of the circuit board (see page 22).

OPERATOR SPECIFICATIONS

UL325 MODEL CLASSIFICATIONS

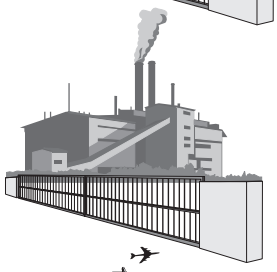
CLASS I – RESIDENTIAL VEHICULAR GATE OPERATOR

A vehicular gate operator (or system) intended for use in a home of one-to four single family dwellings, 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, garage, 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 location not intended to service the general public.

CLASS IV – RESTRICTED ACCESS VEHICULAR GATE OPERATOR

A vehicular gate operator (or system) intended for use in a guarded industrial location or building such as an airport security area or other restricted access locations not servicing the general public, in which unauthorized access is prevented via supervision by security personnel.

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 six 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 C: Inherent adjustable clutch or pressure relief valve.

Type D: Connections provided for a control requiring continuous pressure to operate the operator open and close.

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 Class	Slide Gate Operator		Swing & Gate Barrier (Arm) Operator	
	Primary Type	Secondary Type	Primary Type	Secondary Type
Class I & II	A	B1, B2 or D	A or C	A, B1, B2, or C
Class III	A, B1 or B2	A, B1, B2, D or E	A, B1, B2 or C	A, B1, B2, C, D or E
Class IV	A, B1, B2 or D	A, B1, B2, D or E	A, B1, B2, C or D	A, B1, B2, C, D or E

The chart above illustrates the entrapment protection requirements for each of the four 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 or Type D- Constant pressure control.

OPERATOR WARNINGS

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.

2. 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 swing 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.

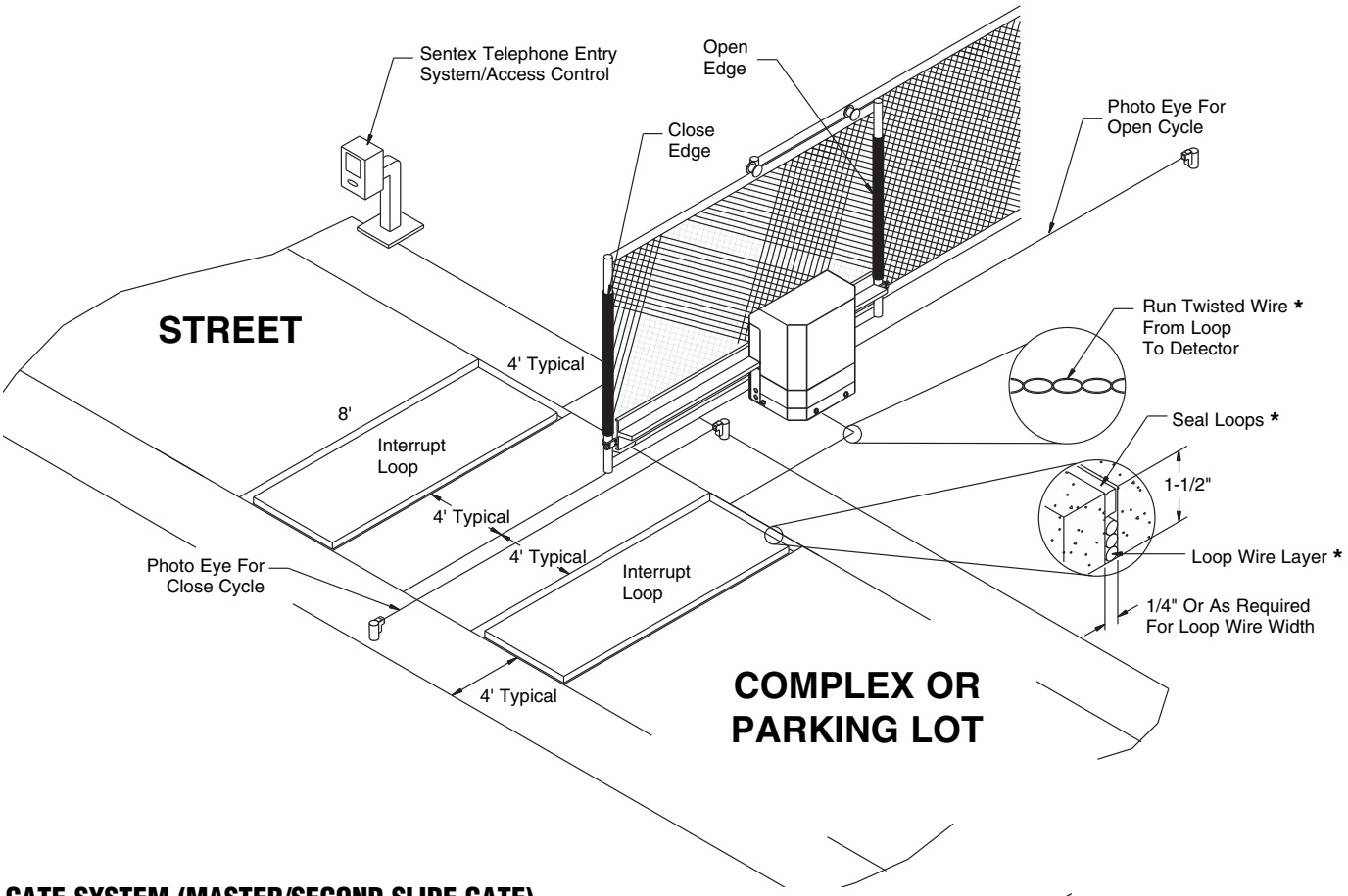
10. A minimum of two (2) WARNING SIGNS shall be installed, one on each side of the gate where easily visible.

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.

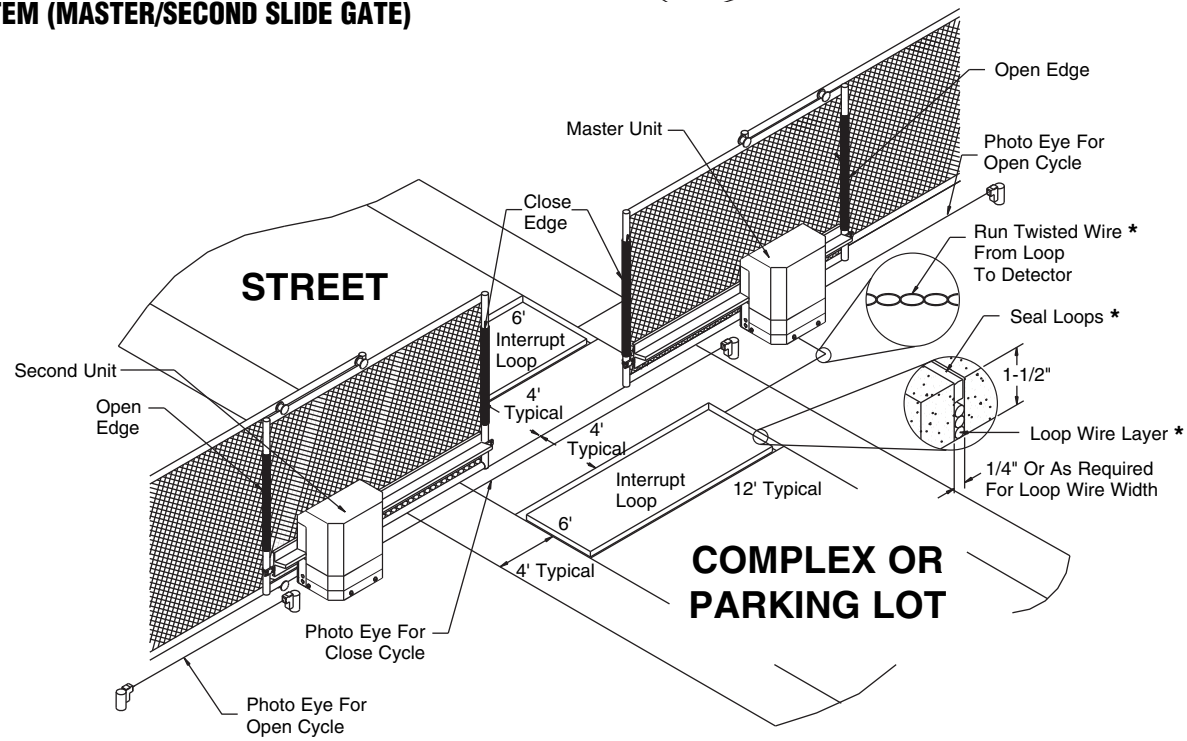
12. For a gate operator utilizing a contact sensor such as an edge sensor:
    a. One or more contact sensors shall be located where the risk of entrapment or obstruction exists, such as at the leading edge, trailing edge and post mounted both inside and outside of a vehicular horizontal slide gate.
    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

GATE SYSTEM (COMMERCIAL SLIDE GATE)



GATE SYSTEM (MASTER/SECOND SLIDE GATE)



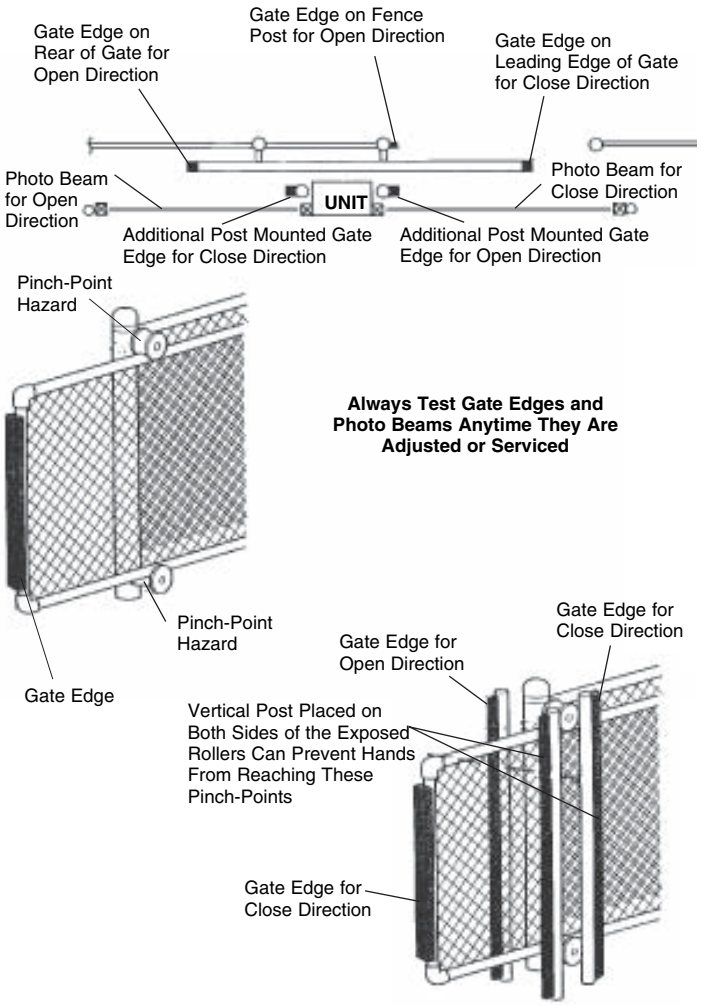
***Refer to loop manufacturer's instructions for detailed installation and loop wiring instructions.**

OPERATOR WARNINGS

SAFETY PRECAUTIONS FOR OPEN ROLLER GATES

⚠ WARNING

- Injuries occur when people get their hands or feet caught between the top or bottom of the gate and the gate roller. These potential pinch-points should be guarded against at ALL times. Enclosed style gate tracks are available for refitting of these rollers from many fence suppliers. Also, roller guards are available for installing over the rollers.
- UL325 requires that, when used, contact sensors shall be located at the leading edge, trailing edge, and be post mounted both inside and outside of a vehicular horizontal slide gate. Non-contact sensors such as photo eyes must protect during both open and close gate cycles.
- Injuries occur when people put their hands and arms through openings in the grill while the gate is operating. They cannot retract their arm and it gets caught between the moving gate grill and the stationary fence post or fence. This potential hazard can be averted by placing a 4' (1.2 m) screen mesh on the gate to prevent access through openings anywhere the gate may travel. See Safety Brochure for details.
- To prevent entrapment injuries, mount controls at least 6' (1.8 m) from the gate or ANY moving parts of the gate.



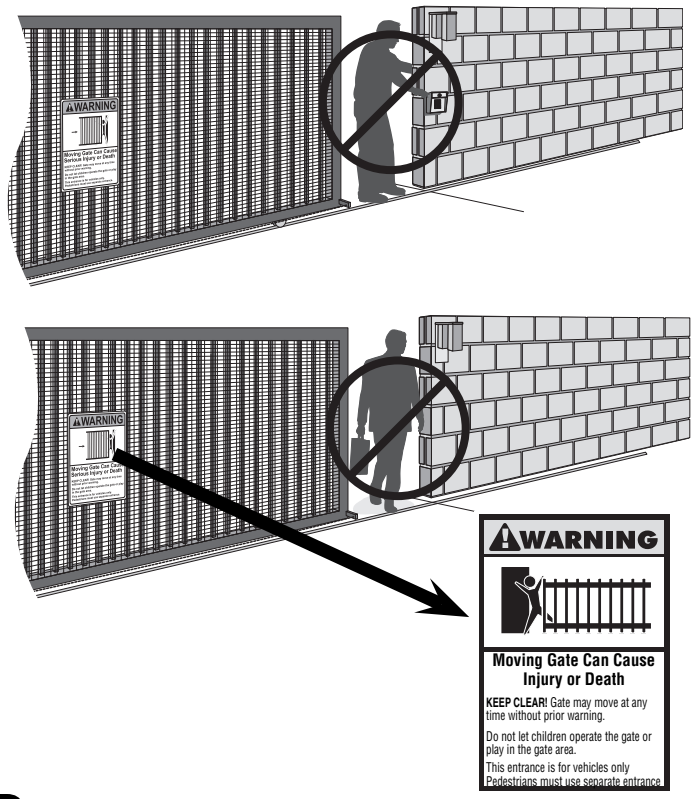
WARNING SIGN PLACEMENT

⚠ 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.
- Do NOT mount accessories that are accessible through gate.

NOT FOR USE AS PEDESTRIAN PASSAGE! This operator is intended for vehicular use only. To prevent INJURY to pedestrians, a separate pedestrian access should be supplied, visible from the gate. Locate the pedestrian access where there is not a chance of INJURY at any point during full movement of the gate.



PREPARATION

TEST OPERATOR

Remove the gate operator from its package and make sure that all parts are included. Refer to the Carton Inventory and Repair Parts. If any parts appear to be missing, contact dealer

Temporarily plug the operator into 115 Volt outlet or extension cord (Figure 1).

Before beginning installation, test the gate operator by running the operator back and forth 2 or 3 times. If the gate operator appears to have any shipping damage, contact a dealer.

SET REMOTE

The operator may be run back and forth by momentarily touching the open input terminals together. The terminals can be touched together with a short length of wire, paper clip or needle nose pliers. With full systems capability circuit board, the open input terminals are 5 and 6 (Figure 2).

Disconnect power when finished!

GATE PREPARATION

The tail end of the gate should extend approximately 24" beyond the edge of the driveway. If this is not the case, an extension tail will need to be added to the gate. This will give room for the gate operator. Make the extension tail 24" x 24" (Figure 3). If the gate has not yet been fabricated, add 24" to the length of the gate.

⚠ WARNING

To prevent possible SERIOUS INJURY or DEATH:
- DO NOT connect electric power until instructed to do so.

Figure 1

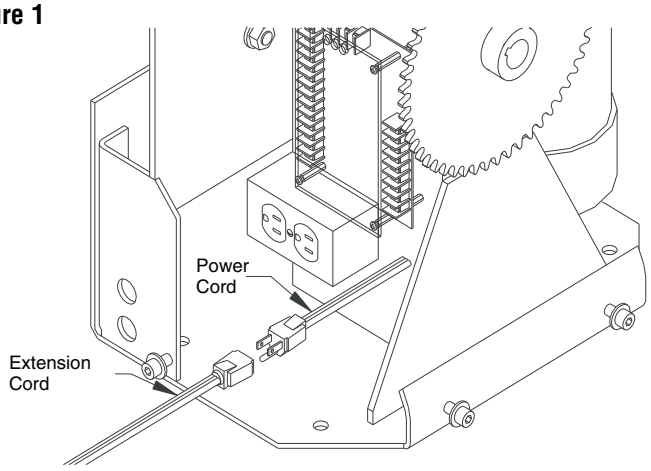


Figure 2

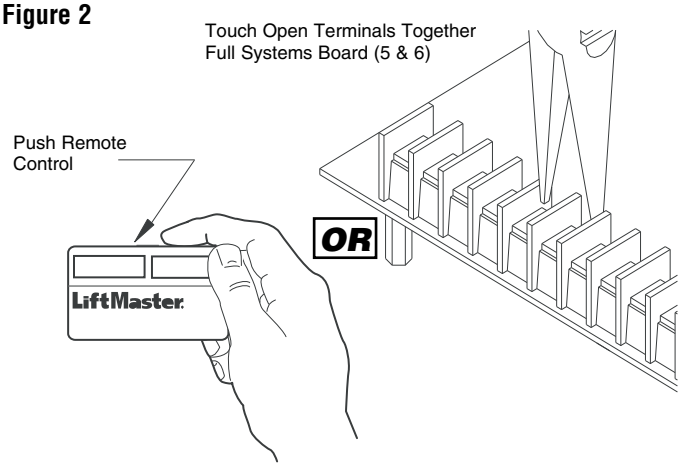
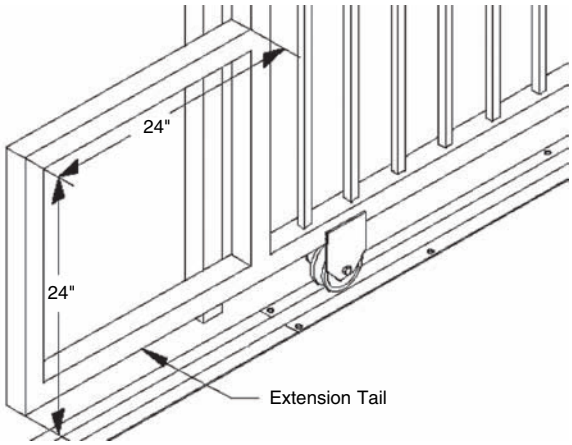


Figure 3



MOUNT THE OPERATOR

CEMENT PAD LOCATION

If no concrete surface exists to attach the gate operator to, make a cement pad 16" x 24" x 10". The cement pad should be at least 6" in depth and extend below frost line. If it is desirable to elevate the gate operator, it may protrude 4" or more above ground (Figure 4). Place the shortest pad edge even with the driveway edge. Place the longer edge of the pad 1" away from the gate.

OPTIONAL MOUNTING STAND

If the steel mounting stand will be used, place the shortest edge of the stand 4" from the driveway edge and place the longest edge of the stand 4-1/2" away from the gate. The top of the steel stand may sit on the ground or the stand may be elevated to keep the operator above snow, flooding etc. Make a post hole and cement the stand in place, making sure the stand is level and square to the gate (Figure 5).

POSITION GATE OPERATOR

If the steel mounting stand was used, simply bolt the gate operator to the stand. If the operator will be mounted to a concrete surface or pad, place the shortest edge of the operator 4" away from the edge of the driveway. Place the longer edge of the gate operator 2-1/2" away from the gate (Figure 6).

ANCHOR THE OPERATOR

When the gate operator is correctly positioned on the concrete surface or pad, mark the base hole locations onto the cement with a felt tip marker or equivalent. Once marked, move the operator to the side and drill the 4 holes using a 3/8" masonry bit. Place the operator back into position. Insert the four sleeve anchors into the holes and firmly tighten (Figure 7).

Figure 4

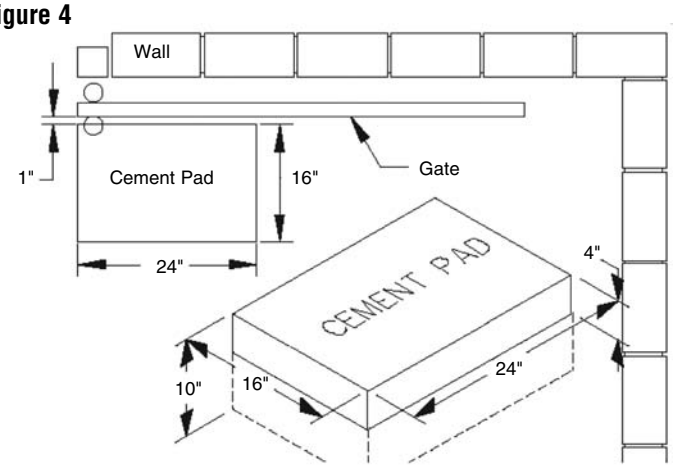


Figure 5

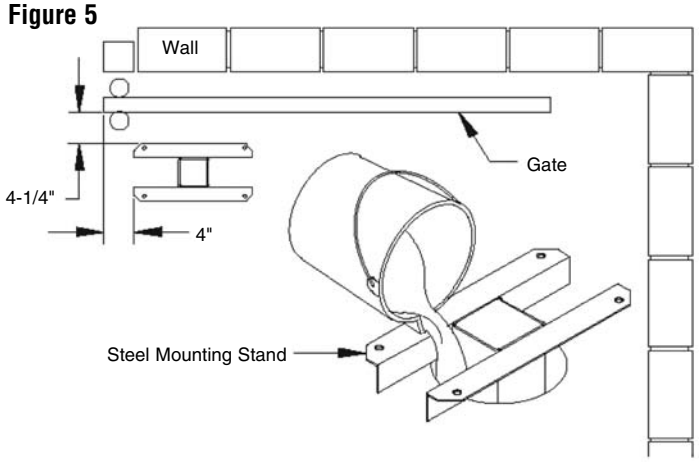


Figure 6

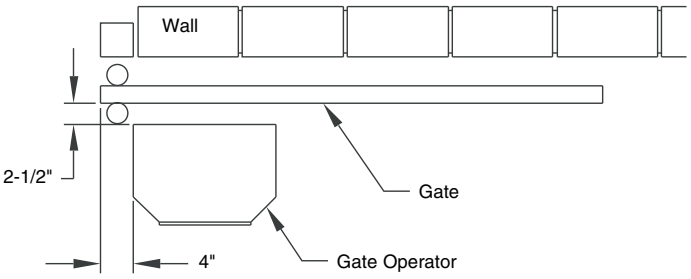
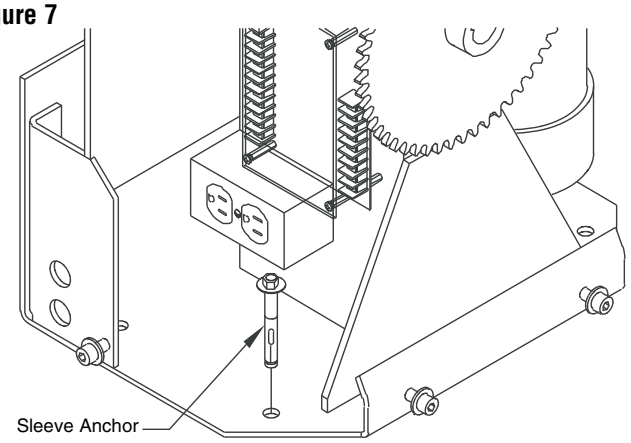


Figure 7



INSTALL GATE BRACKET AND DRIVE CHAIN

THREADING THE CHAIN

Now that the operator is firmly attached, the chain may now be connected to the gate and operator. Begin by threading the chain through the sprockets. The sprockets come arranged so that the chain may be threaded under the idler sprockets and over the drive sprocket (Figure 8). Alternately, the chain may be threaded over the idler sprockets and under the drive sprocket by moving the idler sprockets to the alternate positions above.

NOTE: *The cover will need to be modified for the alternate arrangement.*

ATTACH CHAIN TO GATE

Attach the gate bracket to the gate using the round or square U-bolts for round or square gate frames respectively (Figure 9). Attach the chain to the gate brackets using the chain bolt and master link as shown. If necessary, the chain may be easily shortened using a chain breaker. Adjust the height of the gate brackets until the chain is level and firmly tighten the U-bolts. For round gate frames, it may be necessary to drive the self tapping screw through the gate bracket and into the gate.

ADJUST LIMITS

The limit nuts need to be adjusted to cause the gate to stop in the desired open and closed positions. These adjustments can be roughly made before power has been hooked up by flipping the manual release switch and pushing the gate manually (Figure 10). Push the gate to the open position and adjust the limit nut to press the limit switch in. The limit nuts can be turned after pressing down on the guide plate. Push the gate closed and adjust the other limit nut to press in the other limit switch.

CAUTION: Do not allow the limit nuts to travel past the switch as this may damage the switches. When finished, make sure the guide plate is properly engaged with the grooves on the limit nuts.

CAUTION

To prevent damage to the operator or gate, DO NOT drive the limit (nuts) actuators on the shaft past their normal positions.

Figure 8

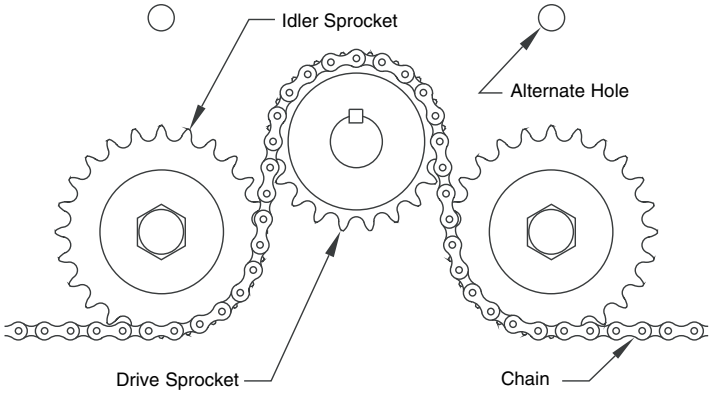


Figure 9

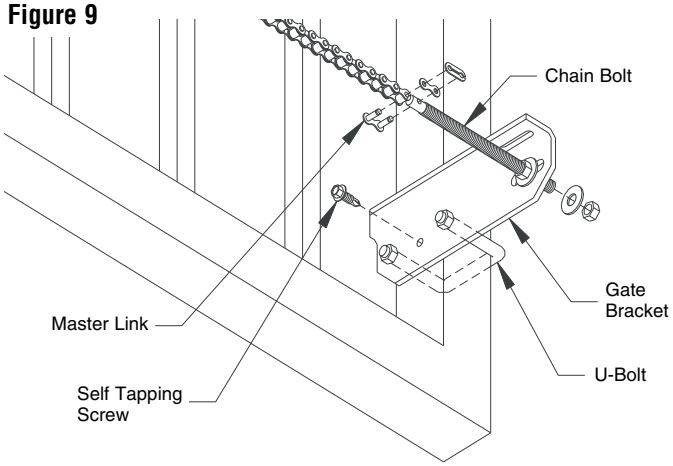
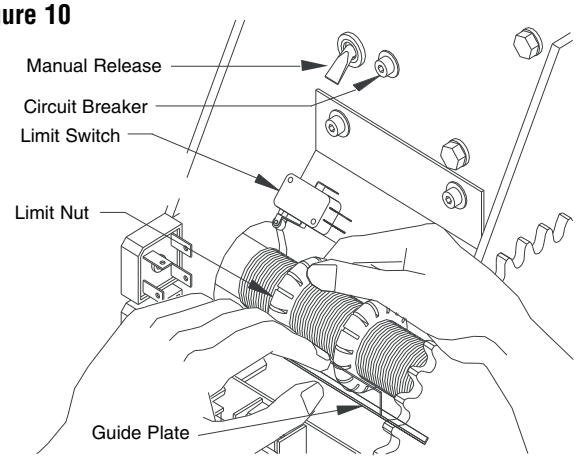


Figure 10



ALTERNATE INSTALLATION

REAR MOUNT PLACEMENT

The rear mount installation is an excellent way to conceal the chain or operator. The operator is placed in the extreme rear of the gate and the chain never goes across the driveway (Figure 11). The chain only goes from the gate operator to a post or wall beside the driveway. Place shortest edge of the operator 3" from the rear end of the gate and place the long edge of the operator 3-1/2" away from the gate toward the wall.

CHAIN ARRANGEMENT

The chain will form a continuous loop, going around the drive sprocket on the operator, and around the idler sprocket on the post or wall. Only one gate bracket is required on the rear edge of the gate where both ends of the chain come together and attach to the bracket (Figure 12).

To prepare the operator for a rear mount installation, remove one or both idler sprockets from the operator. Neither idler sprocket will be needed on the gate operator. For the idler sprocket, an ES130 End Sprocket Assembly with chain guard may be used. Alternately, an idler sprocket that was removed from the gate operator may be used. It is recommended that a cover be placed over the idler sprocket in this case for safety.

SPACE SAVER VERSION

For rear mount installation that are limited on space for the gate to slide back into, the space saver version is an excellent alternative. There may be a property wall, parking stall or other obstacle that reduces the amount of space available, making it difficult to mount the gate operator and still have room for the gate to slide. The space saver version of the gate operator places the drive shaft externally so that the gate can slide past the gate operator, picking up a lot of extra space. The external drive shaft can be specified to be placed on either side of the operator for left or right side installations or can be easily converted in the field.

Installation of the space saver version is very much like the rear mount installation of the standard gate operator. The chain makes a continuous loop going around the drive sprocket on the operator and around the idler sprocket on the post or wall. For the case of the space saver, the external drive sprocket allows the gate to slide past the operator, making installation possible where there is only 4" of space left over after the gate is open (Figure 13).

Figure 11

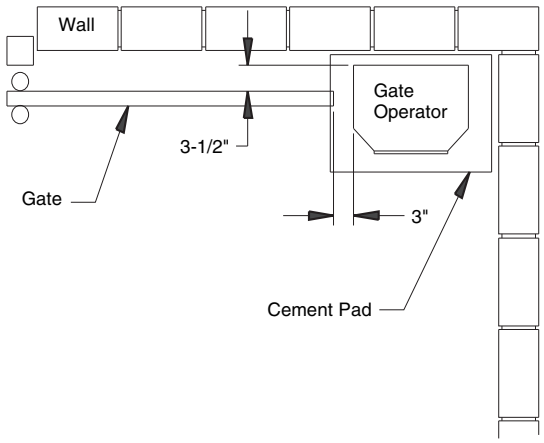


Figure 12

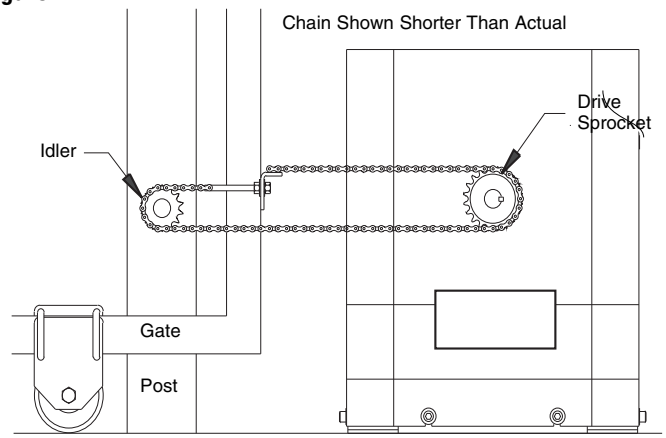
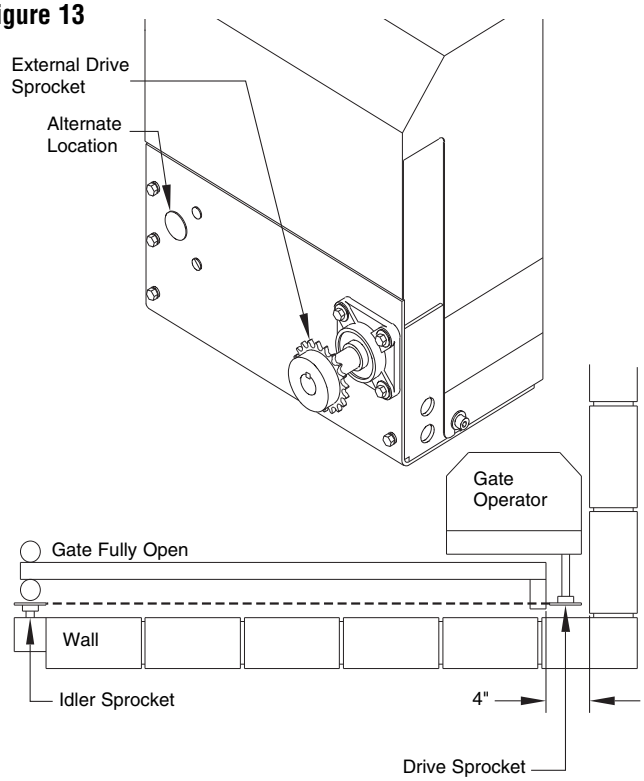


Figure 13



WIRING

⚠ WARNING

To reduce the risk of SEVERE INJURY or DEATH:

- ANY maintenance to the operator or in area near the operator MUST NOT be performed until disconnecting 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.
- Disconnecting 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.

POWER WIRING

CONDUIT ROUTING

The operator is provided with two knockout holes on each side. Run 1/2" liquid tight flexible conduit through one of the four knockout holes and into the handy box where the receptacle is located. An elbow fitting is attached to the handy box and a straight fitting is supplied for the other end of the flexible conduit. Run three 12 gauge wires through the flexible conduit and into the handy box. There should be a black or other colored wire for hot, a white wire for neutral, and a green wire for earth ground.

STANDARD 115 VOLT HOOK-UP

1. Connect the three 12 gauge wires to the 115 Volt receptacle.
2. Connect the black (hot) wire to the brass screw.
3. Connect the white (neutral) wire to the silver screw.
4. Connect the green (ground) wire to the green grounding screw.

When the wires have been connected to the receptacle, insert the receptacle back into the handy box (Figure 2). Secure the receptacle to the handy box with two screws. Apply the receptacle cover to the receptacle and secure it with a screw. The power cord may now be plugged into the receptacle.

To reduce the risk of electric shock, this equipment has a grounding type plug that has a third (grounding) pin. This plug will only fit into a grounding type outlet. Do not change the plug in any way.

Figure 1

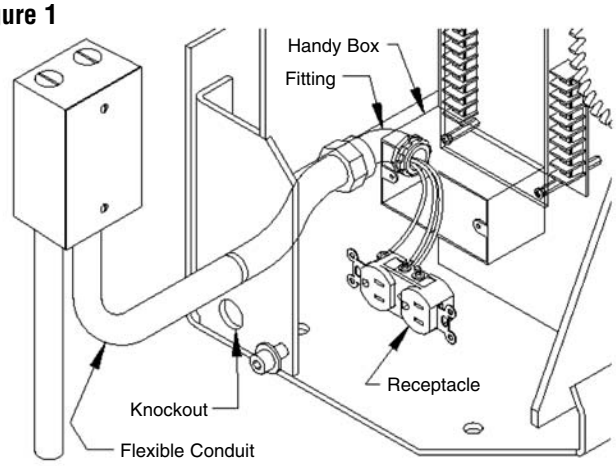
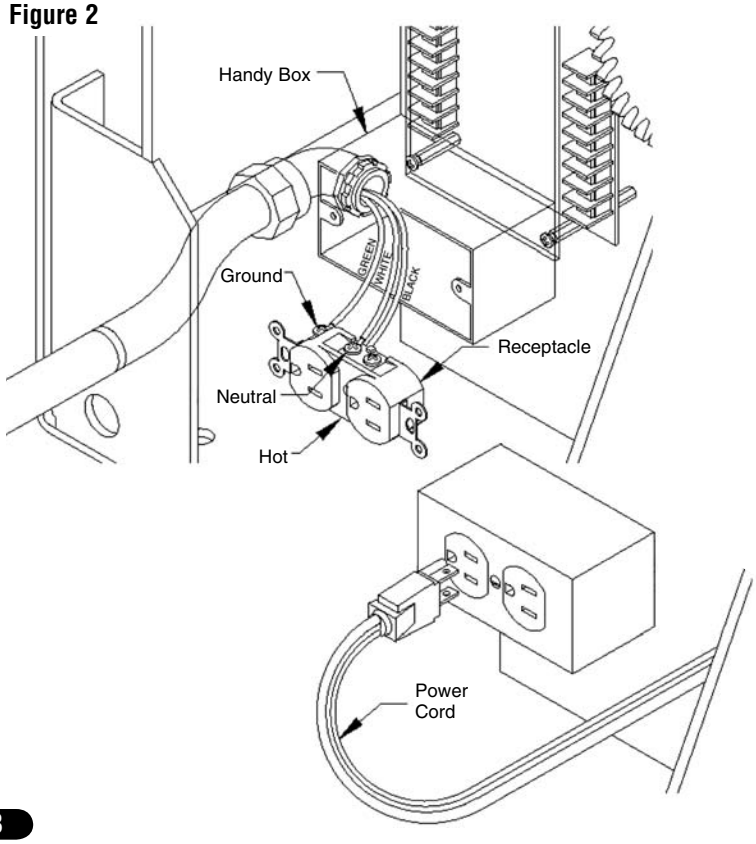


Figure 2



BATTERY BACKUP

If the operator is already factory equipped with a battery backup, only the Right/Left Side switch and Mode 1 are supported (Figure 3). The Right/Left switch simply needs to be set in the same position as the Right/Left switch on the main control board (see page 22). Gate will continue to operate when power is lost.

INSTALLATION

1. Disconnect power to operator.
2. Disconnect the brown and red wires from terminals 13 and 14 and insulate the ends of the wires.
3. Attach 14 terminal charger board to terminal screws on the left side of control board and secure using terminal screws.
4. Connect green wire from terminal 2 to terminal 15 of the control board.
5. Connect orange wire from terminal D of the charger board to terminal 18 of the main control board.
6. Connect red wire from terminal A to battery positive (+) and black wire from terminal B to battery negative (-) (Figure 4).

Figure 3

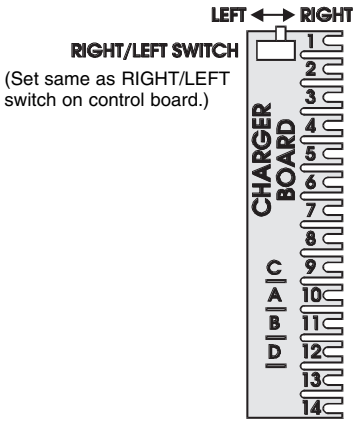
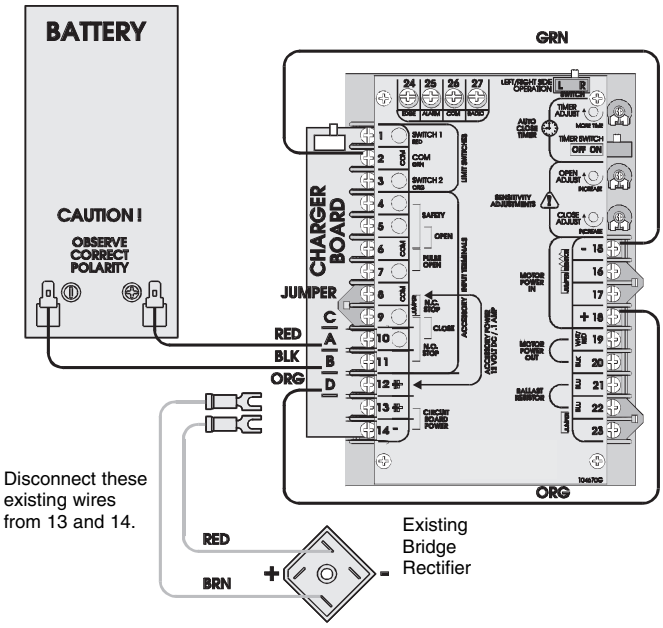


Figure 4



CONTROL WIRING

OPEN INPUT

Any device that is used to open the gate from a closed position is an open input device. The device used must provide normally open contacts. These normally open contacts are connected to terminals 5 and 6. These open input terminals will cause the gate operator to open and/or close if the timer switch is in the OFF position. If the timer switch is in the ON position, these open input terminals will cause the gate operator to open and will hold the gate open until the input is released and the auto close time has elapsed.

CLOSE INPUT

Any device that is used to close the gate is a close input device. The device used must provide normally open contacts. These normally open contacts are connected to terminals 9 and 10. These close input terminals will cause the gate operator to close the gate any time the gate is in a non-closed position and can be used to override the timer and close the gate prematurely.

N.C. STOP INPUT

Any device that is used to stop the gate operator while it is running in the open or closed direction is a stop input device. These stop input devices must provide normally closed contacts. To connect these normally closed contacts, remove the stop jumper from terminals 8 and 9 and then connect the contacts to these same terminals 8 and 9.

N.O. STOP INPUT

This input functions identical to N.C. Stop with the exception that it requires normally open contacts. These contacts are connected to terminals 9 and 11.

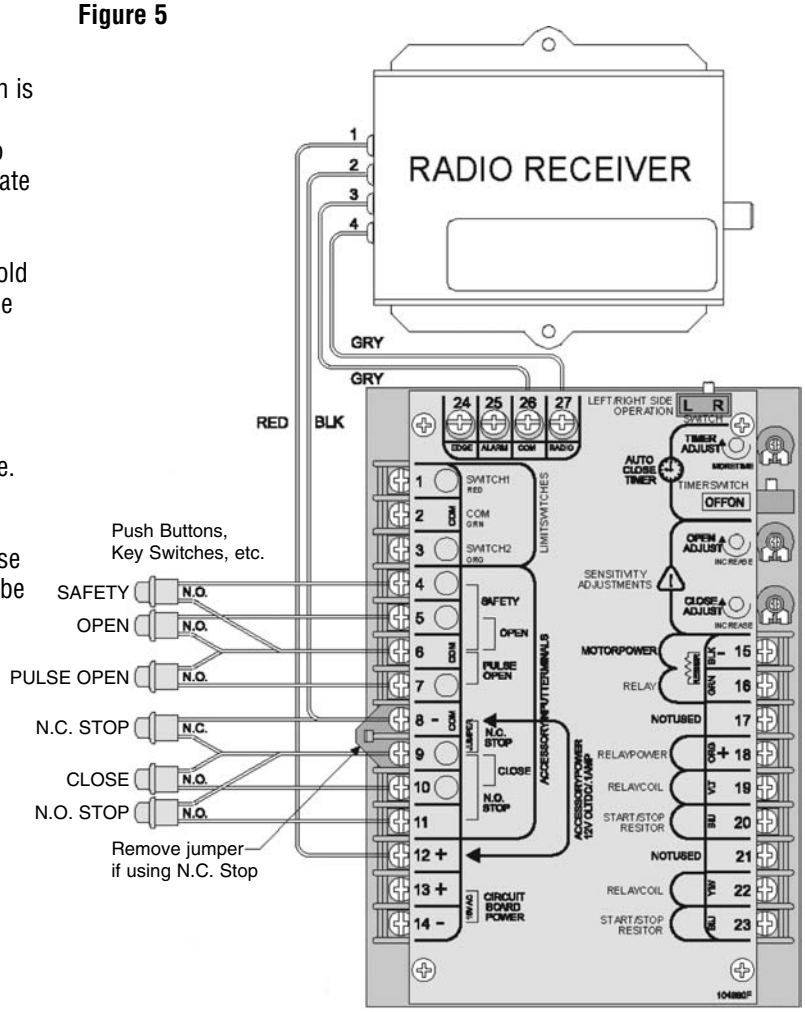
SAFETY INPUT

Any device that is used to open and/or hold open the gate while the gate is in a non-closed position is a safety input device. The safety input device must provide normally open contacts. These contacts are connected to terminals 4 and 6. This function is especially useful when the auto close timer is being used in preventing the gate from accidentally closing on a vehicle.

PULSE OPEN INPUT

This input functions similarly to the standard open input with the exception that it will not hold the gate open if the input remains present. This feature will add additional security to the gate operator system in the event that there is a device that is stuck on. Pulse open is found at terminals 6 and 7.

Figure 5



CONTROL WIRING

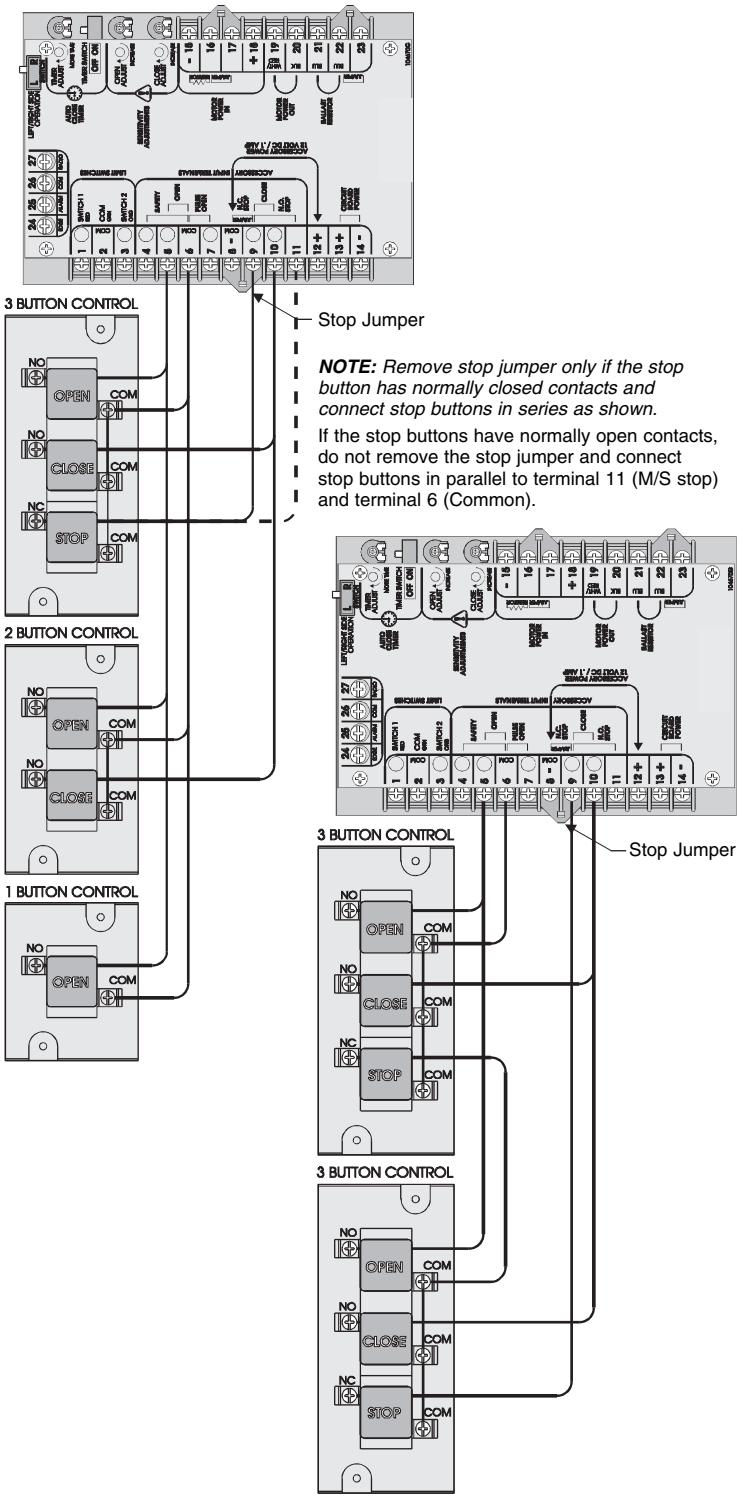
BUTTON CONTROL WIRING

One button, two button and three button controls may be connected individually or together as shown below. Most button controls have a common “buss bar” which connects the common terminals of all buttons together so that only one common wire needs to be run back to the gate operator control board. If this is not the case, the common terminals of each button may be connected together with wire.

Connect the common terminal or terminals (COM) of the push button control to the Common (terminal 6) on the gate operator control board. Connect the Open button NO terminal of the push button control to Open (terminal 5) on the gate operator control board. Connect the Close button NO terminal of the push button control to Close (terminal 10) on the gate operator control board. If the stop button has normally closed contacts, connect the Stop button NC terminal to Stop (terminal 9) and remove the stop jumper that is on terminals 8 & 9. If the stop button has normally open contacts, connect the Stop button terminal NO to the NO Stop (terminal 11) on the gate operator control board.

If more than one push button control is used on one gate operator, connect wires from the Open, Close and Common in parallel to the control board. If the stop button has normally closed, contacts connect the stop buttons in series to the control board. If the stop buttons have normally open contacts, connect the stop buttons in parallel to NO Stop (terminal 11) on the control board.

Figure 6



NOTE: *Remove stop jumper only if the stop button has normally closed contacts and connect stop buttons in series as shown.*

If the stop buttons have normally open contacts, do not remove the stop jumper and connect stop buttons in parallel to terminal 11 (M/S stop) and terminal 6 (Common).

PROGRAMMING THE RADIO RECEIVER

SET SECURITY MODE

The Universal Receiver can be used with up to 15 rolling code remote controls or passwords in HIGH security mode. Alternately, it can be used with up to 31 of any type remote control in NORMAL security mode, including any combination of rolling code, billion code, or dip switch remotes.

The jumper must be set at the HIGH position for the receiver to operate in HIGH security mode. It must be set at NORMAL position to operate at the NORMAL mode (Figure 1).

When changing from NORMAL to HIGH security mode, any previous remote control codes must be erased. Repeat Steps 2 and 3 in the Programming Section below to reprogram the receiver for each remote control in use.
The receiver is factory set at HIGH.

SET OUTPUT DURATION

⚠ WARNING

To prevent possible SERIOUS INJURY or DEATH, the use of CONSTANT OPERATION on residential openers is PROHIBITED.

For commercial applications, the receiver can be set for either constant or momentary closure on the output contacts. Use of constant closure is prohibited on residential garage door openers because it overrides the safety reversal devices.

With the jumper in the "M" (Momentary) position, the contacts will close for 1/4 second regardless of the length of radio transmission. With the jumper in "C" (Constant) position, the contacts will stay closed as long as the radio continues transmitting (Figure 2).
The receiver is factory set at M.

PROGRAMMING THE REMOTE TO THE RECEIVER

1. Pry open the front panel of receiver case with a coin or a screwdriver. Re-connect power to opener (Figure 3).
2. Press and release the "learn" button on the receiver. The learn indicator light will glow steadily for 30 seconds.
3. Within 30 seconds, press and hold the button on the hand-held remote that you wish to operate your garage door.

The opener will now operate when the push button on either the receiver or the remote control is pressed.

Repeat Steps 2 and 3 for each remote control that will be used to operate the garage door opener.

TO ERASE ALL REMOTE CONTROL CODES

Press and hold the "learn" button on the receiver panel until the indicator light turns off (about 6 seconds). All remote control codes are now erased. Then follow the steps above to reprogram each remote control.

NOTICE: To comply with FCC and or Industry Canada (IC) rules, adjustment or modifications of this receiver and/or transmitter are prohibited, except for changing the code setting or replacing the battery. THERE ARE NO OTHER USER SERVICEABLE PARTS.

Tested to Comply with FCC Standards FOR HOME OR OFFICE USE. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

⚠ WARNING

To prevent possible SERIOUS INJURY or DEATH from electrocution:

- Be sure power is not connected BEFORE installing the receiver.

To prevent possible SERIOUS INJURY or DEATH from a moving gate or garage door:

- ALWAYS keep remote controls out of reach of children. NEVER permit children to operate, or play with remote controls.
- Activate gate or door ONLY when it can be seen clearly, is properly adjusted, and there are no obstructions to door travel.
- ALWAYS keep gate or garage door in sight until completely closed. NEVER permit anyone to cross path of moving gate or door.

Figure 1

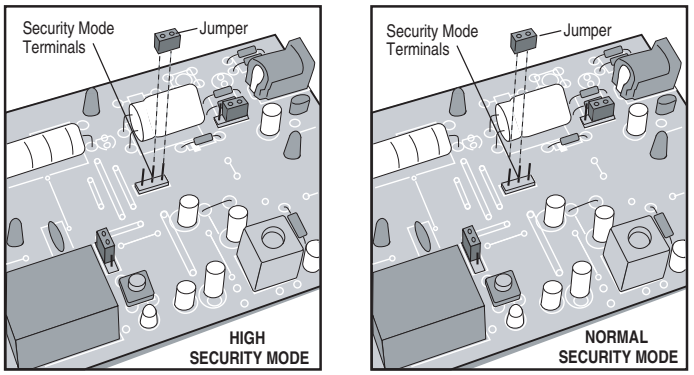


Figure 2

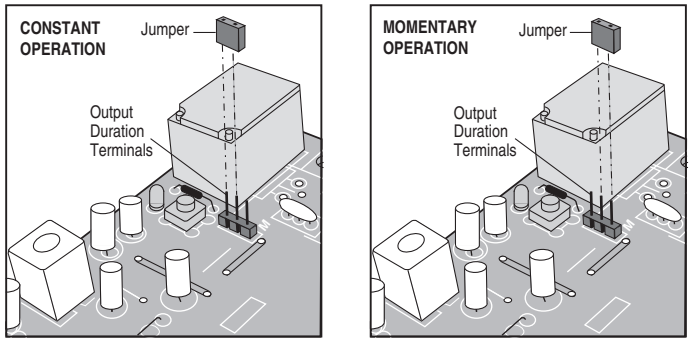
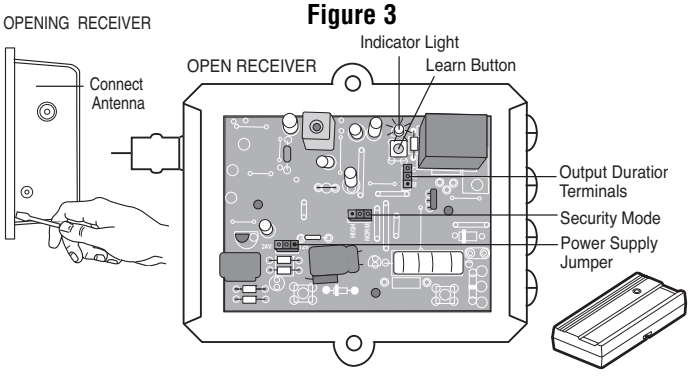


Figure 3



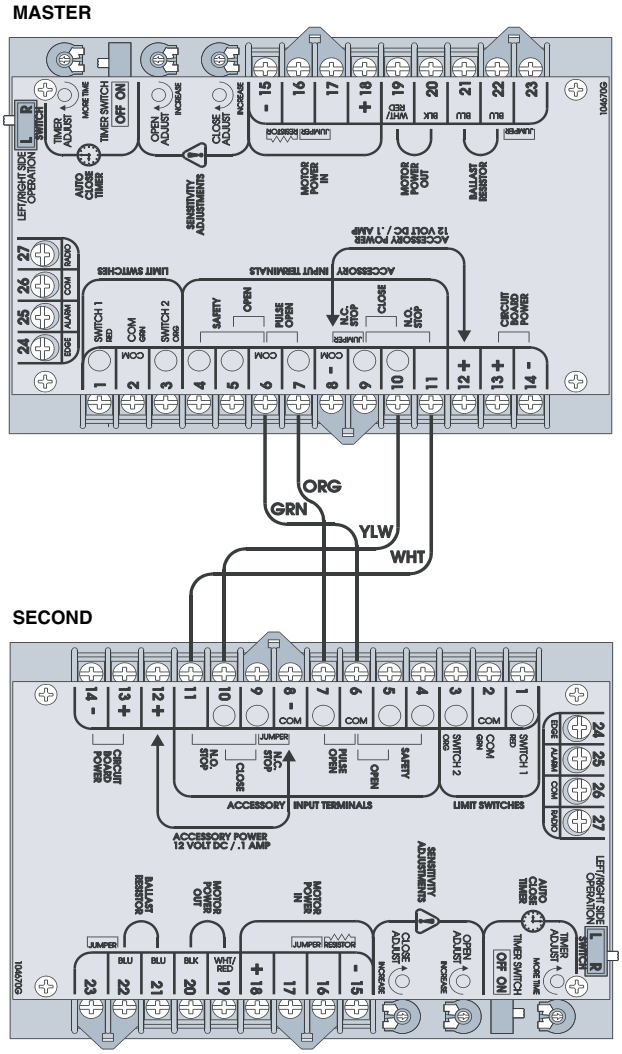
MASTER/SECOND WIRING

Connect 115 Volts AC to each SL930 gate operator. Connect the four Master/Second wires from the master circuit board to the second circuit board (Figure 7). Any operator can be used as either a master or a second. Accessories can be connected to the master or second operator.

Switch the Auto Close Timer switch to the OFF position on the second circuit board. The Auto Close Timer switch on the master circuit board may be switched either ON if the timer function will be used or OFF if the timer function will not be used but the second timer must always be switched OFF.

If the chain is wrapped around the sprockets in the same manner on each operator (both chains under or both chains over the drive sprocket), set the Right/Left Side Operation switch on the master circuit board to be the opposite of the way it is set on the second circuit board. If the chain wrapped around the drive sprocket on the master operator is the opposite of the way it is wrapped around on the second operator, then set the Right/Left Side Operation switches the same on both operators. The Right/Left Side operation switch is located on the circuit board. If the operators are working backwards, the Right/Left Side Operation switches on both operators must be switched. The simplest way to know if the operators are working backwards is to turn the Auto Close Timer switch on the master circuit board to ON and see whether the timer works when the gate is open or closed. The timer should work only when the gate is open. Another way to know if the operators are working backwards is to try the gate sensitivity by applying pressure against the gate while the gate is opening or closing. If pressure is applied while the gate is opening, it should stop. If pressure is applied while the gate is closing, it should reverse and go open. If the gate responds to pressure in a way that is opposite of this, then switch the Right/Left Side Operation switch on both operators.

Figure 7

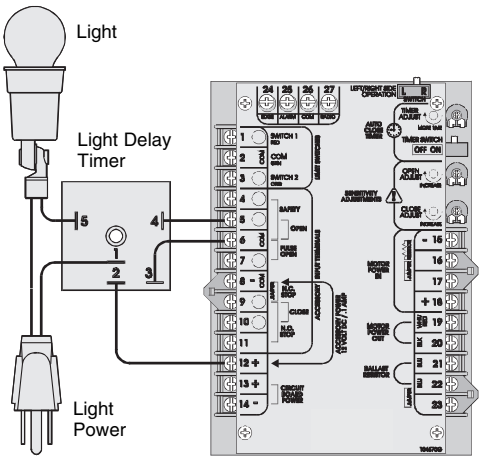


OPTIONAL ACCESSORY WIRING

LIGHT DELAY TIMER

If it is desired that the driveway illuminate when the gate is activated, a light delay timer may be installed. The light delay timer will switch power on to the light for two minutes, then shut power back off. The timer relay is capable of switching up to 10 Amps which will handle most flood or spot lights available. A general hook-up diagram for the light and timer is shown (Figure 8).

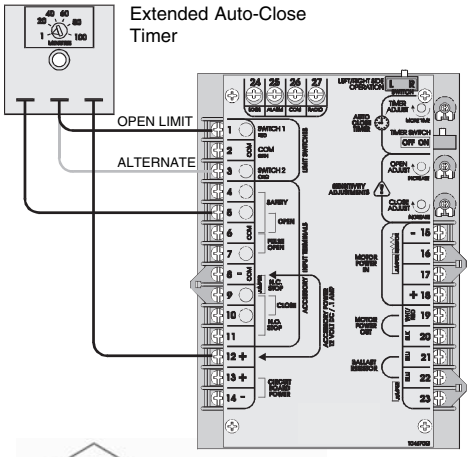
Figure 8



EXTENDED AUTO CLOSE TIMER

The standard auto close timer built into the circuit board can be adjusted to between 0 and 45 seconds. Some installations may require that the gate must stay open for more than 45 seconds before it automatically closes. The extended auto close timer may be hooked up as shown (Figure 9). This optional timer can be adjusted to automatically close the gate after the gate has been open between 1 and 100 minutes. The extended timer will add time onto the auto close timer already on the board. For more control, reduce the timer adjustment on the main control board to zero seconds and make all adjustments with the extended auto close timer knob.

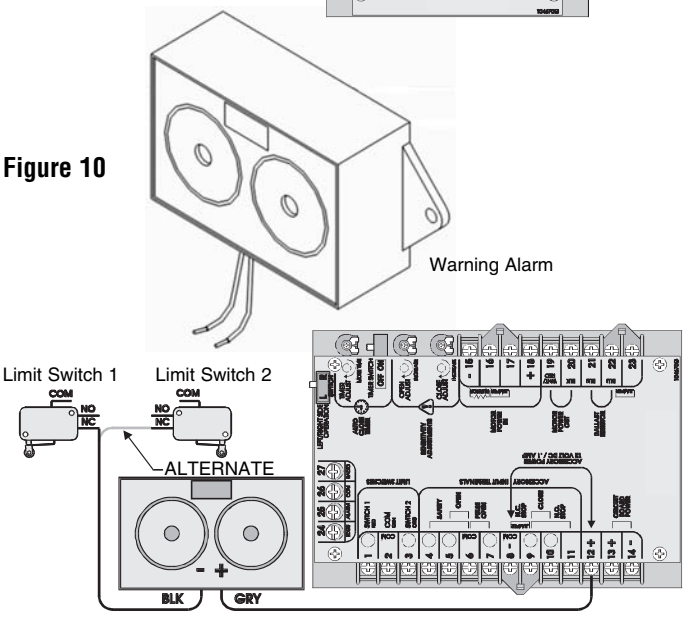
Figure 9



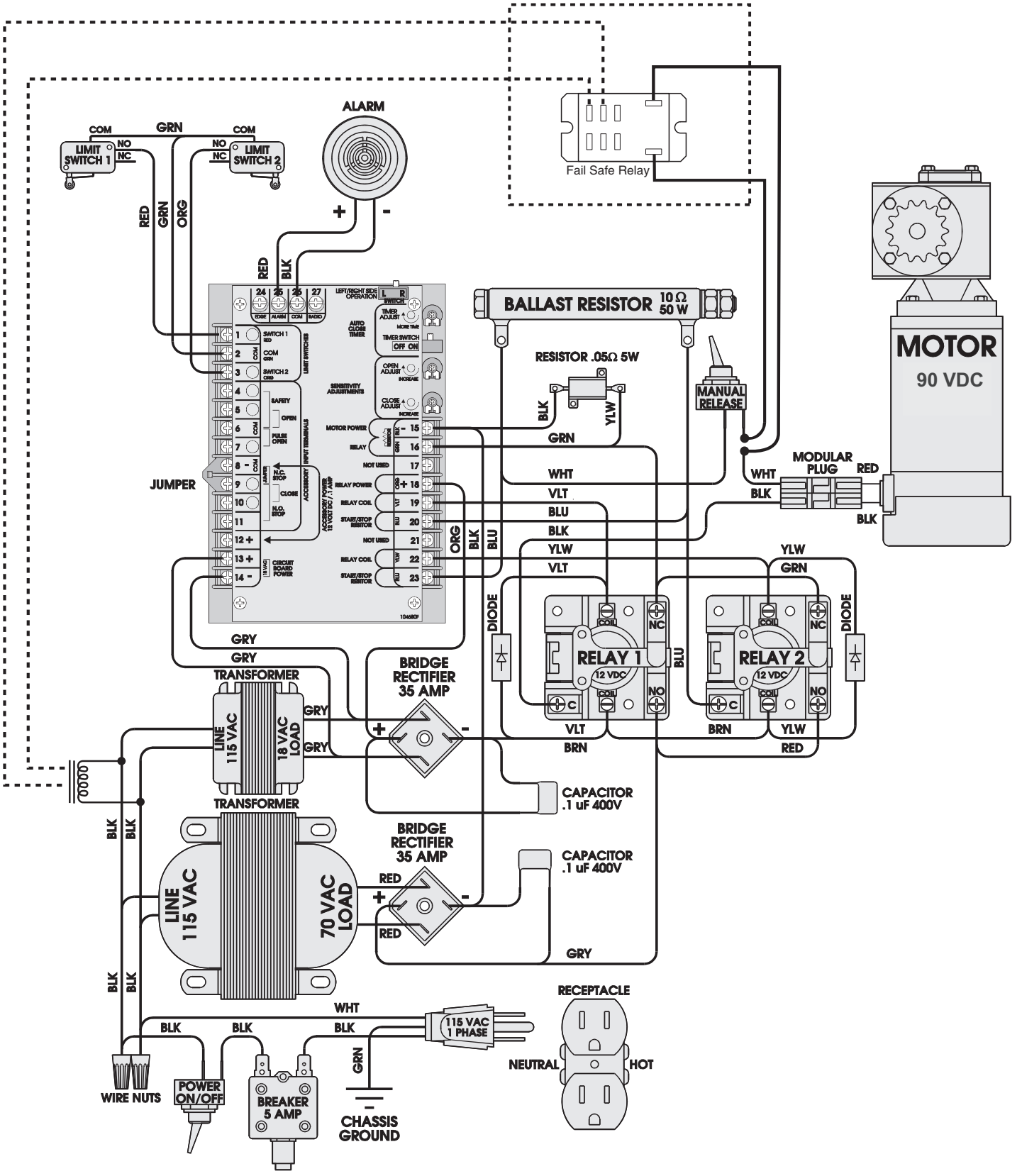
WARNING ALARM

For added safety, a warning alarm may be installed in the gate operator to give audible warning that the gate is in motion. This will in some cases give extra time to get out of the way of the moving gate. The warning alarm is an ear piercing 120 decibel, dual tone, piezo siren that operates on 12 Volt DC. To install the alarm, mount the siren next to the circuit board and connect the positive wire to terminal 12 (12VDC) (Figure 10). Connect the negative wire to limit switch 1 NC or limit switch 2 NC for the alarm to sound in the open or closed directions. Contact the manufacturer for connecting the alarm to sound in both directions. If the alarm is too loud, the sound may be partially muffled by applying tape over the two holes where the sound comes out.

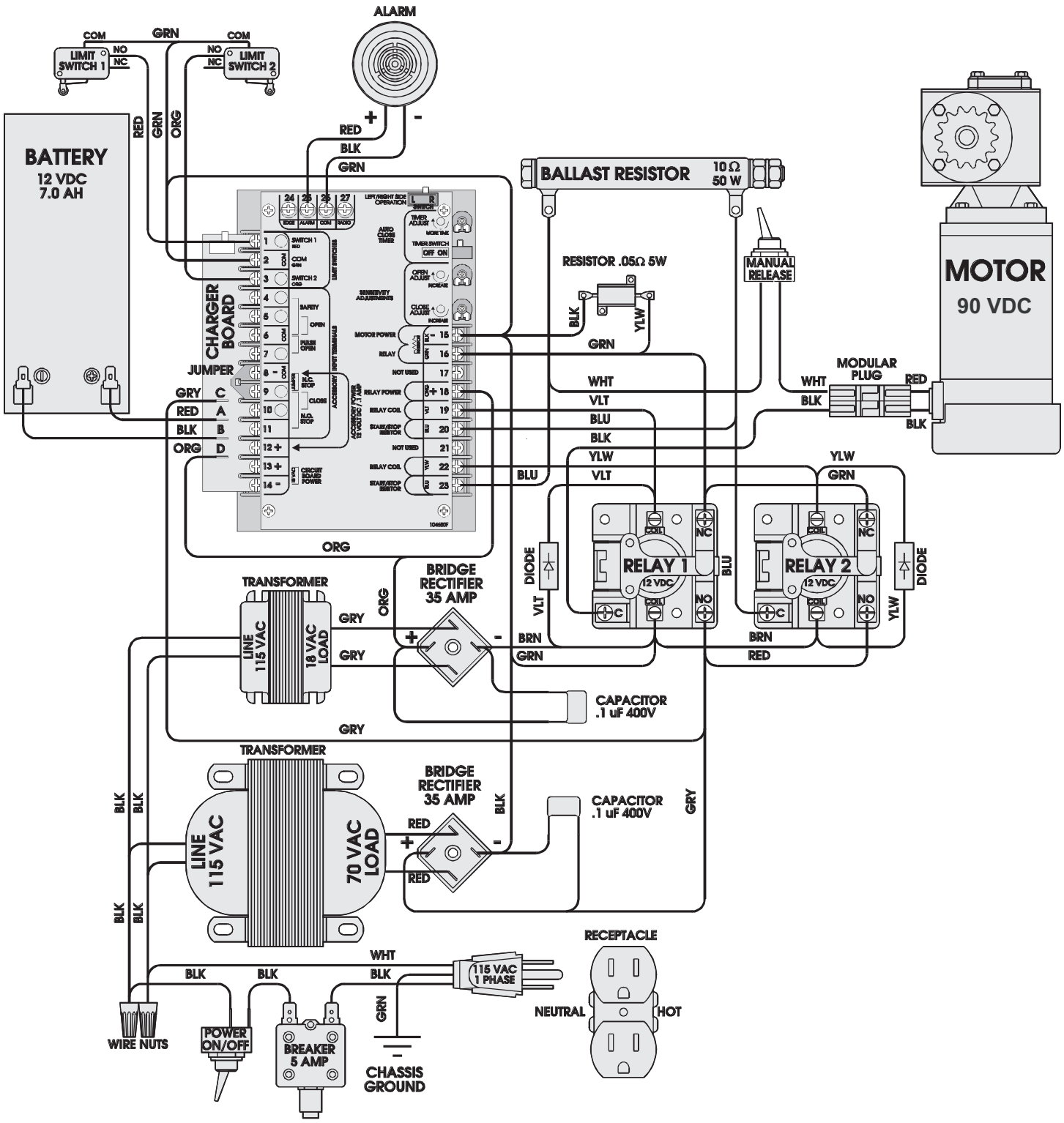
Figure 10

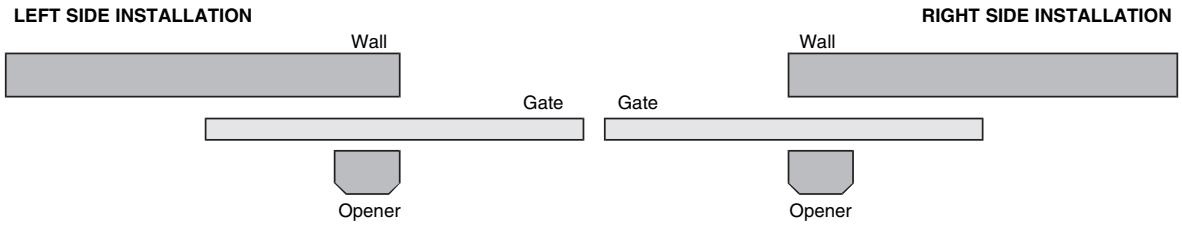


SL930 WIRING DIAGRAM WITH FULL SYSTEMS



SL930 WIRING DIAGRAM WITH BATTERY BACKUP



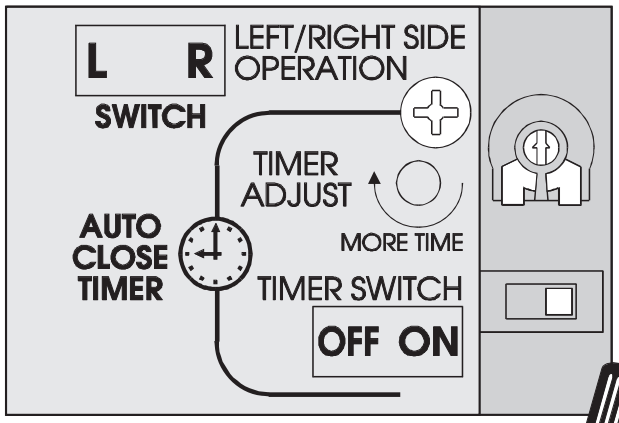


ADJUST TIMER

The gate operator is designed to work differently while opening then while closing to optimize safety, so the direction of the operator will need to be set. Setting the operator direction is done by flipping the right/left side switch located at the top of the circuit board (Figure 1). For a left side installation flip the switch to the left and for a right side installation, flip the switch to the right.

If it is desirable to have the gate close automatically after the gate has opened, flip the auto close timer switch to the ON position. Adjust the amount of time the gate stays open by turning the timer adjustment pot counter clockwise for less time or clockwise for more time. The range is roughly 0-45 seconds.

Figure 1

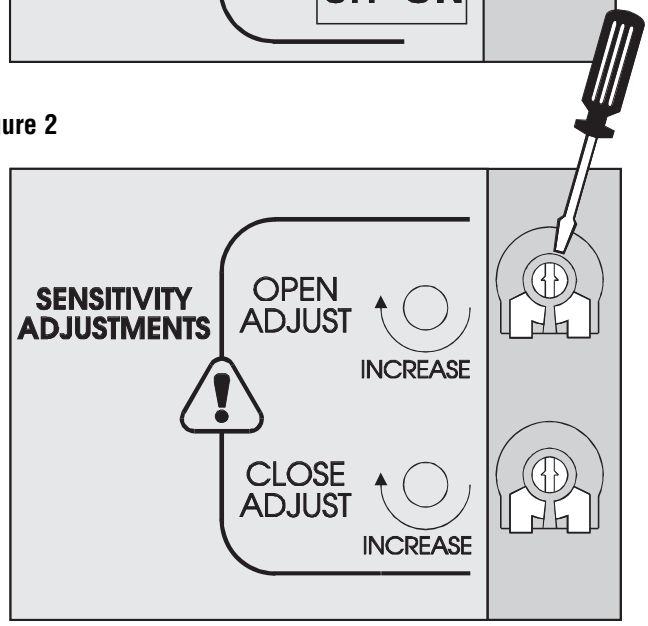


ADJUST SENSITIVITY

For protection of the overall system, there are two “sensitivity” adjustments on the circuit board for the open and close directions (Figure 2). Turning the pots clockwise “increase” will cause the gate to stop or reverse more easily if there is an obstruction preventing the gate from moving. Turning the pots counter-clockwise “decrease” will cause the gate to push harder before it stops or reverses. If adjusted properly, the sensitivity will cause the gate to reverse if the gate meets an obstruction. Additionally, if the gate again meets an obstruction before reaching a limit, the gate will stop, remain stopped, and will sound an alarm until reset with an open input at terminal 5. If no reset is given, the alarm will sound for approximately 5 minutes. If adjusted too sensitive the gate may stop or reverse under it's own weight, without being obstructed and the sensitivity will need to be slightly decreased. Temperature, wind, and other environmental factors may also effect the sensitivity, so the setting should be made with these factors in mind. Before finalizing an installation always test the sensitivity by applying pressure against the gate while it is moving to make sure it will stop or reverse.

NOTE: *Counter-clockwise makes gate push harder. Clockwise makes gate easier to stop.*

Figure 2



OPTIONAL CONTROL DEVICES

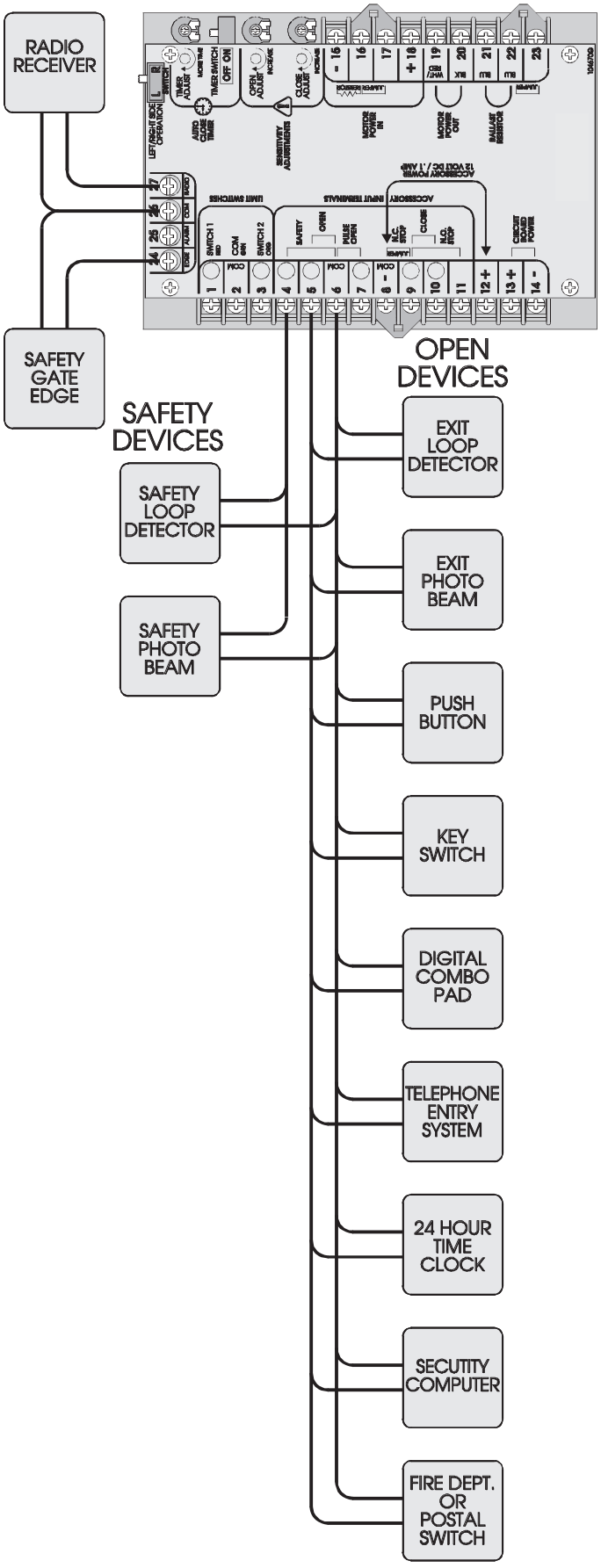
NOTES:

- *All open and safety devices must have normally open contacts.*
- *For devices requiring power, refer to the specific diagram for that particular device.*
- *See wiring diagrams shipped with kit for additional information.*
- *See owner's manual for wiring distances and wire gauge information.*

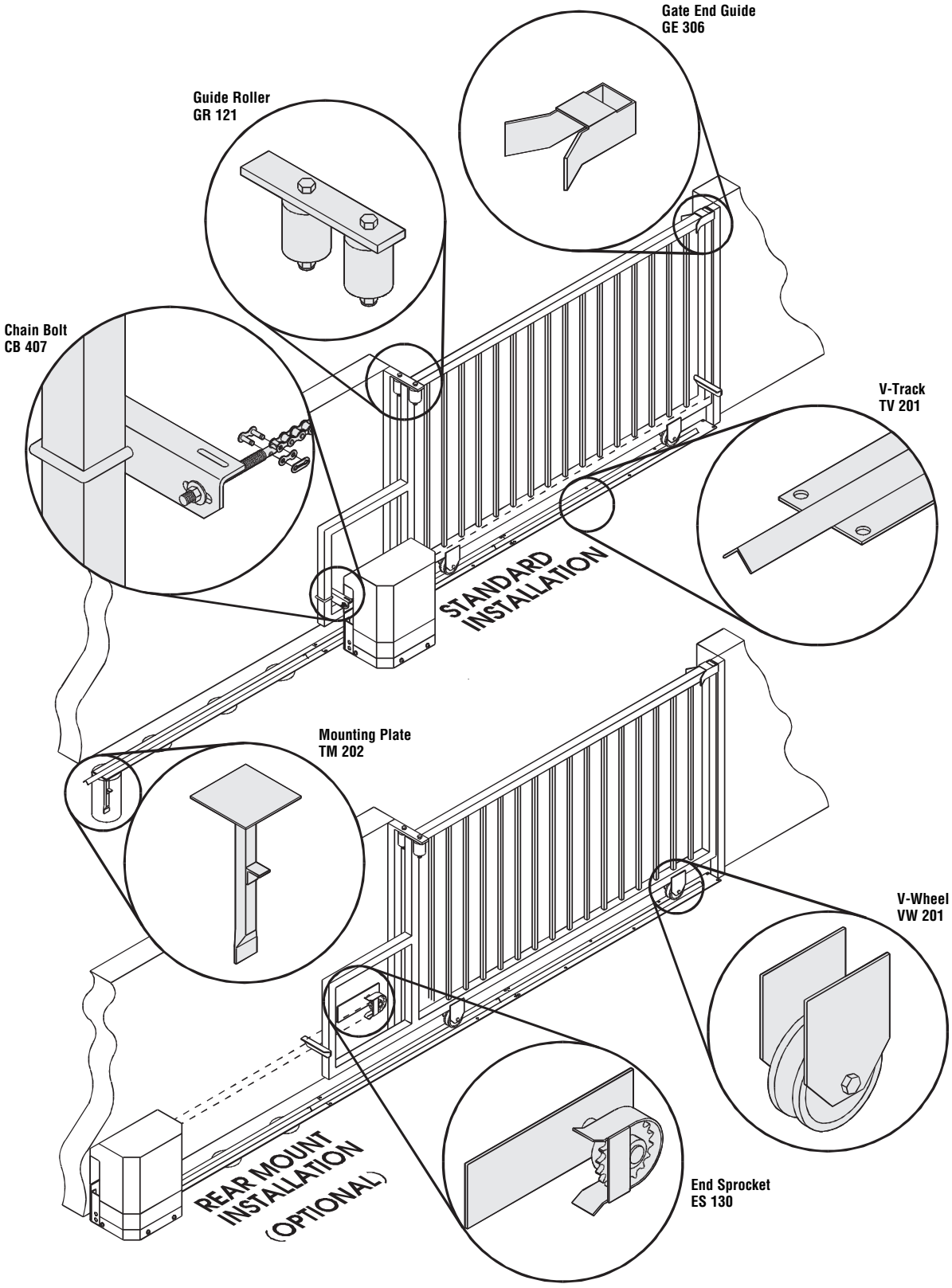
WARNING: All controls that are to be used to operate the gate system, must be installed where the user cannot come into contact with the gate while operating the controls where the user has full view of gate operation.

All inputs are normally open and momentary, except the stop (N.C.). The following instructions are based upon UL325, and include recommendations for significant increase in safety.

*We strongly recommend that you follow the UL guidelines presented throughout the manual. Refer to instructions shipped with optional control devices for mounting, wiring, programming and adjustment. **Installation device instructions:** Always follow the instructions provided by the manufacturer when installing and adjusting any control device. If these instructions are contrary to the advice given here, call for assistance.



GATE HARDWARE LOCATOR



IMPORTANT SAFETY INSTRUCTIONS

⚠⚠ WARNING

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.**

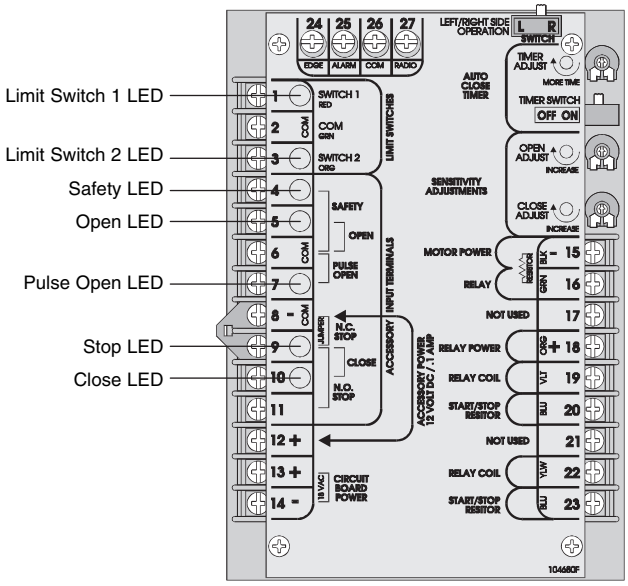
		CHECK AT LEAST ONCE EVERY		
DESCRIPTION	**TASK**	**3 MONTHS**	**6 MONTHS**	**12 MONTHS**
External Entrapment Protection Systems	Check for proper operation	**X**		**X**
Gate Caution Signs	Make sure they are present	**X**		**X**
Manual Disconnect	Check and operate		**X**	**X**
Drive Chain	Check for excessive slack and lubricate		**X**	**X**
Sprockets and Pulleys	Check for excessive slack and lubricate		**X**	**X**
Gate	Inspect for wear or damage		**X**	**X**
Accessories	Check all for proper operation		**X**	**X**
Electrical	Inspect all wire connections		**X**	**X**
Total Unit	Inspect for wear or damage		**X**	**X**

NOTES:

1. *Severe or high cycle usage will require more frequent maintenance checks.*
2. *Inspection and service should always be performed anytime a malfunction is observed or suspected.*
3. *Limit switches may have to be reset after any major drive chain adjustments.*
4 *If lubricating chain, use only a proper chain lube spray or a lightweight motor oil. Never use grease or silicone spray.*
5. *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.*
6. *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 operator's rating.*

VISUAL FEEDBACK LEDS

The SL930 Full Systems Capability circuit board has been equipped with Visual Feedback LEDs to simplify installation and troubleshooting. These are small lights which are located directly beside the input terminals. These LEDs give visual information to the installer or service technician indicating what commands are going into the circuit board from devices such as limit switches or from peripheral devices such as radio receivers or safety loops. There are also two LEDs which show output to the motor for both the opening and closing directions.



LED INPUT	DESCRIPTION
Limit Switch 1	One of the normally open limit switches is pressed in and the gate is in the open position.
Limit Switch 2	One of the normally open limit switches is pressed in and the gate is in the closed position.
Safety	Indicates that there is a closed contact between safety input terminal 4 and common.
Open	Indicates that there is a closed contact between open input terminal 5 and common.
Pulse Open	Indicates that there is a closed contact between Pulse Open input terminal 7 and common.
Stop	Indicates that there is a closed contact between stop input terminal 9 and common. Under normal operating conditions, this LED must be in the on condition in order for the system to function.
Close	Indicates that there is a closed contact between close input terminal 10 and common.

SL930 TROUBLESHOOTING

REMOTE CONTROL DOES NOT WORK

1. Check the battery inside of the remote control and/or try another remote control.
2. Check to see which LEDs are illuminated on the circuit board. For normal operating conditions the only LEDs that should be illuminated are the stop input at terminal 9 and Limit Switch 1 input if the gate is in the fully open position or Limit Switch 2 input if the gate is in the fully closed position.
3. If any of the input LEDs are illuminated on terminals 4, 5, 7 or 10, disconnect wires from that input terminal that is illuminated until the LED is extinguished to determine which input device may be stuck in an on condition.
4. If it is the radio receiver that appears to be stuck in an on condition, check all remote controls to see if any of them are stuck on.
5. Make sure that there is power (10 to 16 VDC) to the receiver on terminals 8 and 12 and make sure that the circuit breaker button is pressed in.
6. If a click is heard while the remote control is being pressed and there is no response from the operator, check all receiver connections (see page 15).
7. If there is still no response, see GATE WILL NOT OPEN OR CLOSE.

GATE TRAVELS TOO FAR OR NOT FAR ENOUGH

1. Adjust the gate sensitivity (see page 22). If the gate sensitivity adjustment is too sensitive, the gate may stop in mid-travel.
2. It may be necessary to lubricate any mechanical parts on the gate including wheels and rollers and clean the track of any debris.
3. Check the limit switch input LEDs on terminals 1 and 3 to see if either one is illuminated. If one of the limit switch input LEDs is illuminated and the gate has traveled too far or not far enough, this indicates that the limits of travel may need adjustment. Adjust the limits of travel (see page 11). This adjustment may change slightly as the chain stretches due to normal wear and it may change dramatically if the chain has been retightened or the limit plate is accidentally left not engaged with the limit nuts.
4. If the limit nut has traveled past a limit switch, check the limit switch and all limit switch connections (see page 20 or 21).
5. Watch the stop input LED on terminal 9 while the gate operator is running and see if the LED flickers or extinguishes. This may indicate a faulty stop input device or a poor connection between the stop input terminal 9 and common.
6. If the stop input LED on terminal 9 flickers or extinguishes check all connections to the stop input device and/or replace faulty device.

GATE BEGINS TO OPEN OR CLOSE, THEN STOPS OR REVERSES

1. Adjust the gate sensitivity (see page 22). If the gate sensitivity adjustment is too sensitive, the gate may stop in mid-travel or reverse.
2. It may be necessary to lubricate any mechanical parts on the gate including wheels and rollers and clean the track of any debris.
3. Watch the input LEDs on terminals 4, 5, 7 and 10 while the gate operator is running to see if any of the LEDs flicker or illuminate.
4. If there is an input LED that flickers or illuminates while the gate is running, disconnect the wires one at a time from that input terminal until the LED does not flicker or illuminate to determine which input device may be activating.
5. If it is the radio receiver that appears to be stuck in the on condition, check all remote controls to see if any of them may be stuck on. A stuck transmitter may cause the gate operator to reverse.

GATE WILL NOT OPEN OR CLOSE

Test the operator to find out whether the open input devices are functioning by following these steps:

1. If a remote control is being used to open the gate, try another remote control or try using a push button if there is one installed.
2. If a push button is being used try using another push button or a remote control.
3. If there is no push button installed the gate may be operated by connecting a jumper wire to terminal 8 and momentarily touching it to terminal 5 or 7.
4. If the remotes are not working, see REMOTE CONTROL DOES NOT WORK.
5. Check the manual release switch to make sure it is in the operate (up) position.
6. Check to see which LEDs are illuminated on the circuit board. For normal operating conditions the only LEDs that should be illuminated are the stop input at terminal 9 and Limit Switch 1 input if the gate is in the fully open position or Limit Switch 2 input if the gate is in the fully closed position.
7. If any of the input LEDs are illuminated on terminals 4, 5, 7 or 10, disconnect wires from that input terminal that is illuminated until the LED is extinguished to determine which input device may be stuck.
8. If the stop input LED on terminal 9 is not illuminated, check the stop input device if any are installed and all connections to the device. If no stop input device is installed make sure that there is a jumper between terminals 8 and 9 and that it is securely fastened.
9. Check the circuit breaker button. If the circuit breaker is tripped, press it back in.
10. Make sure there is power to the circuit board on terminals 13 and 14.

SL930 TROUBLESHOOTING

THE GATE WILL NOT STOP OR REVERSE WHEN IT MEETS AN OBSTRUCTION

Adjust the gate sensitivity. The operator needs to be adjusted for more sensitivity. This is done by turning the open and close gate sensitivity adjustments clockwise for more sensitivity (see page 22).

GATE WILL NOT STAY CLOSED

1. Make sure that the Right/Left Side operation switch is in the correct position (see page 22). If the Right/Left Side operation switch is in the incorrect position, the auto close timer feature may be working in reverse and telling the gate operator to open after the auto close time has elapsed.
2. Check to see if any input LEDs on terminals 4, 5 or 7 flicker or illuminate when the gate gets to the closed position.
3. If any of the input LEDs flicker or illuminate on terminals 4, 5, or 7, disconnect wires from that input terminal that is illuminated until the LED is extinguished to determine which input device may be activating.

TIMER WILL NOT CLOSE THE GATE

1. Make sure that the Right/Left Side operation switch is in the correct position (see page 22). If the Right/Left Side operation switch is in the incorrect position, the auto close timer feature may be working in reverse and telling the gate operator to open instead of close after the auto close time has elapsed.
2. Make sure the auto close timer switch is in the ON position (see page 22). The auto close timer switch is located on the right edge of the circuit board.
3. Adjust the amount of auto close time (see page 22). The auto close time may be set too high and is simply taking a long time to close. Do not continue pressing the remote control or other open or safety input devices because each time an open or a safety input is given the timer will reset and begin counting over.

OPERATOR RUNS IN ONLY ONE DIRECTION

1. Check to see which LEDs are illuminated on the circuit board. For normal operating conditions the only LEDs that should be illuminated are the stop input at terminal 9 and Limit Switch 1 input if the gate is in the fully open position or Limit Switch 2 input if the gate is in the fully closed position.
2. If any of the input LEDs are illuminated on terminals 4, 5, 7 or 10, disconnect wires from that input terminal that is illuminated until the LED is extinguished to determine which input device may be stuck.

OPERATOR NOTES

REPAIR PARTS - MODEL SL930

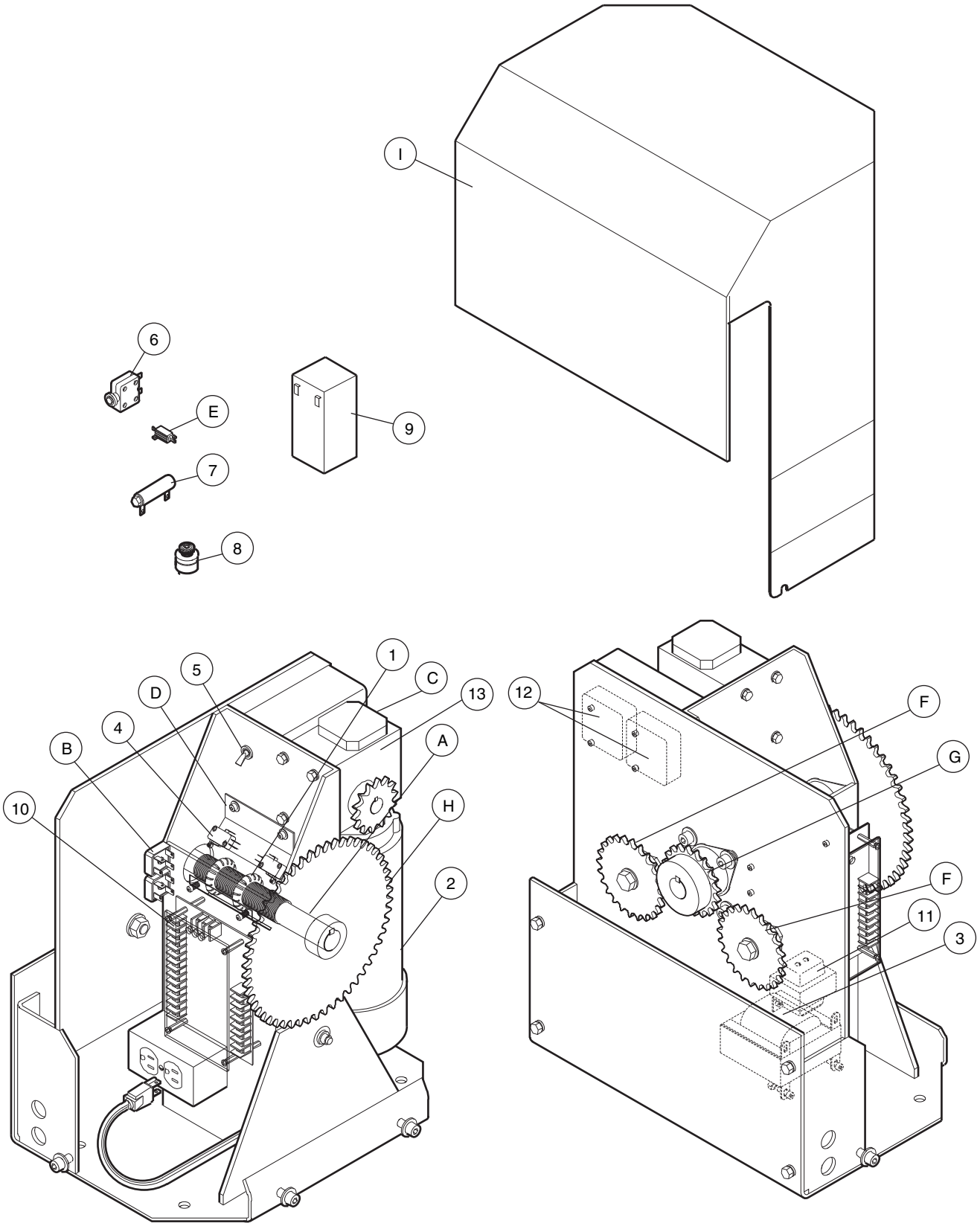
INDIVIDUAL PARTS

ITEM	PART #	DESCRIPTION
1	13-40362	Limit Nut
2	20-40351	Motor, 70Vdc 1/2HP
3	9596	Transformer, 120V 60HV 66V
4	23-40050	Limit Switch
5	23-40357	Toggle Switch, SPST - Manual Release
6	25-40356	Circuit Breaker, 5 Amp
7	29-40355	Resistor, 10 Ohm
8	29-40089	Sonalert Piezo Alarm
9	29-NP712	Battery, 12V 7AH
10	K79-40056	Control Board, Full System
11	21-40359	12V Transformer
12	23595-73	Relay 12Vdc
13	AGS3016	Gear Box
		NOT SHOWN
	K79-40370	Control Board, Battery Charge
	25-40356	Breaker, 5 Amp
	01-40333	Owner's Manual

SERVICE KITS

ITEM	PART #	DESCRIPTION
A	K72-40359	Limit/Drive Shaft Assembly Complete with: Limit/Drive Shaft, Bearings, Limit Nuts, Sprocket 41B20 1/4" Keyway Includes 2 Set Screws, Woodruff Key 1/4"x7/8", Shim Washer 1"x1.5"x.01", Shim Washer 1"x1.5"x.031", Hex Bolts 3/8-16x1, Flange Nuts 3/8-16 and E-Ring 1".
B	K74-40084	Bridge Rectifier Assembly Complete with: Cap Rectifier, Bridge Rectifier, Phillips Screw #6-32x1" and Flange Nut 6-32.
C	K75-30350	Motor/Gear Box with Sprocket Service Kit Complete with: Motor/Gear Box, Hex Bolts 1/4-20x3/4", Lockwashers 1/4", Key 1/8"x1-1/8" and Sprocket 35B12x5/8".
D	K74-40347	Limit Switch Service Kit Complete with: Limit Switches, Limit Switch Plate, Limit Switch Actuator Plate, Flange Nut #8-32, Hex Standoffs #4-40x1-1/2" FF, Locknuts #8-32, Lockwashers #4, Rubber Grommet 7/16"x1/16", Phillips Screws #4-40x5/8", Phillips Screws #8-32x1" and Limit Plate Spring.
E	K74-40065	External Resistor Service Kit Complete with: External Current Resistor, Shrink Wrap 1", Phillips Screws #2-56x1/2", Lock Nuts #2-56, 8" Green Wire and 8" Yellow Wire.
F	K75-40346	Idler Sprocket Service Kit Complete with: Sprocket 41B14-3/16" Keyway Includes 2 1/4" Set Screws, Bearing 1/2" IDx3/4" ODx1/2", Hex Bolt 5/8-11x2-3/4", Jam Hex Nuts 5/8-11 and Lockwasher 5/8.
G	K75-40401	Drive Sprocket Service Kit Complete with: Sprocket 41B18-1/4" Keyway Includes 2 1/4" Set Screws and Woodruff Key 1/4"x7/8".
H	K75-40403	Reduction Sprocket Service Kit Complete with: Sprocket 35B54-1" Bore and Woodruff Key 1/4"x7/8".
I	K74-40378	Operator Cover Service Kit Complete with: Cover, Label, Socket Screw 3/8-16x1" and Plastic Washer.

ILLUSTRATED PARTS - MODEL SL930



REPAIR PARTS AND SERVICE

HOW TO ORDER REPAIR PARTS

OUR LARGE SERVICE ORGANIZATION
SPANS AMERICA

FOR INSTALLATION AND SERVICE INFORMATION,
CALL OUR TOLL FREE NUMBER

1-800-528-2806

www.liftmaster.com

WHEN ORDERING REPAIR PARTS
PLEASE SUPPLY THE FOLLOWING INFORMATION:

PART NUMBER DESCRIPTION MODEL NUMBER

ADDRESS ORDER TO:

THE CHAMBERLAIN GROUP, INC.
Technical Support Group
6050 Country Club Road
Tucson, AZ 85706