

Installation Manual
MSW OPERATOR

MEDIUM DUTY SWING GATE OPERATOR

UL 325 AND UL 991 LISTED 

MODEL “MSW”

MEDIUM DUTY SWING GATE OPERATOR

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IMPORTANT!

FOR SWING GATE OPERATING SYSTEMS

SAFETY IS EVERYONE'S BUSINESS

Automatic gate operators provide convenience and security to users. However, because these machines can produce high levels of force, it is important that all gate operator system designers, installers, and end users be aware of the potential hazards associated with improperly designed, installed, or maintained systems. Keep in mind that the gate operator is a component part of a total gate operating system.

The following information contains various safety precautions and warnings for the system designer, installer and end user. These instructions provide an overview of the importance of safe design, installation, and use.

Warnings are identified with the ▲ symbol. This symbol will identify some of the conditions that can result in serious injury or death. Take time to carefully read and follow these precautions and other important information provided to help ensure safe system design, installation and use.

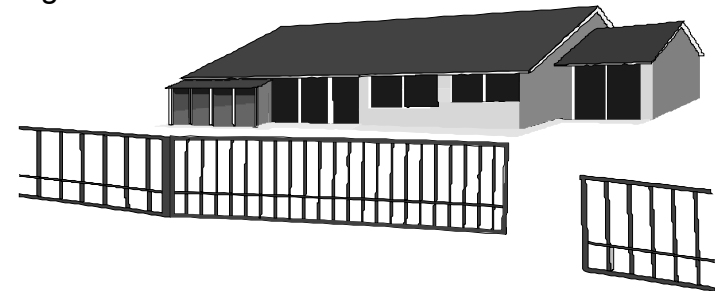
▲ **WARNING:** Gate operators are only one part of a **TOTAL GATE OPERATING SYSTEM**. It is the responsibility of purchaser, designer, and installer to ensure that the total system is safe for its intended use. All secondary entrapment safety devices must be **RECOGNIZED** by U/L to ensure the safety of the complete operating system.

U/L INSTALLATION AND SAFETY CONSIDERATIONS

INSTALLATION CLASSES

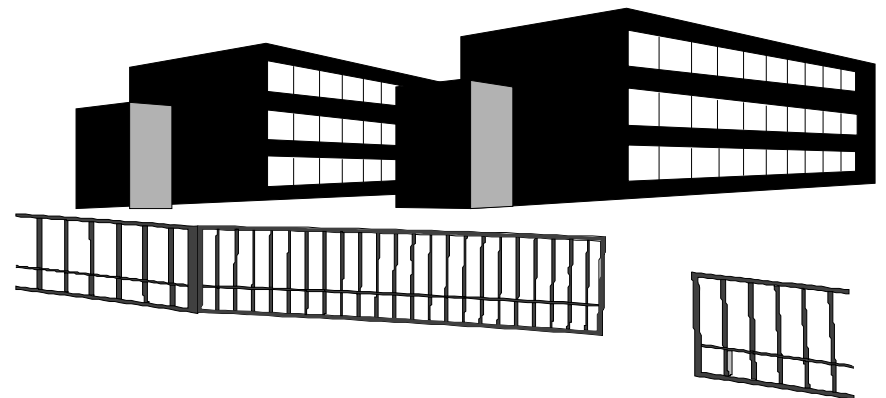
CLASS I – RESIDENTIAL VEHICULAR GATE OPERATOR

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.



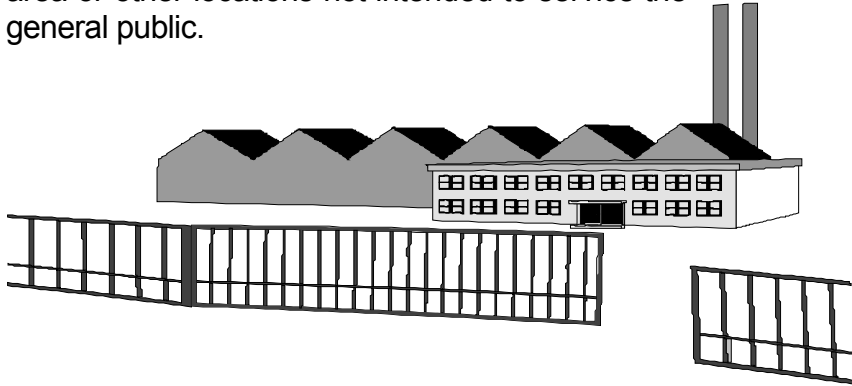
CLASS II – COMMERCIAL/GENERAL ACCESS VEHICULAR GATE OPERATOR

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



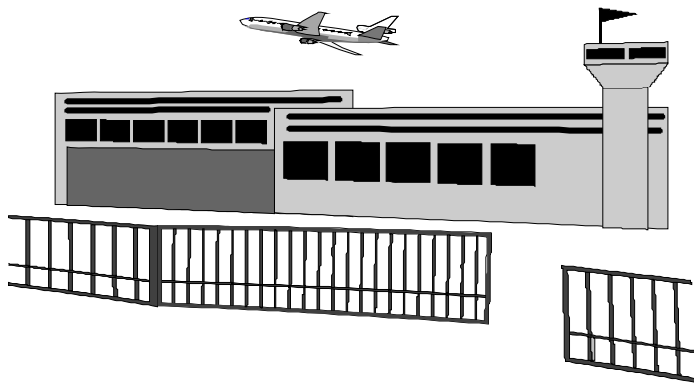
CLASS III- INDUSTRIAL/LIMITED ACCESS VEHICULAR GATE OPERATOR

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



CLASS IV- RESTRICTED ACCESS VEHICULAR GATE OPERATOR

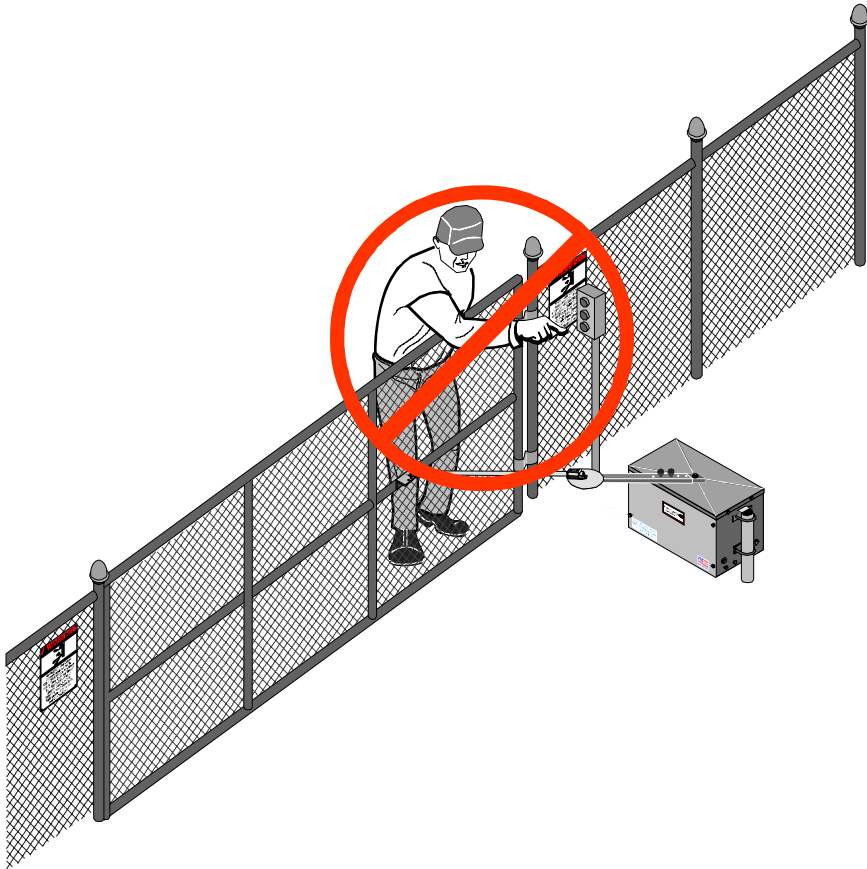
A vehicular gate operator (or system) intended for use in a guarded industrial location or building such as an airport area or other restricted access locations not servicing the general public, in which unauthorized access is prevented via supervision by security personnel.



SYSTEM DESIGNER SAFETY INSTRUCTIONS

The illustrations and descriptive captions found on the following pages provide precautions to help eliminate injuries or fatalities. Familiarize yourself with them when designing the total system.

- ▲ 1. Familiarize yourself with the precautions and warnings for the installer. Users are relying on your design to provide a safe installation.
- ▲ 2. The operator is supplied with a primary obstruction sensing entrapment protection system. The installation must also have a secondary entrapment protection system installed, such as photoelectric sensors or an electric edge system.
- ▲ 3. When designing a system that will be entered from a highway or main thoroughfare be sure the system is placed far enough away from the road to eliminate traffic backup. Distance from the road, size of the gate, usage levels, and gate cycle/speed must be considered to eliminate potential traffic hazards.
- ▲ 4. Design the gate system so a person cannot reach over, under, around or through the gate to operate any controls. Never place controls on the gate operator itself.



INSTALLER SAFETY INSTRUCTIONS

BEFORE INSTALLATION

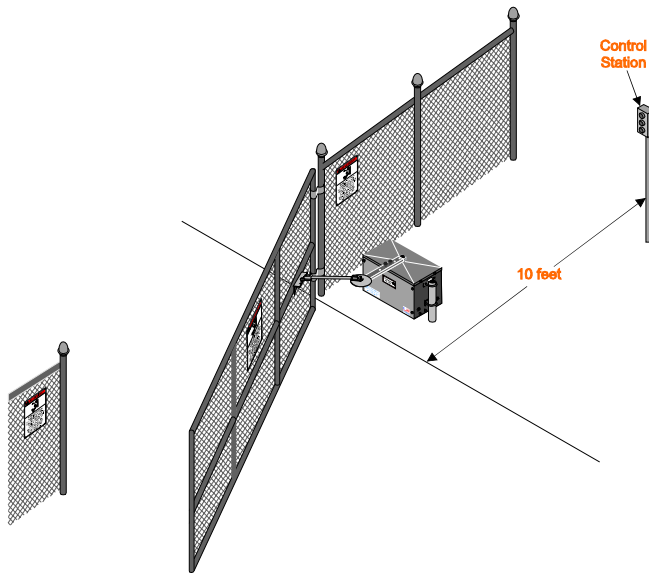
- ▲ 1. Check to see that the operator is proper for this type and size of gate and its frequency of use. If you are not sure, consult factory.
- ▲ 2. Check to see that there are no structures adjacent to the area, which may pose a risk of entrapment when gate is opening or closing.
- ▲ 3. You must ensure that the gate has been properly installed and works freely in both directions. Replace

or service any worn or damaged gate hardware prior to installation. A freely moving gate will require less force to operate and enhance the performance of the operator as well as the safety devices used within the system.

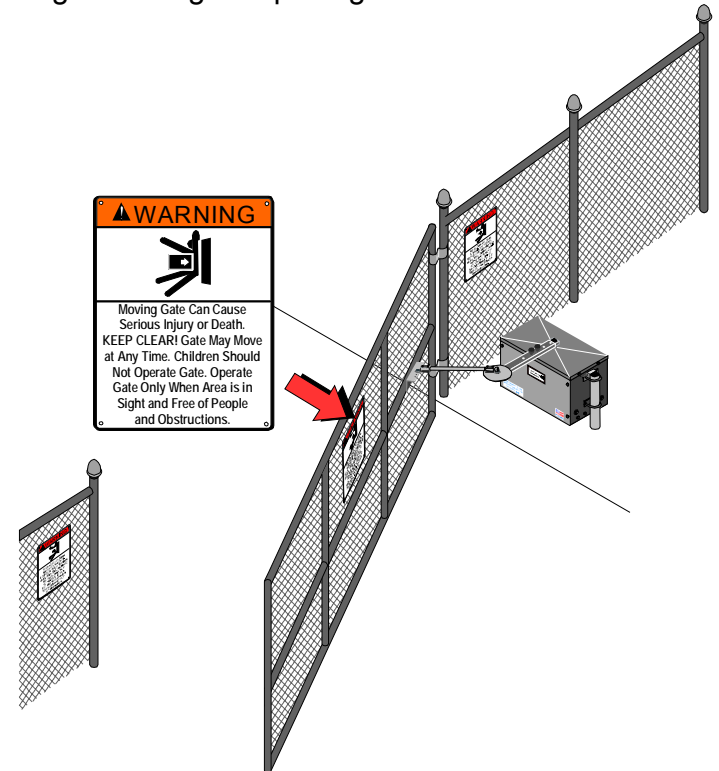
- ▲ 4. Install the gate operator on the inside of the property and/or fence line. **DO NOT** install an operator on the public side of the gate.
- ▲ 5. Severe injury or death can result from entrapment by a gate. The operator is supplied with an obstruction sensing primary entrapment protection system. Additional safety equipment such as electric edges or photocell sensors must be installed to provide the required secondary entrapment protection system. For assistance in selecting the correct type of safety equipment, consult the factory.
- ▲ 6. Review the operation of the unit and become familiar with the manual operation procedure and safety features of the system.
- ▲ 7. You must install a pushbutton control or key switch to allow for normal operation of the gate if the automatic controls do not work. Locate the push button or key switch and small warning placard within sight of the gate in a secured area at least 10 feet or more from the gate and fence to keep users away from the moving gate and fence.
- ▲ 8. Outdoor or easily accessed gate controls should be of the security type to prohibit unauthorized use.

DURING INSTALLATION

- ▲ 1. Be aware of all moving parts and avoid close proximity to any pinch points.
- ▲ 2. Disconnect power at the control panel before making any electric service connections. Connection location for controls and safety equipment can be found on the wiring diagram, and in this manual.
- ▲ 3. Know the procedure to disengage and manually operating the unit.
- ▲ 4. Adjust the open and close force adjustment on the control board in each direction to the minimum force required to operate the gate smoothly. **DO NOT increase the force adjustment setting to make up for rough spots in gate travel - FIX THE GATE INSTEAD!**
- ▲ 5. Locate the controls at least 10 feet from the moving gate so that the user can observe the gate operation, but is not able to come in contact with the gate while operating the controls.



- ▲ 6. Attach large warning signs provided to each side of gate in the most conspicuous place. Mount control station and smaller warning placard together within sight of the gate opening.



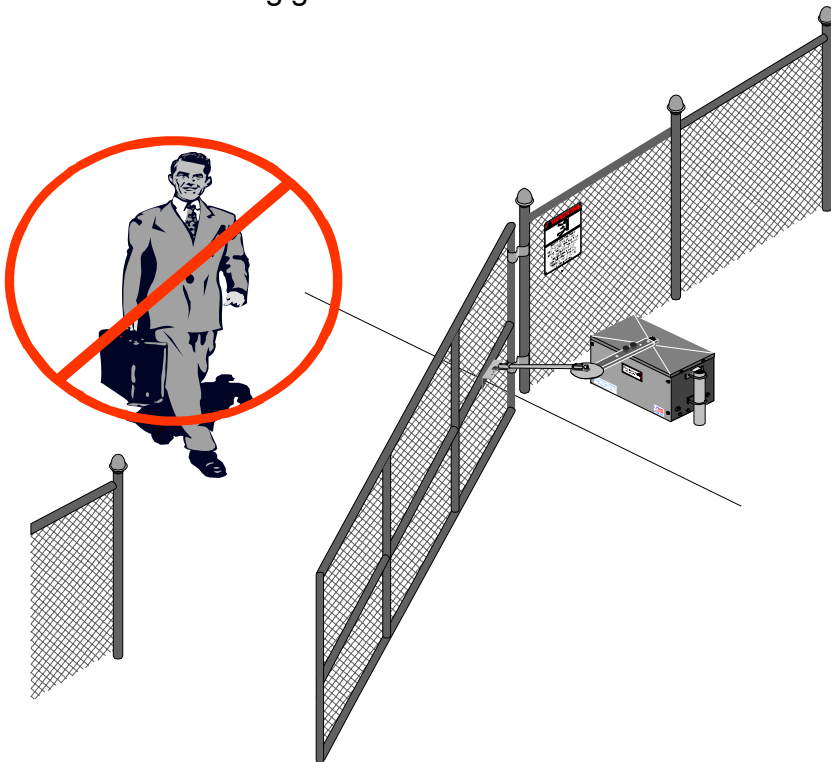
AFTER INSTALLATION

- ▲ You are responsible for ensuring that the end user understands the basic operations and safety systems of the unit, **INCLUDING THE MANUAL OPERATION PROCEDURE.**
- ▲ Point out that the safety instructions in this manual are the responsibility of the end user, and then **LEAVE THIS MANUAL WITH THE END USER**

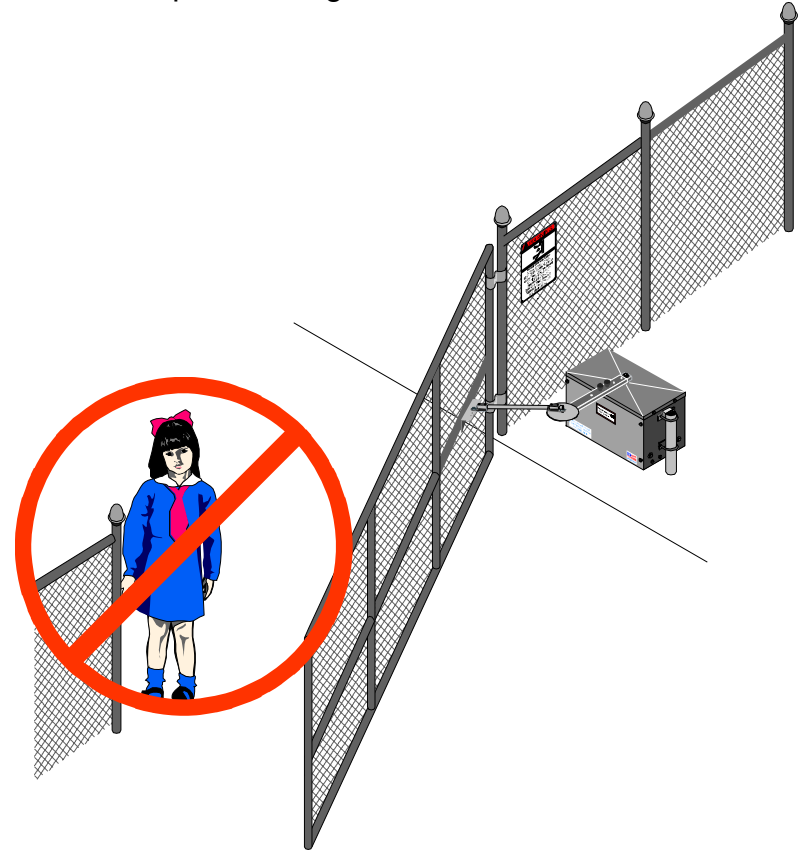
END-USER SAFETY WARNINGS

The manufacturer of the gate operator does not know what type of gate you have, or what type of automatic system is installed on your gate. Be sure you've been fully instructed on the sequence of operation for your specific gate system(s). Keep the gate properly maintained and have a qualified service person make repairs.

- ▲ 1. Be sure the following safety instructions are distributed to all persons authorized to use your gate.
- ▲ 2. **KEEP GATEWAY CLEAR (Front and Back) AT ALL TIMES.** Your automatic gate is not for pedestrian use. No one should ever cross the path of the moving gate.



- ▲ 3. **DO NOT** allow children to play near your gate, or to operate the gate.



- ▲ 4. **DO NOT** operate your gate system unless you can see it when the gate moves.
- ▲ 5. Be sure a pushbutton or key switch has been installed for manual electric operation in the event your radio or card key does not work. Any mounted control station should be located a minimum of 10 feet from the gate so the gate cannot be reached through or touched. Any pushbutton located in a building should be installed within sight of the gate.

- ▲ 6. **DO NOT** operate any controls without watching the movement of the gate.
- ▲ 7. Your gate system is required to have a primary and a secondary entrapment safety system installed and maintained.
- ▲ 8. If your gate closes automatically, loop detectors should be installed to detect the presence of a vehicle.
- ▲ 9. **DO NOT** increase force adjustment to compensate for a damaged gate. The gate should always be maintained to operate manually as easily as possible to provide maximum protection.
- ▲ 10. Check all safety systems at least once per month for the correct force, speed and sensitivity. Gate must reverse when hitting a rigid object, or when a non-contact sensor is activated. **If these functions are observed to operate improperly, discontinue use and have it serviced immediately!**
- ▲ 11. You are responsible for ensuring that warning signs are installed and maintained on both sides of your gate.
- ▲ 12. To ensure safe operation of this equipment, you must read this safety manual and keep it for reference.
- ▲ 13. **Swing gates have two potential entrapment zones you must avoid. Make sure they are protected as shown in the following diagram.**

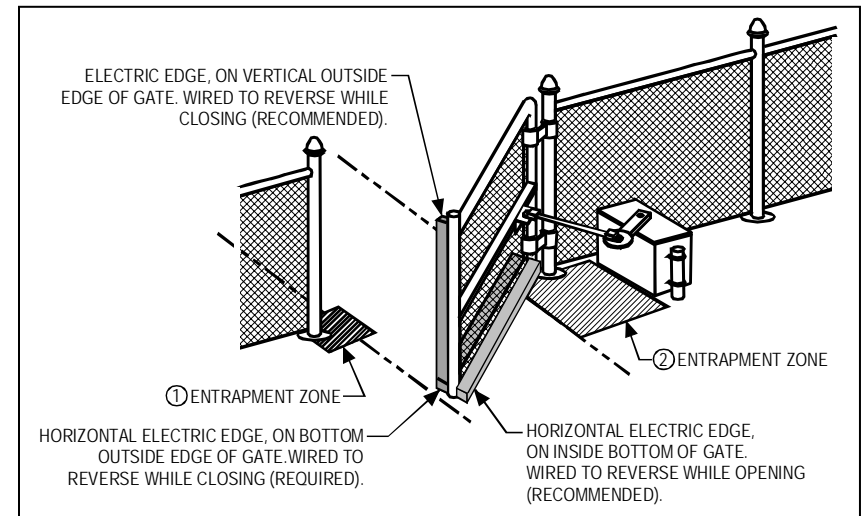


Figure 1

1. Pedestrians should keep clear of path of gate, particularly in the area before fully closed.
2. The area of the gate arm and linkage must be avoided as it can create an entrapment.

WARNING: THIS GATE SYSTEM IS FOR VEHICULAR TRAFFIC ONLY. A SEPARATE PEDESTRIAN ENTRANCE MUST BE PROVIDED.

MANUAL OPERATION

Your operator is equipped with an emergency disconnect for manual operation. Be sure you know how to properly use this feature. To disengage operator follow the procedure below.

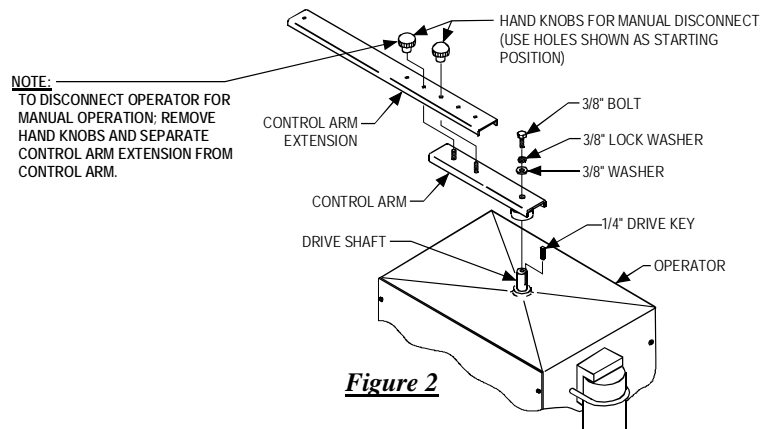


Figure 2

INSTALLATION INSTRUCTIONS

▲ **WARNING:** DO NOT APPLY POWER UNTIL TOLD TO DO SO! RISK OF ELECTRICAL SHOCK OR INJURY MAY RESULT!

BEFORE INSTALLING OPERATOR

IMPORTANT: Operator should always be mounted inside the gate. Determine whether the installation is Left hand or Right hand by the direction the gate moves in order to open, when viewed from inside the fence.

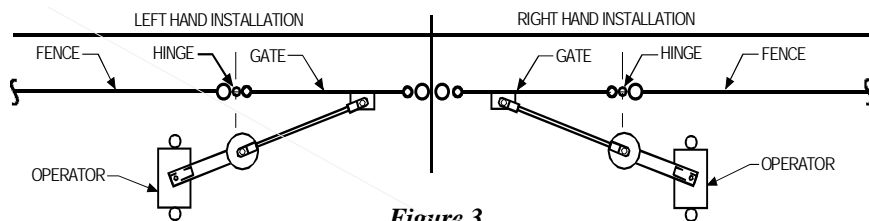


Figure 3

1. Gate must swing freely to fully opened and fully closed position.
2. The operator will be located as shown above, for left and right hand installation.

INSTALLATION LAYOUT

1. Layout mounting post and electrical conduit locations as shown in figures below. Excavate required area for conduit installation and cementing of mounting posts. (Minimum of 2 feet deep, check local codes.)
2. Set mounting post and electrical conduit in place.
3. Pour cement to secure mounting posts and let cure for two days prior to operator installation.

Note: Distance between mounting posts and relative location to gate is very important! Operator must be installed perpendicular to the fence.

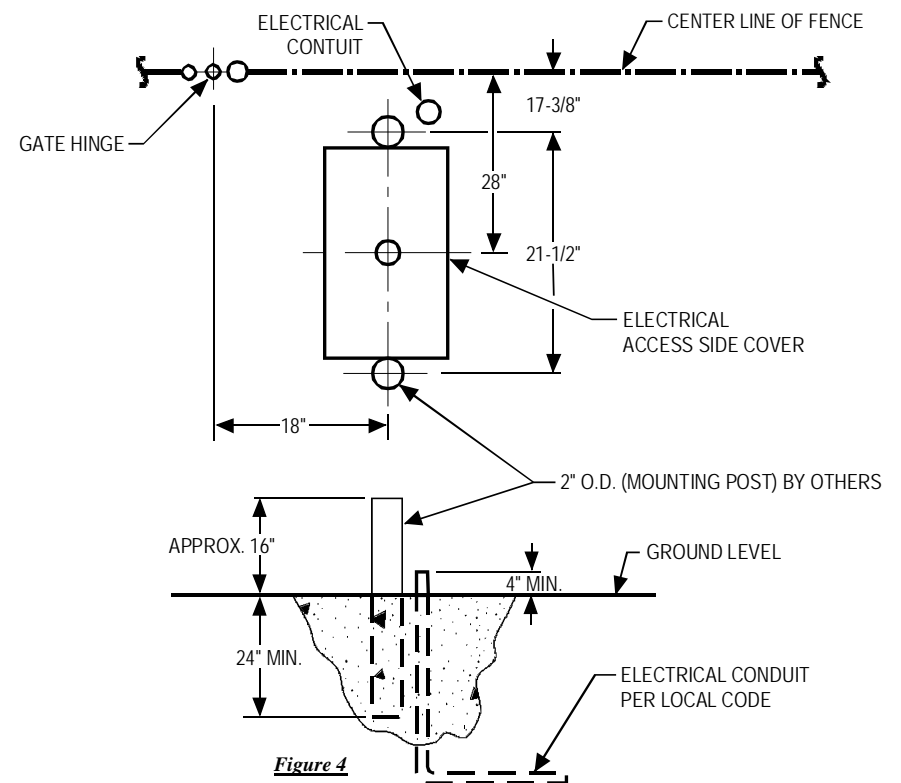
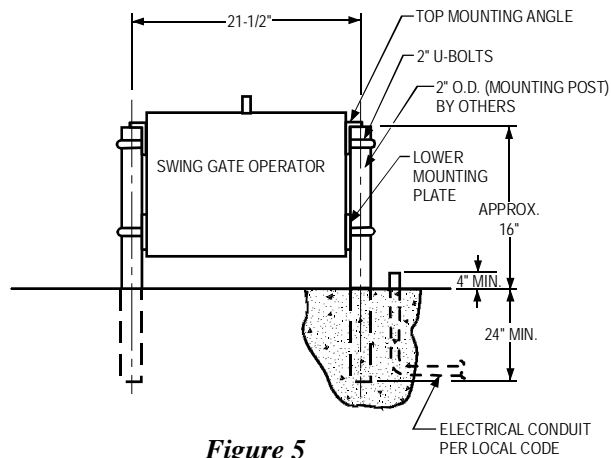


Figure 4



OPERATOR INSTALLATION

1. Mount operator on posts with mounting angles, and mounting plates. Secure position with 2" U-bolts, and hardware provided. See figure #5.
2. Set control arm on output shaft of operator without drive key, and install control arm extension using hand knobs to secure position. See figure #6.

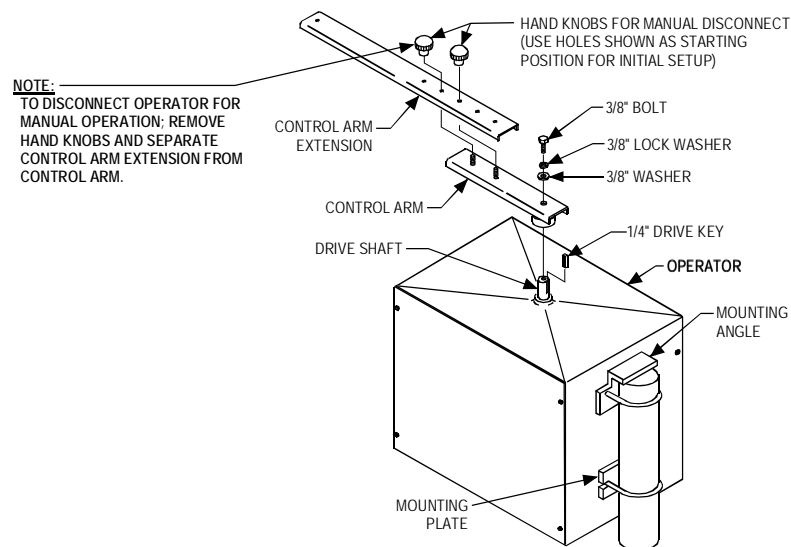


Figure 6

3. Install end fittings on connecting rod assembly and attach one end of assembly to end of control arm extension. See figure #7.

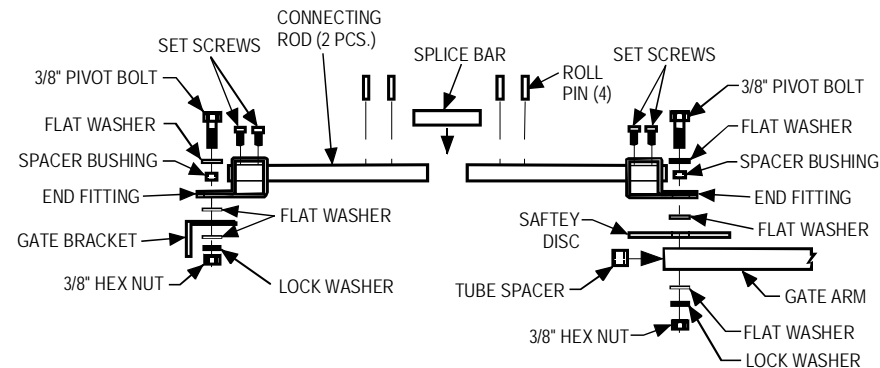


Figure 7

4. Install gate bracket on remaining end of connecting rod (See figures #7 & #8.
5. Locate gate bracket in position on gate, as shown in figure #8, and clamp in position.
6. Move control arm to its maximum close position. See figure #8. Control arm and connecting rod must be straight in line.

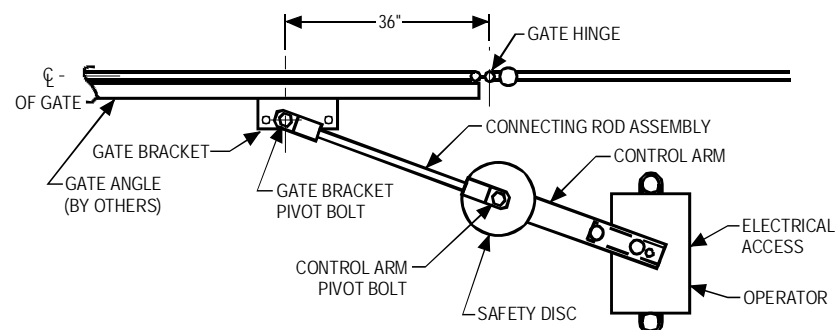


Figure 8

Note: Adjustment can be made in (4) locations to get desired closed position. **Always start with option “a”**

- a) Move the gate bracket to left or right of the 36 inch starting position.
- b) Change length of connecting rod assembly.
- c) Relocate control arm extension on control arm to a different hole pattern then start position. See figure #6.
- d) Move connecting rod bolt in gate bracket to a different hole. See figure #8.

7. Move control arm to its open position. See figure #9.

Note: Arm and connecting rod should almost double over each other. This is important for smooth operation and longevity of the operator.

Note: Open position of gate may be adjusted slightly with limit switch adjustment, but when finished, open position on control arm assembly should be as close as possible to that shown in Figure 9. If mechanical adjustments are made to achieve desired open position of gate, repeat steps 6 & 7, since this will affect the closed position.

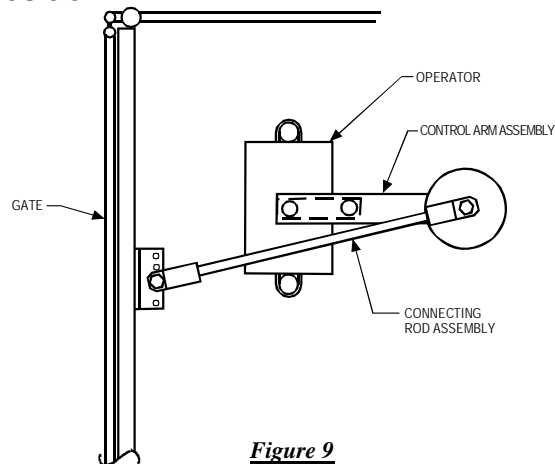


Figure 9

8. When the desired open and closed gate position have been achieved, remove control arm extension from control arm. See figure #6.
9. Remove control arm from operator drive shaft and insert drive key. See figure #6.
10. Replace control arm on operator drive shaft with drive key and secure with 3/8 inch bolt. See figure #6.
11. Replace control arm extension on control arm and secure with hand knobs. See figure #6.

Note: If operator was ordered as a right or left hand unit from the factory, the control arm position will be somewhere in its normal travel segment and the limit switches will be set at an approximate open and close position. Final adjustments will be made later after power is connected.

If the hand of the operator is to be changed in the field as described in the following section than before the control arm extension is replaced as in step #11, proceed to step #12.

12. By turning the internal drive pulley by hand, move the control arm to somewhere in its normal drive segment.
13. Control arm extension may now be attached to control arm as in figure #6.

ELECTRICAL CONNECTIONS

WARNING- DO NOT APPLY POWER UNTIL TOLD TO DO SO. RISK OF SHOCK OR INJURY MAY RESULT!

NOTE: Wiring to operator must use watertight materials in accordance with local electric code. See wire gauge/distance charts for proper sizing. Master/Slave installations should have **SEPARATE** power supply wiring or length of wire runs should be figured at half that shown on the chart. **This unit must be grounded in accordance with N.E.C. and local codes.**

Before connecting the operator, use a voltmeter to determine that the electrical service is 115V. THIS OPERATOR CANNOT BE CONNECTED AT 230 VOLTS. Damage will result which is not covered under warranty.

Line Voltage	HP	14 AWG	12 AWG	10 AWG	8 AWG	6 AWG
115 VAC	1/2	150'	250'	400'	500'	650'

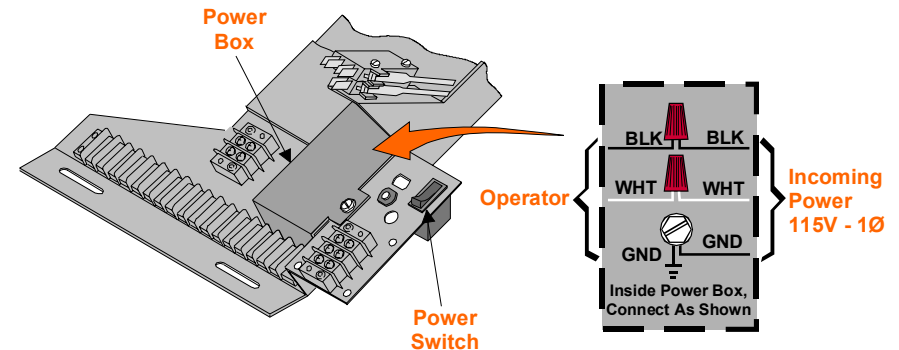
LOW VOLTAGE WIRE GAUGE /DISTANCE CHART

24 AWG : Up to 150'
 20 AWG : 150' - 200'
 18 AWG : 250' - 1,500'

Control wiring should be run as twisted pairs. DO NOT run control wires in the same conduit as power wires, telephone wires, or loop detector leads.

1. Be sure power switches at source and operator are OFF.
2. Connect incoming power lines and ground wire as shown below.

Hot leg (black) to BLACK; Neutral (white) to White: Ground to Ground Screw.



NOTE: In order to properly run and check the operator at various stages during the setup procedure, it is suggested that a three button control station be connected at this time. See page 24.

LEFT/RIGHT HAND CONVERSION:

Refer to (Fig. 1) to determine hand of operator required for this installation. This unit is factory setup for right hand operation.

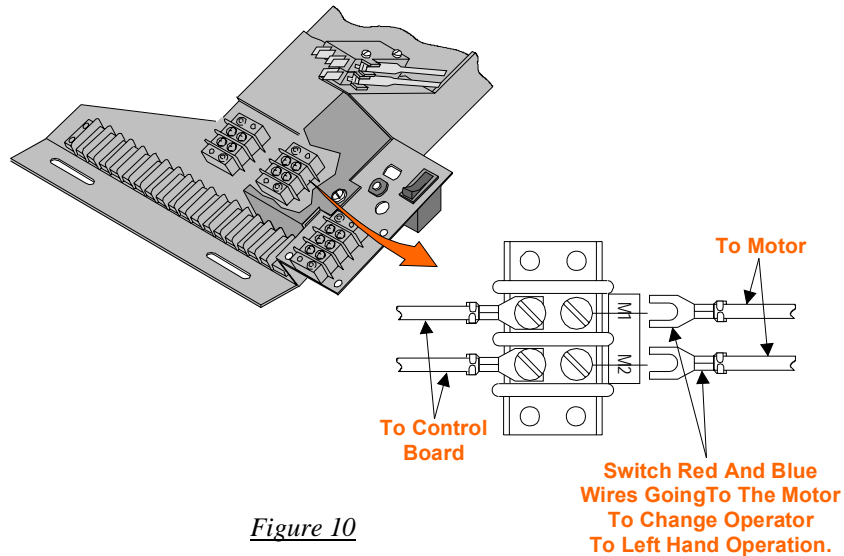


Figure 10

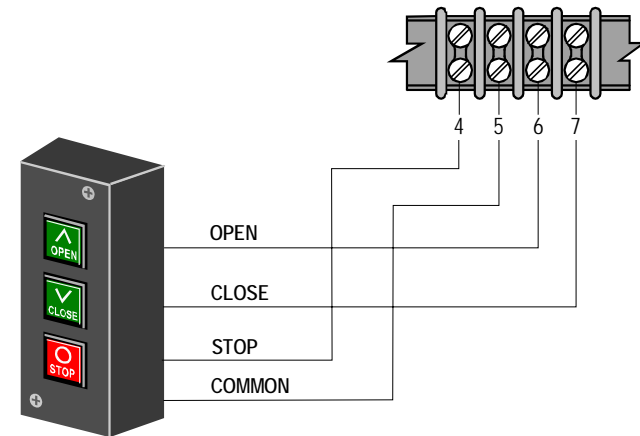
To convert operator to left hand operation, make certain the power switch is off, and locate the motor terminal strip (See Fig. 10). Switch the red and blue wires, between M1 and M2, that go to the motor. The operator is now setup for left hand installation.

LIMIT ADJUSTMENT PROCEDURE

▲ **WARNING:** READ ENTIRE PROCEDURE BEFORE STARTING. TURN OFF MAIN POWER BEFORE MAKING ANY ADJUSTMENTS!

▲ **WARNING:** STAY CLEAR OF ALL MOVING PARTS AND ELECTRICAL COMPONENTS OF THE OPERATOR WHILE TESTING!

A CONTROL STATION SUCH AS A THREE BUTTON STATION (“OPEN”, “CLOSE”, “STOP”) WITH ALL NORMALLY OPEN CONTACTS IS REQUIRED FOR THIS PROCEDURE. SEE INSTRUCTIONS BELOW.

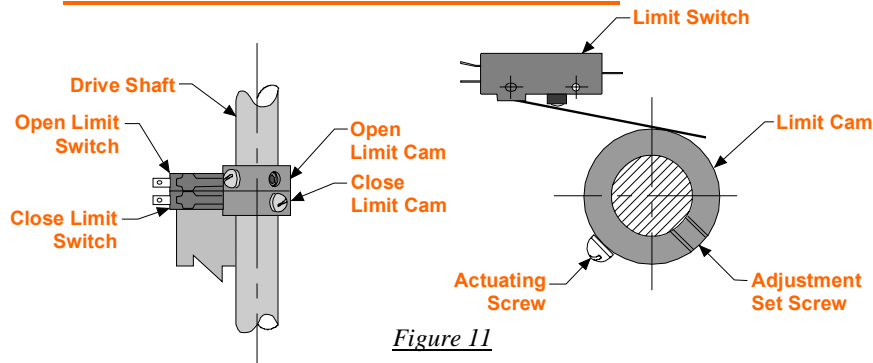


1. Connect a wire from the common connection of the control station to terminal #5.
2. Connect a second wire from the “**OPEN**” button of the control station to terminal #6.
3. Connect a third wire from the “**CLOSE**” button of the control station to terminal #7.
4. Connect a fourth wire from the “**STOP**” button of the control station to terminal #4.

NOTE: Operator should be completely installed, mechanically and electrically, before attempting to set limit switch cams (See Fig. 11).

NOTE: For master slave installation, travel time for the master operator must be set longer than the slave operator.

OPEN LIMIT SWITCH ADJUSTMENT:



1. Turn on power. Press open button on control station, gate should stop before full open position is reached. If gate does not stop when open position is reached, **PRESS STOP BUTTON!**

2. To adjust gate for more open travel, loosen open limit cam set screw and rotate limit cam, in the opposite direction drive shaft rotates to open gate. Re-tighten set screw after adjustment (See Fig. 11).

3. If it was necessary to stop gate, adjust open limit switch cam for less open travel, by rotating the cam in the same direction that the drive shaft rotates to open the gate.

4. Press close button and stop gate in mid travel with stop button.

5. Repeat procedure until desired open setting is obtained.

CLOSE LIMIT SWITCH ADJUSTMENT:

1. Press close button on control station, gate should stop before full close position is reached. If gate does not stop when close position is reached, **PRESS STOP BUTTON!**

2. To adjust gate for more close travel, loosen close limit cam set screw and rotate limit cam, in the opposite direction drive shaft rotates to close gate (See Fig 11).

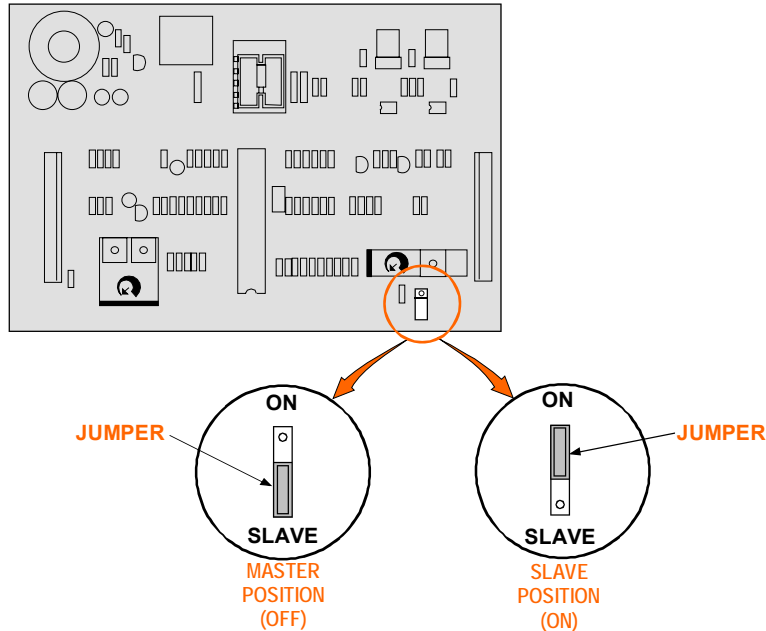
3. If it is necessary to stop gate, adjust close limit switch cam for less close travel by rotating the cam in the same direction that the drive shaft rotates to close the gate.

4. Press open button and stop gate in mid travel with stop button. Repeat procedure until desired close setting is obtained.

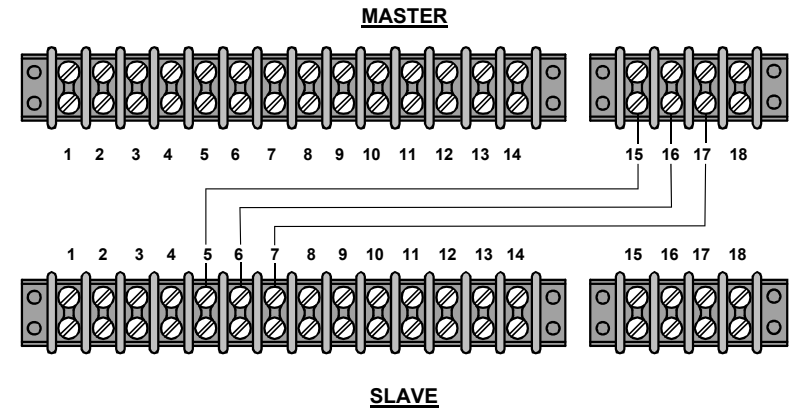
Note: After both “Open” and “Close” limit adjustments are complete, check that both limit cam set screws are tight.

MASTER/SLAVE INSTALLATION

NOTE: A single unit is considered a Master. In a Master/Slave installation, one unit must be converted to **LEFT HAND** operation.



1. Place jumper on the **MASTER** operator's control board in the "**OFF**" position.
2. Place jumper on the **SLAVE** operator's control board in the "**ON**" position.
3. Connect terminal #15 of **MASTER** unit to terminal #5 of slave unit.
4. Connect terminal #16 from the **Master** unit to terminal #6 on the **Slave** unit.
5. Connect terminal #17 from the **Master** unit to terminal #7 on the **Slave** unit.



TIMER TO CLOSE OPTION

The operator is equipped with a timer to close option for use with control devices such as a radio control, or card key control. The **AUTO RECLOSE TIMER** adjustment screw is located on the printed circuit board. The operator is shipped from the factory with this timer preset to the off position; fully counter clockwise. As the timer adjustment screw is rotated clockwise, the closing of the gate can be delayed from 2 seconds to 60 seconds.

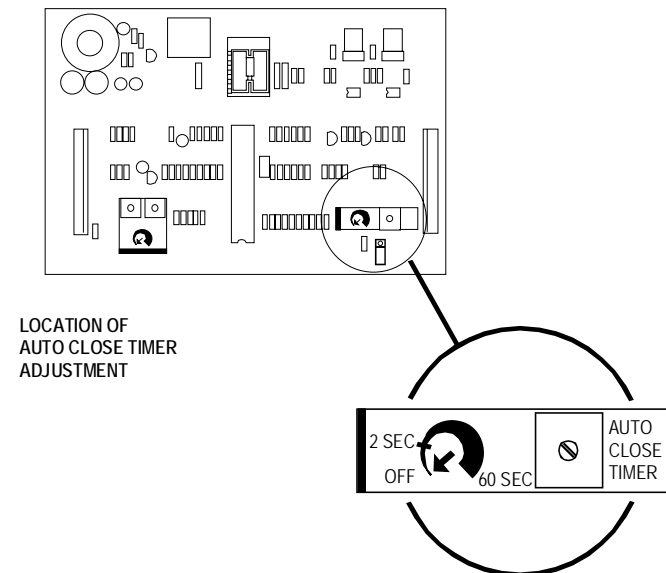


Figure 12

ACCESSORY CONTROL CONNECTIONS

RADIO CONTROL INSTALLATION

A Three or Four wire radio control receiver can be installed on this operator. This radio control receiver can only be used to open the gate, therefore the "TIMER TO CLOSE" option must be activated for closing.

NOTE: If your radio's connecting wires are not color coded as shown, see the radio's installation manual to determine which wires are for the normally open contacts and which require the 24 VAC Power Supply.

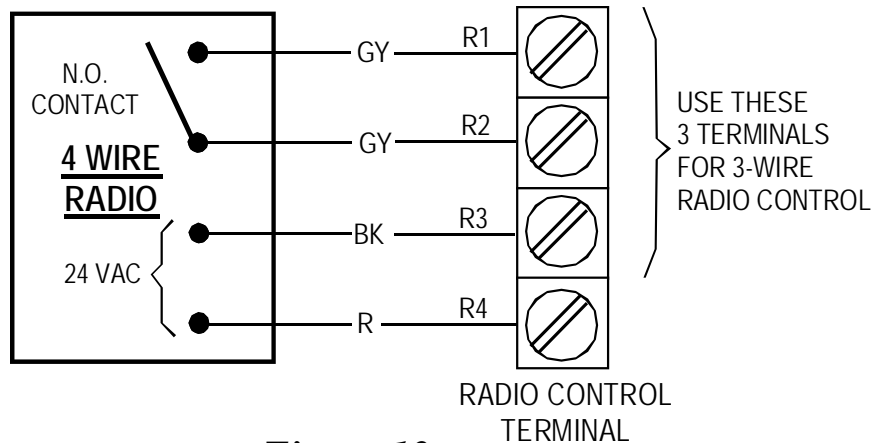
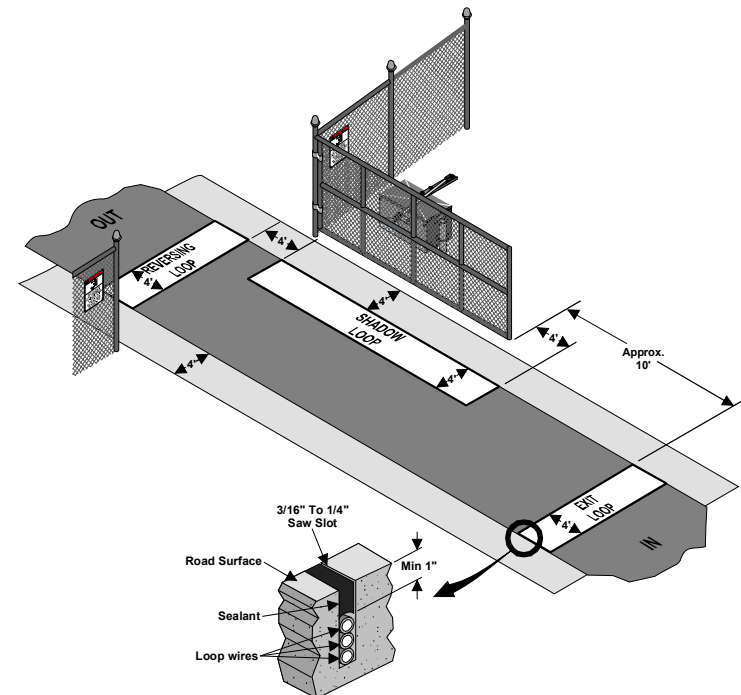


Figure 13

LOOP DETECTOR SYSTEMS AND INSTALLATION

The diagram below depicts the typical loop options for a Slide Gate installation.

1. The **Exit Loop** provides a signal to open the gate when a vehicle enters the loop zone.
2. The **Reversing Loop** protects a vehicle in the loop zone from being contacted with the gate by overriding any close signal while the gate is open, and by reversing the gate if closing.
3. The **Shadow Loop** protects a vehicle in the loop zone from being contacted with the gate by overriding any close signal while the gate is in the full open position.



LOOP INSTALLATION

1. Layout the desired loop locations per the diagram.
The standard size chart below will give an approximate length of wire required for various loop dimensions and number of turns required.

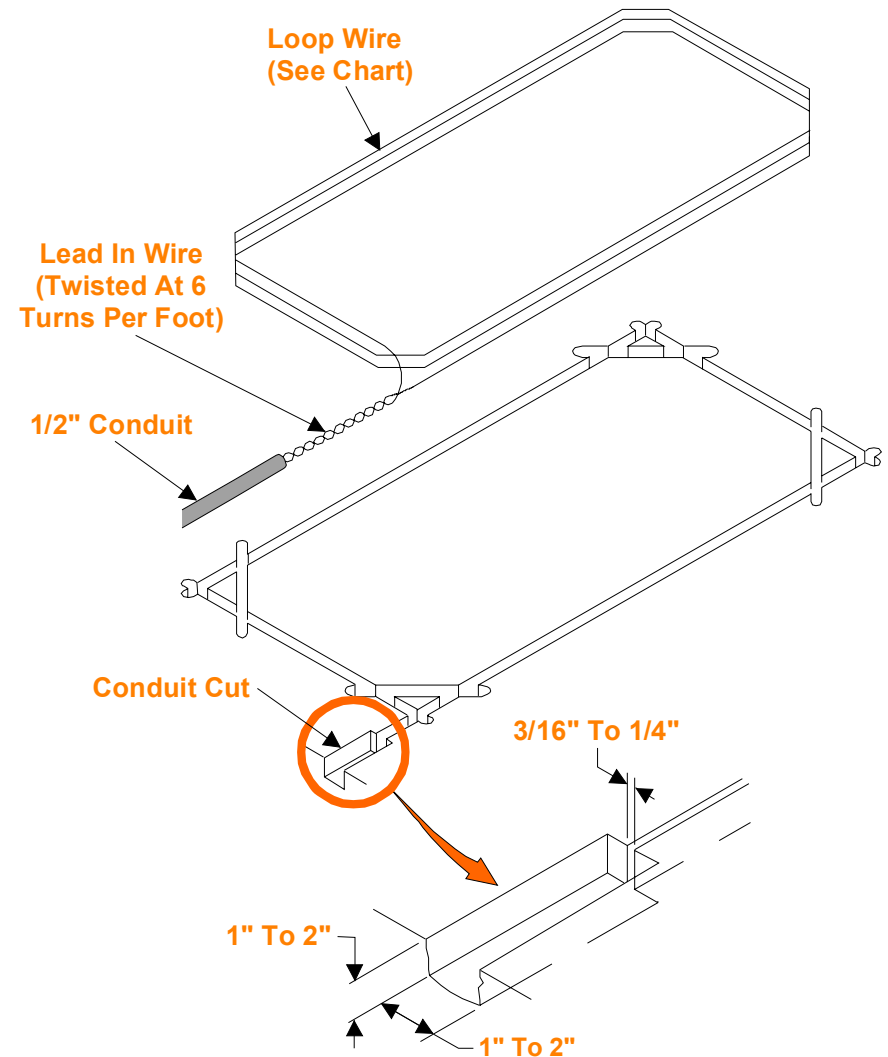
CAUTION: The Loop wires and Lead-in wires must be a continuous piece of wire without splices. The amount of lead in wire required must be added to these lengths for total wire required. Only use wire intended for this type of application. (Type XHHW insulation 16AWG)

NOTE: Buried steel from drains or other systems may affect functioning of the loop system. Check with the factory for advice on any special installations. (1-800-243-4476).

STANDARD LOOP LAYOUTS FOR APPROX 36" HEIGHT DETECTION

LOOP SIZE	# OF TURNS	LOOP WIRE LENGTH (FT)
4' X 4'	4	64'
4' X 6'	4	80'
4' X 8'	3	72'
4' X 10'	3	84'
4' X 12'	3	96'
4' X 14'	3	108'
4' X 16'	3	120'
4' X 18'	3	132'
4' X 20'	3	144'
4' X 22'	3	156'
4' X 24'	3	168'
4' X 26'	3	180'
4' X 28'	3	192'
4' X 30'	2	136'
4' X 32'	2	144'
4' X 34'	2	152'
4' X 36'	2	160'
4' X 38'	2	168'
4' X 40'	2	176'

2. Cut the required groove as shown in the diagram below at the locations laid out in **Step #1**.

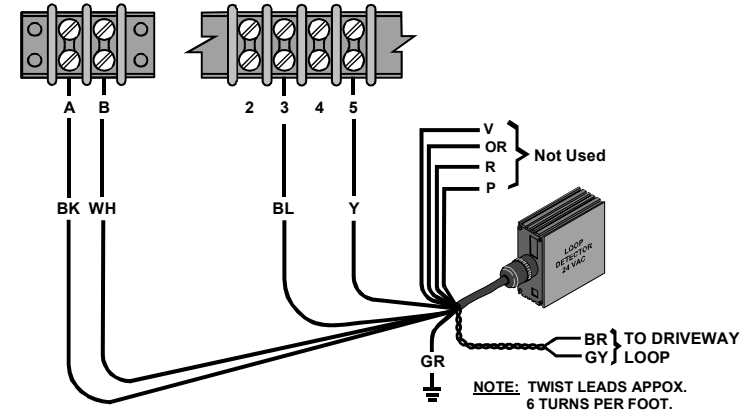


- Leaving enough wire for the **LEAD IN**, insert the specified number of turns of wire in the cut grooves. (See chart).

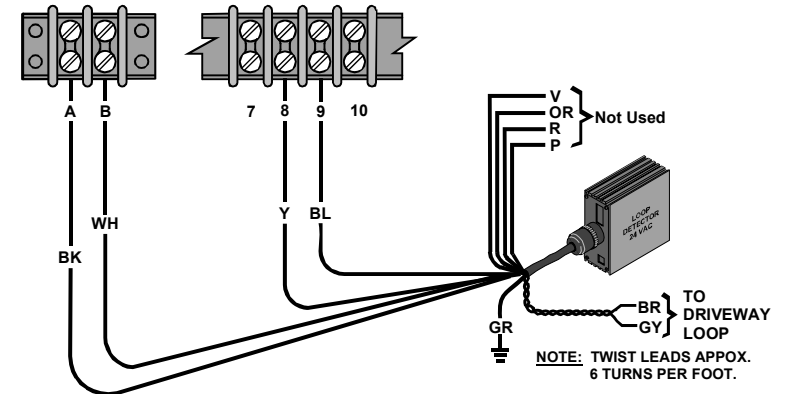
CAUTION: Be careful not to damage the wire insulation during installation.

- After completing the required number of loop turns, twist the ends together at the rate of 6 turns per foot to form the **LEAD-IN**.
- Seal the **LEAD-IN** wire in the conduit to prevent moisture seepage into the conduit.
- Fill over the loop wires in the groove with a recommended loop sealant. Contact your distributor for available sealants.
- Mount the loop detector in the operator and connect the wire loop.
- Connect loop detector to the control board as shown on the following page.

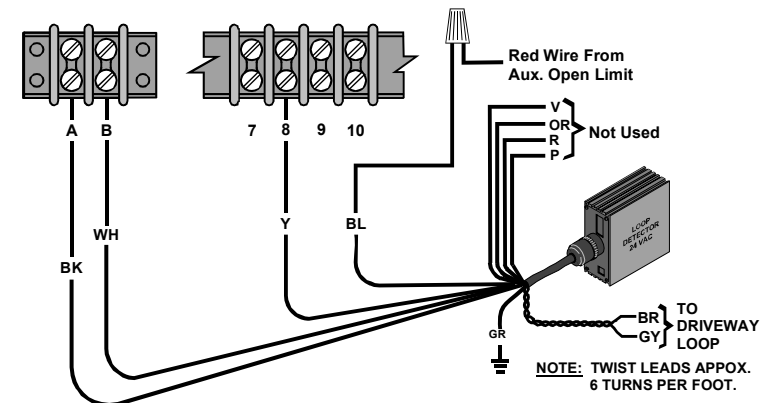
EXIT LOOP CONNECTION



REVERSING LOOP CONNECTION



SHADOW LOOP CONNECTION



SAFETY DEVICE CONNECTIONS

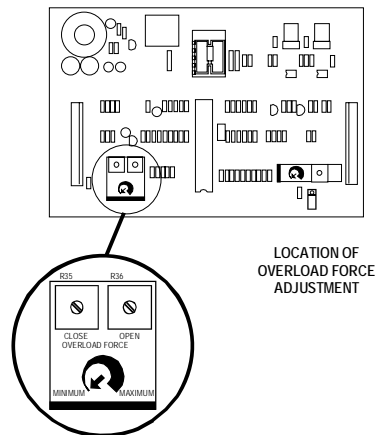
INHERENT OBSTRUCTION SENSING DEVICE:

NOTE: The gate MUST move smoothly and easily in manual operation before attempting this adjustment.

WARNING: TURN OFF POWER TO OPERATOR WHEN MAKING ANY ADJUSTMENTS.

This unit is supplied with a current sensing system, which will stop the gate when it encounters an obstruction and then backs the gate off approximately 2 inches. If the gate is started again and a second encounter occurs before hitting a limit switch, the gate will stop and sound a warning signal. A constant pressure control will then be needed to start the gate. This sensing system has sensitivity adjustments located on the printed circuit board. The force required to activate the system must be adjusted in both **OPEN** and **CLOSE** directions separately. Start at minimum and increase force setting until it is just over what is required to move the gate smoothly without any nuisance tripping.

WARNING: NEVER INCREASE FORCE SETTING TO MAKE UP FOR A GATE THAT IS NOT MAINTAINED PROPERLY. THIS WILL DESENSITIZE THE OPERATION OF THE SAFETY SYSTEM.



LOCATION OF
OVERLOAD FORCE
ADJUSTMENT

Figure 14

SECONDARY OBSTRUCTION SENSING DEVICES

Another sensing device (Either a contact or a non-contact system) must be installed and connected to this unit to increase protection against entrapment per U/L requirements.

NOTE: All safety device contacts must be **NORMALLY OPEN**.

NOTE: 24 VAC power is available at marked terminals for devices that may require it (i.e., photo eyes, wireless edges, etc).

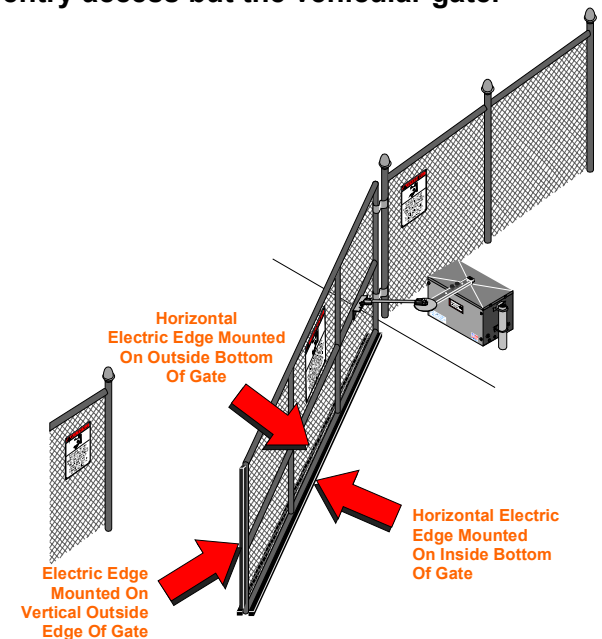
CONTACT SENSOR INSTALLATION:

NOTE: When wireless sensors are installed it must be done so there is no signal interference.

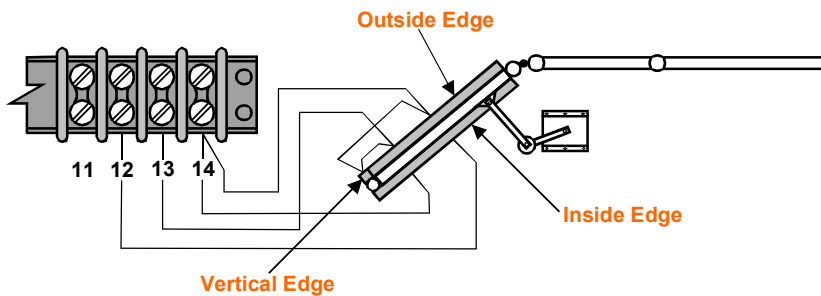
NOTE: All hard wiring to safety edges must be installed so there is no threat of mechanical damage to wiring between components, when the gate is moving.

1. Install electric edge sensors in locations shown below.

NOTE: A separate pedestrian gate must be installed if there is no other entry access but the vehicular gate.



2. Connect contact sensor edges to the control board as shown in the illustration below.



3. After sensors are mounted and electrically connected, turn on the power.
4. Test the close obstruction sensing system for proper operation, by depressing the vertical edge sensing strip while the operator is running closed.

NOTE: The operator should stop and reverse a short distance and then stop.

5. Run the operator to the open limit, and repeat step #3 for the outside horizontal edge.
6. Test the open obstruction sensing system by depressing the inside horizontal edge sensor while the gate is opening.

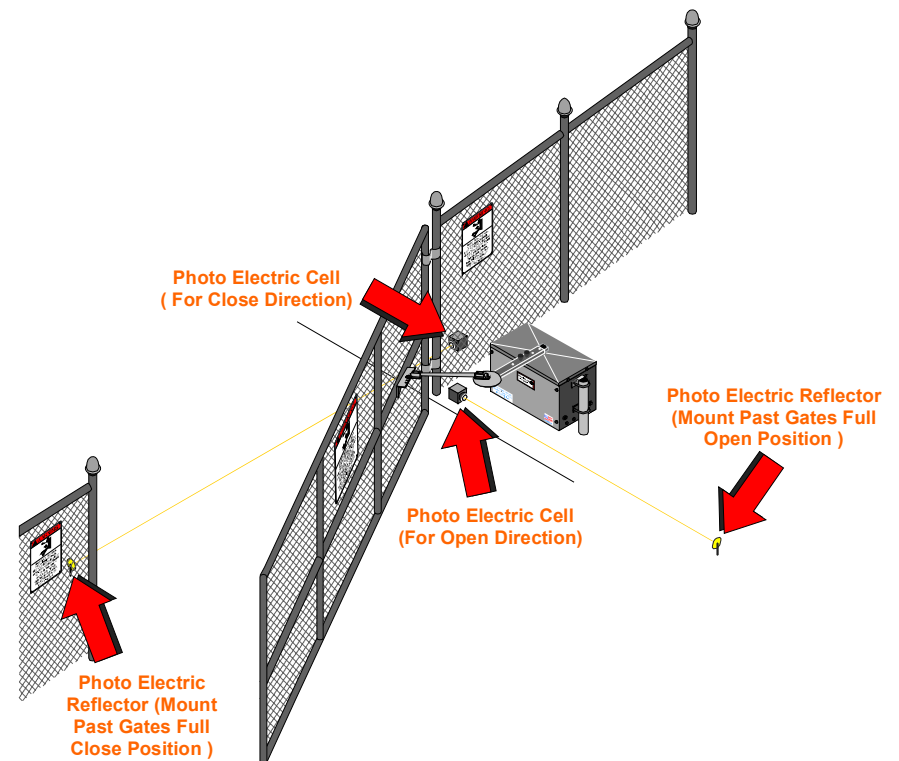
NOTE: The operator should repeat the STOP AND REVERSE procedure.

NOTE: If an edge is activated twice or a second edge is activated before a limit is hit (full open or close) operator will stop and sound a warning horn. To reactivate system turn operator power switch off, then on.

NON-CONTACT SENSOR INSTALLATION

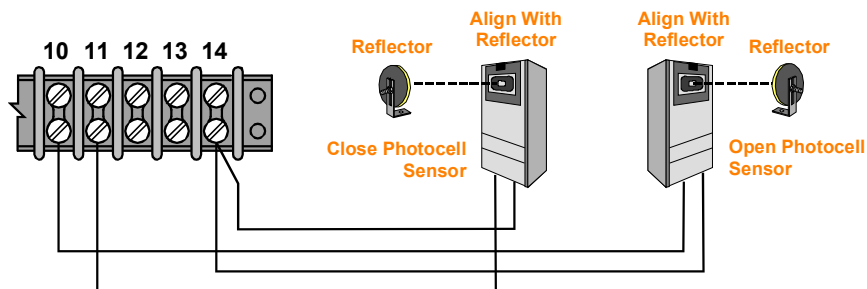
1. Install photoelectric cell as close to the full open position and full closed position of gate as possible.
2. Photocells should be installed across the gate opening and behind the gate (as shown below) at least 10 inches above ground.

NOTE: A separate pedestrian gate must be installed if there is no other entry access but the vehicular gate.



3. Connect **NON-CONTACT** sensors to the control board as shown below.

NON CONTACT SENSOR CONNECTION



NOTE: Close photocell is connected to terminal #11 and terminal #14. Open photocell is connected to terminal #10 and terminal #14.

AFTER SENSORS ARE CONNECTED:

1. Turn on power.
2. Make sure the photo-beams are properly aligned per the manufacturer's specifications.
3. Test the **CLOSE** obstruction sensing system for proper operation, by blocking the beam across the gate opening while the gate is running closed.

NOTE: The gate should stop and reverse a short distance and then stop.

4. Run operator to close limit.
5. Test the **OPEN** obstruction sensing system by blocking the beam mounted at the back area of the gate while the gate is running open.

NOTE: The operator should repeat the stop and reverse procedure.

PowerMaster

Limited 5 Year Warranty

PowerMaster warrants all gate operators to be free of defects in materials and workmanship for a period of Five (5) years from date of purchase. If any part is found to be defective during this period, new parts will be furnished free of charge. Failure of this product due to misuse, improper installation, alterations, vandalism, or lack of maintenance is not covered under this warranty, and voids any other implied warranties herein.

PowerMaster is not responsible for any labor charges incurred in connection with the installation of warranted parts.

In order to activate this warranty, the registration form on opposite page **MUST** be completed and returned within **THIRTY CALENDER DAYS FROM DATE OF PURCHASE VIA CERTIFIED MAIL**, fax (631-951-3934) or via email techsupport@power-master.net If registration is not activated, a one year warranty will apply.

Model MSW

Date Installed _____

Serial # _____

The end user should retain this information for their records and to obtain warranty service.

Installer's Information

Company Name _____

Company Address _____

Company Address _____

Company Address _____

Company Telephone # _____

Company Contact _____

Periodically check all hardware (nuts, bolts, screws, etc) for tightness.

This image shows a single page of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on the right side, suggesting it's part of a bound notebook or folder.

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on the right side, suggesting it's resting on a surface.

Registration Information

Model MSW

Date Installed _____

Serial # _____

Location Installed:

Address _____

Address _____

Address _____

Installer's Information

Company Name _____

Company Address _____

Company Address _____

Company Address _____

Company Telephone # _____

Company Contact _____

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Fax 503-774-6708

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