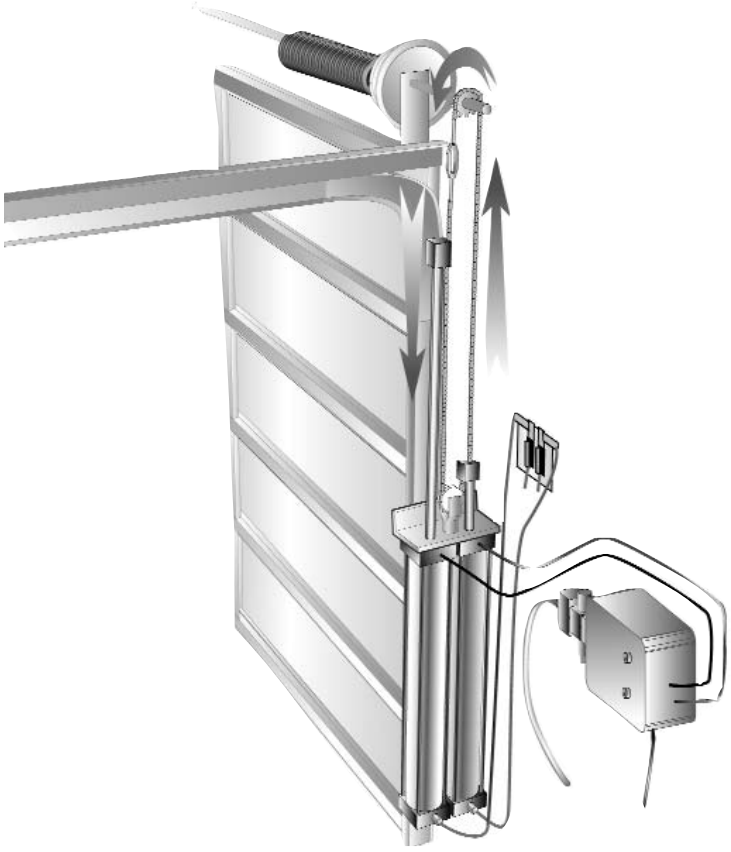
Supralift™

Air-Powered Operator



Installation Manual

1-1-05

American Garage Door Supply, Inc.

1-800-233-1487

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KAB

Supralift™ Air-Powered Operator Installation

Please read Instructions completely before installation!

Recommendations

1. Before you begin the installation of the Supralift[tm] product; test your door for proper operation - your door must operate smoothly without binding and also be balanced equally from the close to the open position. An out of balance door will cause problems with the operation of the air operator.

2. You will need a minimum of 5" of shaft protruding through the bearing plate for the sprocket and chain assembly. A 1" solid keyed shaft is necessary. The use of an extra bearing plate to stabilize the end of the shaft is recommended on longer shafts to prevent deflection.

3. All Supralift operators used with standard lift or doors with minimal high lift (under 16") doors should utilize a pusher spring to keep constant pressure on the door in a downward direction to prevent cable spooling.

4. All air-powered operators should have an inline dryer located before the control box to eliminate moisture in the airlines. Units installed without "point of equipment" inline dryers may void the warranty.

5. Do not use an oiler with your Supralift[tm] system. Lubricant will attract contaminents and can cause damage to the valve and operator seals.

6. The Supralift[tm] piston rod surfaces should be kept clean and should not be dented, scratched or marred in any manner. Damage of this type will cause damage to the seals.

7. When repairing or servicing a unit. Use anti-seize on any stainless steel fasteners that are threaded into aluminum.

8. Use teflon tape on any threaded airline components to prevent air pressure leakage. Tighten all for the best seal.

9. Do not use airline larger than 3/8" between the control box and the operator. Using larger line will slow the unit down.

10. Stopping the door more than 6" before it's intended end travel (door height) will slow down the unit. Order the correct size for your desired opening height of the door.

Safety

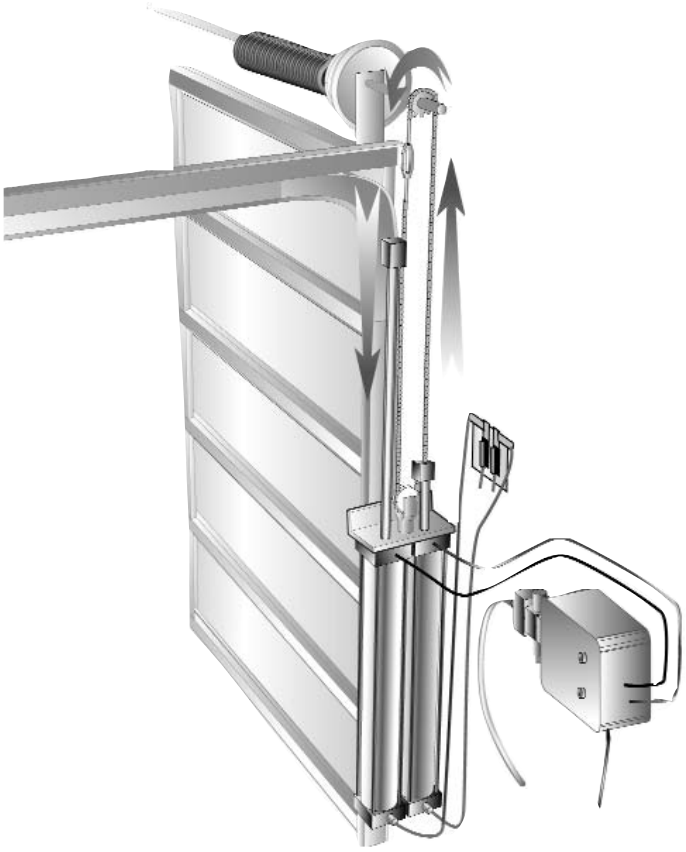
1. Use the shut-off valve in the off position until installation is complete. To turn the valve to the off position turn the handle of the lockout so it is 90 degrees to the valve.

2. Torsion springs and counterweights on overhead type doors are under extreme torque and if handled improperly could cause serious injury, even death. Always use extreme caution when working with or near torsion springs, counterweights or any counterbalance system. Installation should be performed by a trained professional.

3. Follow equipment manufacturer's recommendations on tools, ladders and other equipment used for installation.

4. Any air-powered opener must be equipped with a safety reversing device that operates reliably. Failure to install workable safety devices such as photoeyes, reversing edges and etc. may cause the door to strike an object or person causing serious damage, injury or death.

5. Use precaution when installing or servicing air-powered openers. Air-powered openers utilize high pressure air for a power source and can cause equipment damage, serious injury or death if used improperly.

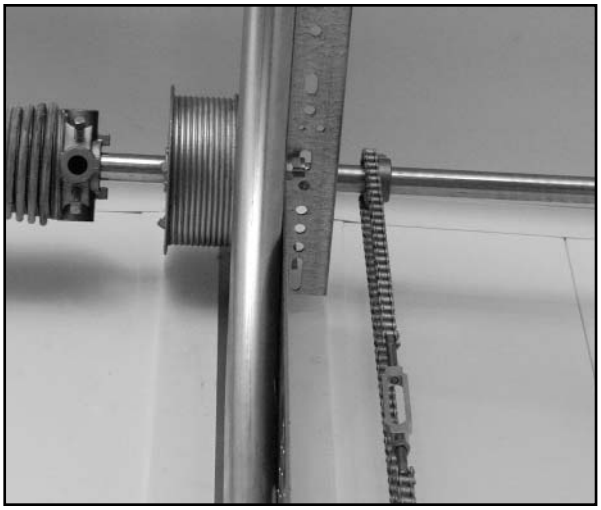


How Supralift™ Works

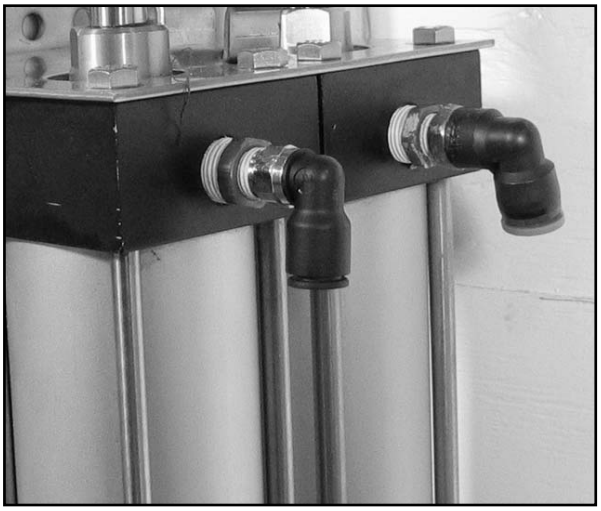
Supralift™ air-powered operators utilize a dual cylinder/piston assembly mounted to the door track. The regulator and air valve located between your compressor and the operator directs air to either the open or the close cylinder which pushes the piston/rod assembly down. The drive chain is attached to the top of each piston rod and loops over the sprocket on the doors' torsion shaft. On the "open" signal, compressed air drives the "open" piston/rod downward. The chain rotates the sprocket, rotating the torsion shaft. The door responds with a smooth, fast motion to the open position. On the “down” signal the door closes with a cushiony stop, preventing cable spooling and unwanted door jerking.

Sample Installation Pictures

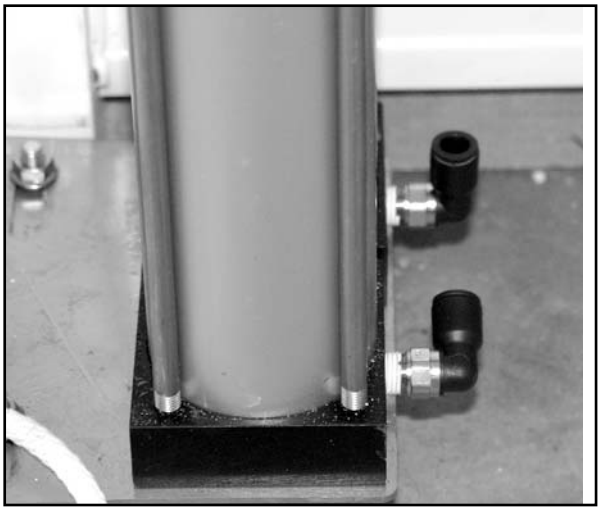
Top Assembly View



Chain/Sprocket View

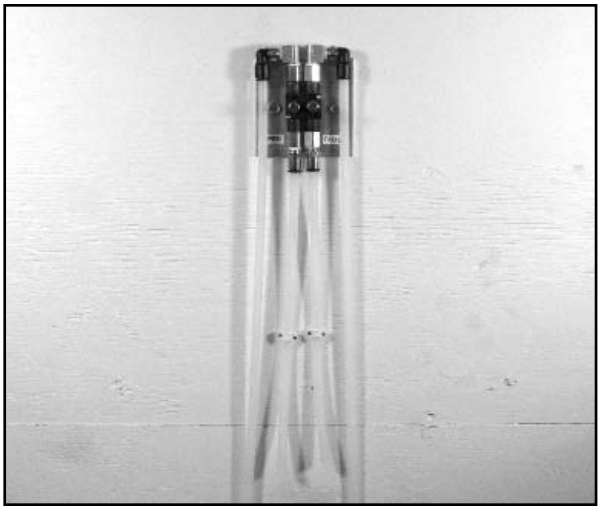


Top of Cylinder View



Bottom of Cylinder View

Control Box View



Flow Control View

Typical Material List

Provided Materials

CYLINDERS - 1 assembled unit per door.

Part #	Door Opening Ht.	Description	Qty
SL08	8’	47-3/16" Cylinders	
SL10	10’	59-3/16" Cylinders	1 ea.
SL12	12’	71-3/16" Cylinders	
SL14	14’	83-3/16" Cylinders	
SL16	16’	95-3/16" Cylinders	

HARDWARE PACKAGE

Part Number	Description	Qty
TBLTS1458	1/4" x 5/8" SS Track Bolt	4 ea
NUTFS14	1/4" SS Flange Nut	4 ea
SLAC/SLSC12	Aluminum Collar with 1/2” SS Set Screw	2 ea
SLJNUT	7/16” SS Jamb Nut	4 ea
SLSTBS	Turnbuckle w/ SS Studs/Locknuts	1 ea
CN41/SLWP**	#41Chain	Door Operator size plus 1’
CMLN41/CMLWP41	#41 Master Link	2 ea
SL1241SS	#41 x 12 Tooth SS Sprocket	1 ea
SSK	1/4" x 2" SS Key	1 ea
SLPF90-38X14	90^0 -3/8” x 1/4” NPT Push-in Fitting	4 ea

Options Sold Separately

Control Box Assembly with Valve & Regulator
Flow Control Kit
Inline Dryer
SS or Galvanized Pusher Springs
Photoeye or other Safety Reversing Mechanism
Waterproof Chain
Installation Kits- (3/8” polyflow airline & fittings for connection from compressor to control box and control box to cylinders)

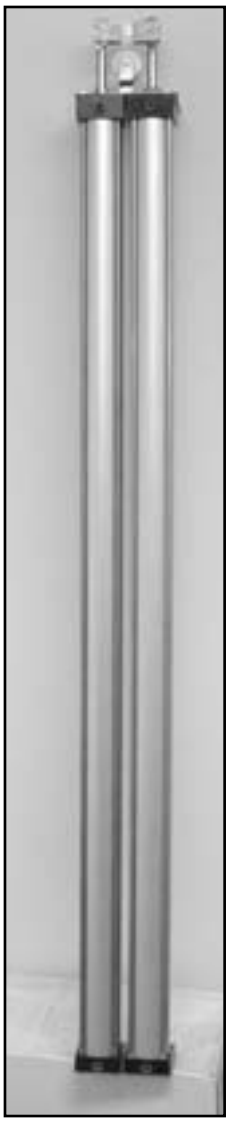
Tools Required

Ladder
Hammer
Hand Wrenches- 5/16” 1/4”, 7/16”, 1/2”, 9/16”, 5/8”
Standard Screwdriver
3/8” Socket Set- 7/16”, 1/2”, 9/16”, 5/8”
Electric Impact or Drill with 3/8” and 7/16” Sockets, 1/4” drill bit.
Allen Wrench Set with 1/4”

Components Identification

Aluminum Collar with Set Screw

Aluminum Collar Lock Nut



Cylinders

Chain

Master Links

Sprocket with Set Screws

1/4” Key

Push-in Fitting

Turnbuckle

Track Bolt & Nut

Cylinder Assembly & Installation

Typical Installation

Step 1
Please inspect all packages for damage and missing parts (refer to component identification page). Then decide which side of your door you wish to install your new Supralift operator on. The Supralift is versatile enough to mount to either side of the door.

Step 2
Remove the plastic plugs at the top of the cylinders and install (hand tight) the two push-in fittings. Finish tightening with one half to one full turn with a 9/16” or 5/8" wrench.

Step 3
Remove the plastic plugs at the bottom of the cylinders and install the two push-in fittings (hand tight). Finish tightening with one half to one full turn with a 9/16” or 5/8" wrench.

Step 4
Thread one end of the chain down through one aluminum collar under the idler pulley and up through the other collar. Attach the turnbuckle to each end of the chain using the two master links. (Figure 1)

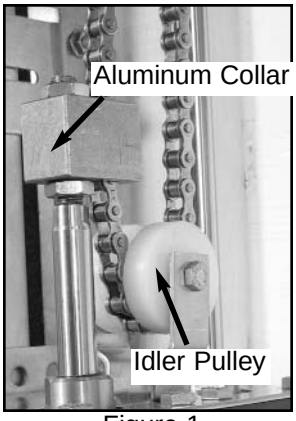


Figure 1


Figure 2

Step 5
Slide the 12 tooth sprocket over torsion shaft with set screws towards outside of shaft. Do not insert the ¼" key or tighten the set screws at this time. Slide sprocket near end bearing plate of the door. (Figure 2)

Step 6
With the door closed, hang the operator by the chain assembly over the sprocket onto the torsion shaft. Keep the turnbuckle on the front side of the sprocket.

Step 7
Slide the operator cylinder assembly to the door track and move sprocket for proper vertical alignments. (See figure 5) Mark and drill ¼" holes into the track and track angle through the pre-punched holes in the adjustable top and bottom track brackets of air operator. Drill as many holes as necessary to secure operator firmly. (**Recommended:** Minimum 2 holes on top and 2 holes on bottom.

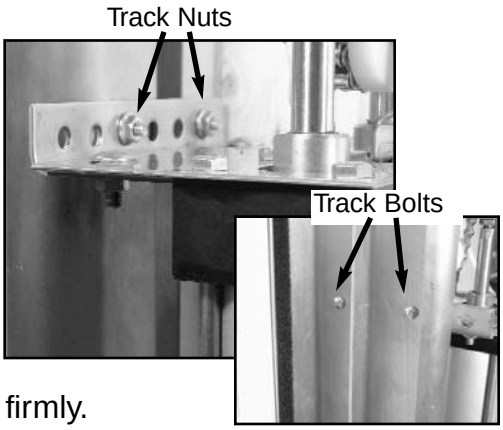


Figure 3

Note: The final position of the bottom of the cylinders may be moved down to accommidate highlift or vertical lift track applications. To move the cylinder down increase the chain length. The cylinders cannot be moved up.

Step 8
Bolt the operator to the track with the ¼" track bolts and track flange nuts included in the hardware package. Please ensure that the heads of the track bolts are on the inside of the track, closest to the door. When drilling the holes position the holes in the center of the track to avoid obstruction to the door rollers. (Figure 3)

Step 9
Adjust operator vertical alignment with shaft sprocket and door/track by adjusting the top and bottom track brackets. The brackets can be adjusted by loosening the bolts that connect the top and bottom operator track brackets and the operator top plates. The opener can be adjusted in two directions for proper alignment. Tighten the bolts securely when complete.

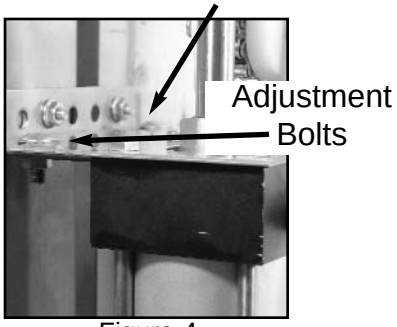


Figure 4

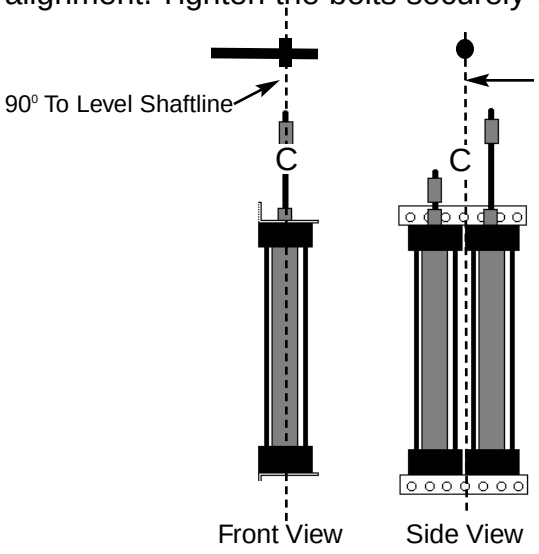


Figure 5

Important:
The centerline of the operator should be plumb with the center of the sprocket teeth on the torsion shaft of the door. The operator should also be plumb 90° to the torsion shaft as well.
If the operator is not plumb, the piston rods will cause friction and cause premature failure of rod seals.

Step 11
Finish tightening the chain by turning the turnbuckle clockwise until the chain is snug.
Tighten the locknut on one of the turnbuckle studs to prevent the chain from loosening after use.

Step 12
Pull the chain assembly up until the turnbuckle is approximately 1" below the sprocket on the torsion shaft. The turnbuckle should be on the front side of the sprocket. (Figure 6)


Figure 6

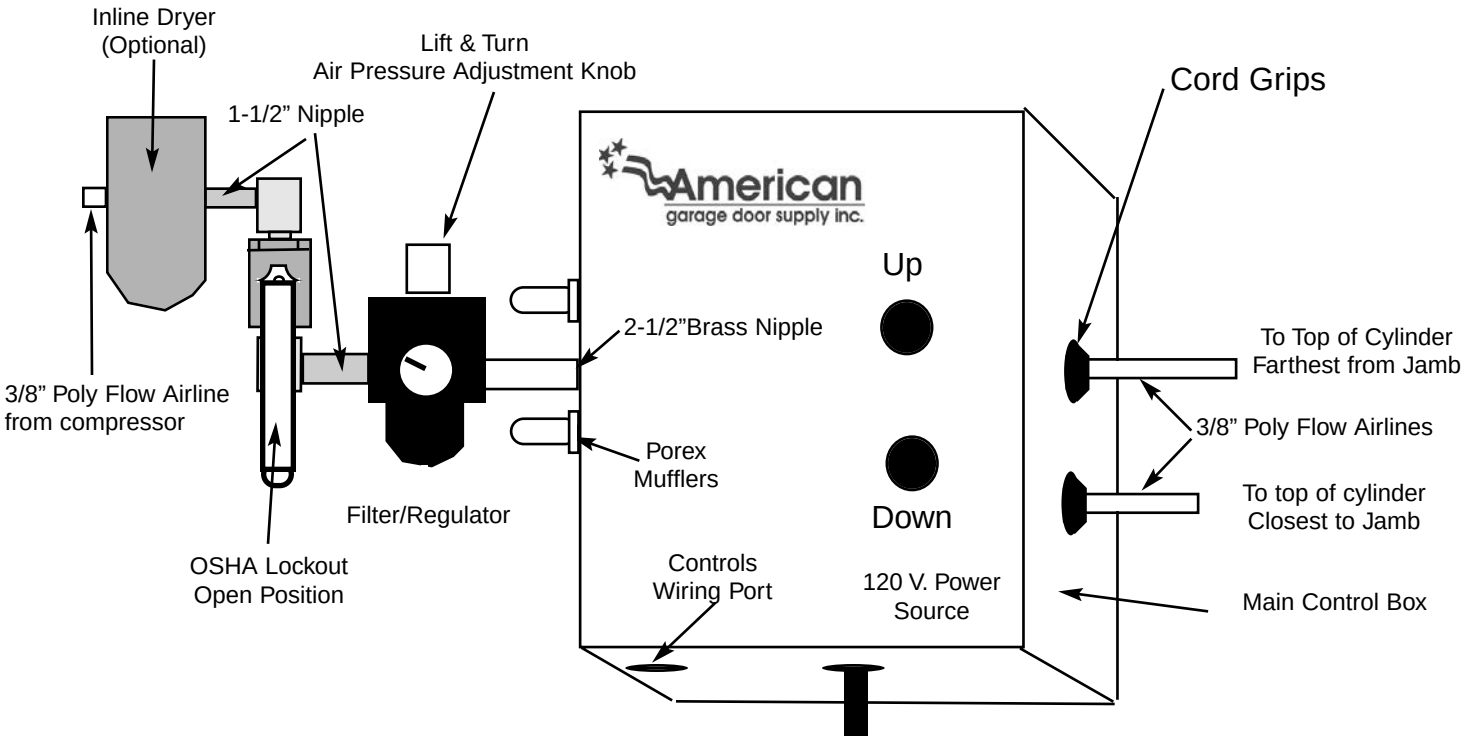
Step 13
Insert the ¼" key into the sprocket and tighten the set screw securely on the shaft sprocket. For final setting of the sprocket, it is recommended to keep the sprocket as close to the bearing plate as possible to prevent deflection of the shaft. If it is necessary to have the sprocket more than 4” from the bearing plate and track assembly, use a additional bearing plate to stabilize the end of the torsion shaft.
The sprocket must always be plumb with the operator to prevent premature seal wear.

Step 14
Push the piston rod on the cylinder closest to the wall (close cylinder) all the way down until the piston bottoms out in the cylinder, then raise the piston rod 1"-1-1/2” upward and tighten the set screw on the aluminum collar to lock the chain. **Tip:** Rotate the piston rod to one side to tighten the set screw then rotate back to proper position. Tighten locknuts on top and bottom of aluminum collar.

Step 15
Raise door to your desired opening height, push the piston rod on the cylinder furthest from the wall (open cylinder) all the way down, and tighten the set screw on the aluminum collar.

Dual Operator systems should be installed identically.

Typical Control Box Assembly



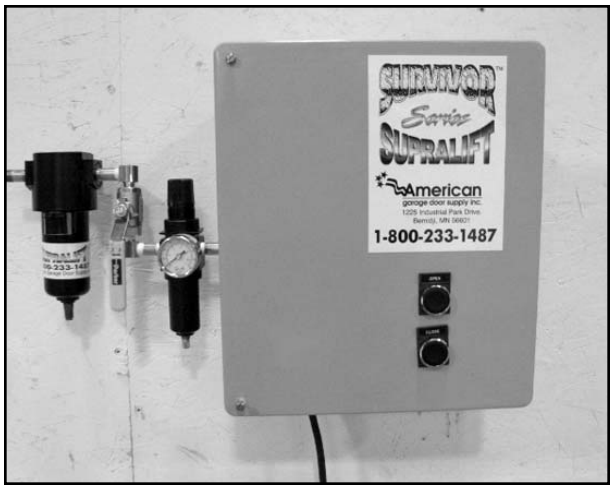
Typical Material List

Provided Materials

Part Number	Description	Qty
SLE 10/20/etc	Waterproof Control Box	1 ea
SLFR	Filter Regulator Assembly w/ Dial	1 ea.
SLRF	Nipple 1/4' NPT x 2-1/2"	1 ea
SLPE	Porex Muffler	2 ea
SLBV	Shut-off Valve Assembly	1 ea.
	Flow Control Mounting Screws	2 ea

Options Sold Separately

Inline Dryer with 1-1/2” Nipple
Photoeye or other Safety Reversing Mechanism
Timer to Close
Installation Kits- (3/8” polyflow airline & fittings)
One Shot Timers
Relays



Tools Required

Standard Screw Driver
Phillips Screwdriver
Hand Wrenches- 1/4”, 7/16”, 1/2”, 9/16”, 5/8”
3/8” Socket Set- 7/16”, 1/2”, 9/16”, 5/8”
Electric Impact or Drill with 3/8” and 7/16” Sockets, 1/4” drill bit.
Small Pipe Wrench
Wire Cutters
Teflon Tape

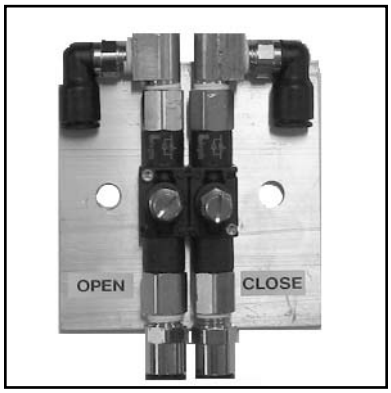
Components Identification

Control Box

Filter/Regulator

2-1/2” Nipple

Porex Muffler



Flow Control

Shut-off Valve Assembly and
Inline Dryer (Optional)

Control Box Assembly & Installation

Step 1
Install the two porex mufflers to the top and bottom ports on the left side of the control box. Hand tighten only.

Step 2
Install the filter regulator assembly onto the control box using the 2½" brass nipple. Insert through the middle hole on the left side of the control box and tighten. Use teflon tape on threads. (Figure 1)

Step 3
Install the shut-off valve assembly into the filter/regulator using the 1-1/2" For optional inline dryer use additional 1-1/2" nipple. (Figure 1)

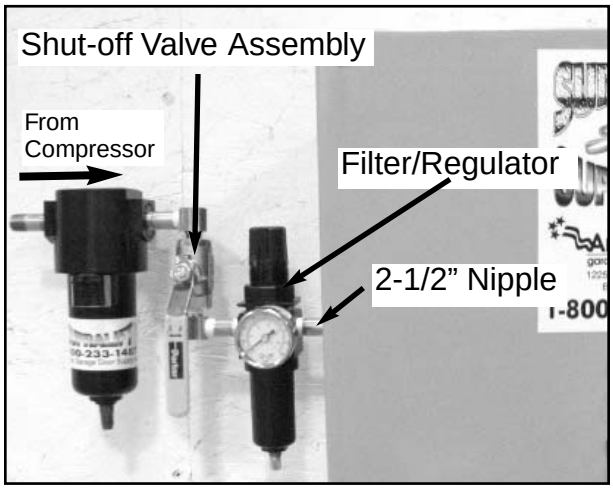


Figure 1

Step 4
Mount the control box to the wall or other surface at the desired location .

Step 5
Open the cover of the control box and connect two 3/8" polyflow lines to the two push-in fittings on the valve inside the control box. Plumb through the cord grips located on the right side of the control box to the push-in fittings located on the top side of the operator cylinders. Plumb the airlines from the control box to the top of the operator cylinders. The top airline fitting on the control box goes to the front cylinder (farthest from the jamb) and bottom airline goes to the back cylinder (closest to the jamb). Tighten cord grips on the right side of the control box when complete. (Figure 2)

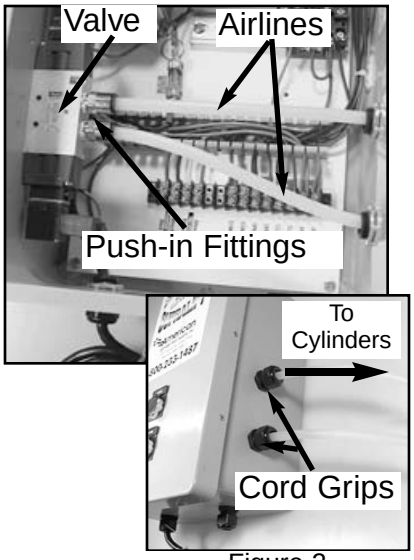


Figure 2

<u>Important!</u>
Control boxes should be used in conjunction with an inline dryer!! See recommendations. We recommended to keep the airlines as short as possible to reduce internal condensation in the airlines. Always install airlines without dips or watertraps.

Step 6
Install the flow control kit to your wall. It is recommended to locate the flow control kit in an area away from the doorway and direct spray. Plumb 3/8" airlines from the previously installed push-in fitting on the bottom of the cylinders to the push-in fittings located on the top of the flow controls. Plumb the line from cylinder nearest the jamb to the close and the
line farthest away from the jamb to open. Plumb bottom of flow control with a 12" drain tube

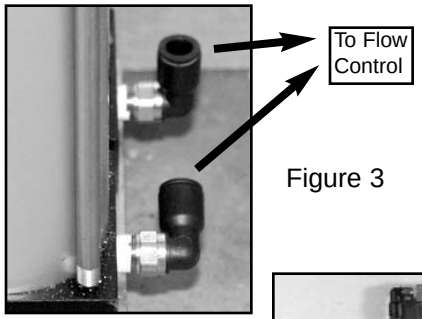


Figure 3

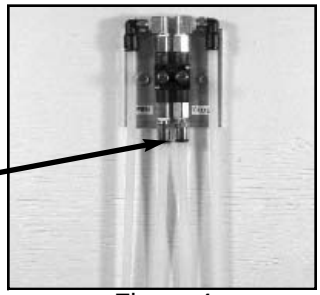


Figure 4

Step 7
Tighten the flow controls (clockwise) completely. Tighten lock nut.

Final Installation & Adjustment

Before Connecting Main Airline from Compressor to Control Box.

Clear main airline from compressor from contamination and debris by slowly opening up valve at compressor and purging line. If new installation, the main airline which may have slag or other contaminant's which could cause damage to the valve and other internal components.
Before hooking up the main airline to the Inline Dryer (optional) or the shut-off valve. Turn off the shut-off valve by turning the valve lever to 90^0 to the valve or Off.

Caution: If the Shut-off valve is in the open position, the door will start upward when you apply air pressure to the operator system.

Step 1
Install a 3/8" polyflow airline from your air compressor to the push-in fitting on the inline dryer (optional) or the shut-off valve assembly. Other line sizes may be used.

Step 2
Back off the filter regulator by pulling up on the adjustment knob on top of regulator and turn counter clockwise until it stops. Open shut-off valve (inline with valve) Turn the regulator adjustment knob in slowly until it reaches approximately 60-PSI (Recommended air pressure between 45-PSI and 70 PSI).

Step 3
Plug in 110 volt power cord located on the bottom of the control box into receptacle or hardwire. **This should be connected to a grounded receptacle only!!!**

Step 4
Adjust flow controls by starting with flow controls completely closed (Clockwise) with the locknut loose. Open each flow control valve approximately 5 complete turns (Counterclockwise). Cycle the door by pushing the open and close buttons located on the control box. While cycling the door open and closed continue to turn the flow control valves until the door opens and closes smoothly at the top and bottom of each cycle. **It is recommended to keep both flow controls set equally.**

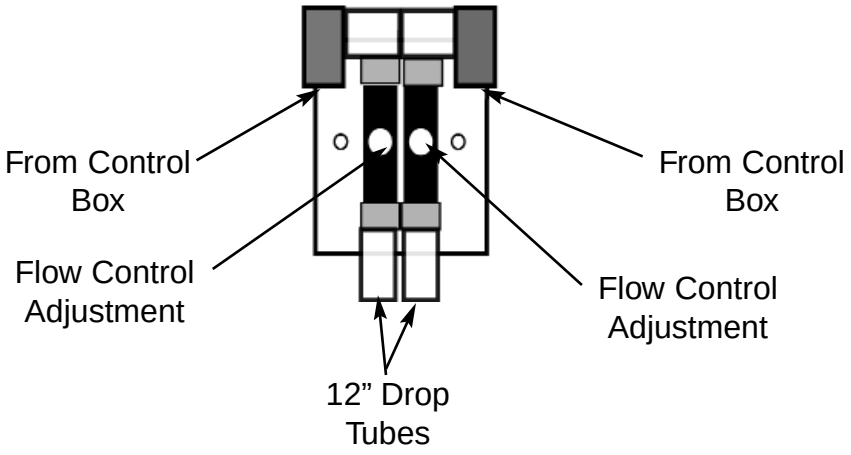
For additional tuning, adjust flow controls and air pressure at the regulator until door operates to your desired speed and smoothness.

Note: Each flow control valve will control the speed of it's direction. Tighten lock nut located on flow control when adjusted completely.

For complete explanation of how the flow control works, see next page.

Step 5
Inspect entire operator cylinder assembly, chain, sprocket assembly and piston rods for proper alignment, adjust as needed.

How the Flow Control Assembly Works



The flow control valve meters the volume of air escaping from the bottom of the cylinder as the piston is being pushed downward. Closing the valves will slow the travel speed of the door. The check ball in each valve allows each cylinder to breath freely as the piston is draw up mechanically by the chain on the reverse cycle.

Caution!!

The Supralift operator is capable of opening and closing the door at very high speeds.
Recommended door travel speed is 1 to 1-1/2 feet per second. (example: 10’ high door= 7 seconds)
Excessive door travel speed will increase the chances for malfunction of your door or the operator to occur which could result in injury or damage to persons or property.

Step 5
Wire in loop detectors, pushbuttons, photoeyes and other controls or accessories as required.
Plug in time and/or photoeye amplifier. Photoeye sockets are previously installed for your convenience.
For wiring information, please see wiring diagrams.

Attention!!!

Our control boxes are configured for momentary dry contact signaling only.
For easy tie-in to carwash and other equipment use the following components.

Signal from Equipment	Type of Component
24 VAC Pulse Current	24 VAC Relay, N/O Contact
110 VAC Pulse Current	110 VAC Relay, N/O Contact
24 VAC Continuous Current	24 VAC One Shot Timer, N/O Contact
110 VAC Continuous Current	110 VAC One Shot Timer, N/O Contact

MAINTENANCE AND ADJUSTMENT

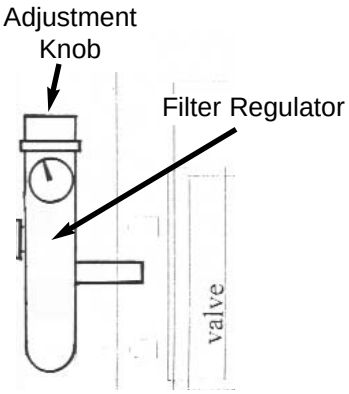
Keep the door tracks, torsion springs, track rollers, shaft bearings and chain connecting the operator to the door shaft, lubricated monthly. Tighten track bolts holding operator to the track periodically as well as checking tightness of the bolts holding the operator track bracket and top plate. Check to ensure correct plumbness with torsion shaft and sprocket.

There are three main adjustments to be made on an air-powered operator.

1. Chain Tensioner (Turnbuckle)

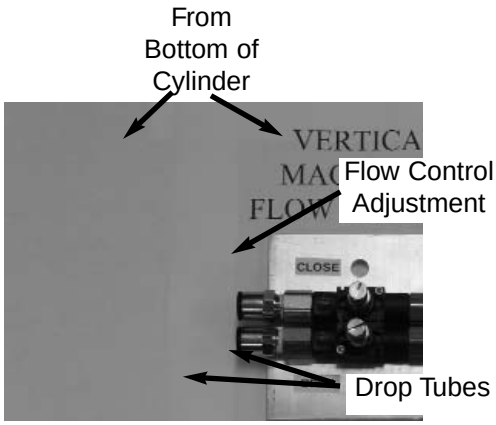
The chain on the operator has a turnbuckle, which is used to connect and tighten the chain. It is also used when you want to disconnect the operator from the door shaft. As the chain stretches with age this turnbuckle may need to be tightened. **DO NOT OVER TIGHTEN!** Over tightening will cause early bearing failure on the door.

2. Air Filter - Regulator



The combination filter/regulator assembly controls the air pressure to both cylinders. It may be adjusted by pulling the knob up and turning clockwise or counter-clockwise (Clockwise to increase PSI, **50 - 70 PSI Recommended**).
62 PSI is common.
Heavier doors may need to have the pressure increased, but if you must exceed 90 PSI you probably have a door problem.
Replacing the filter in the regulator is recommended every 6 months.

3. Door Speed



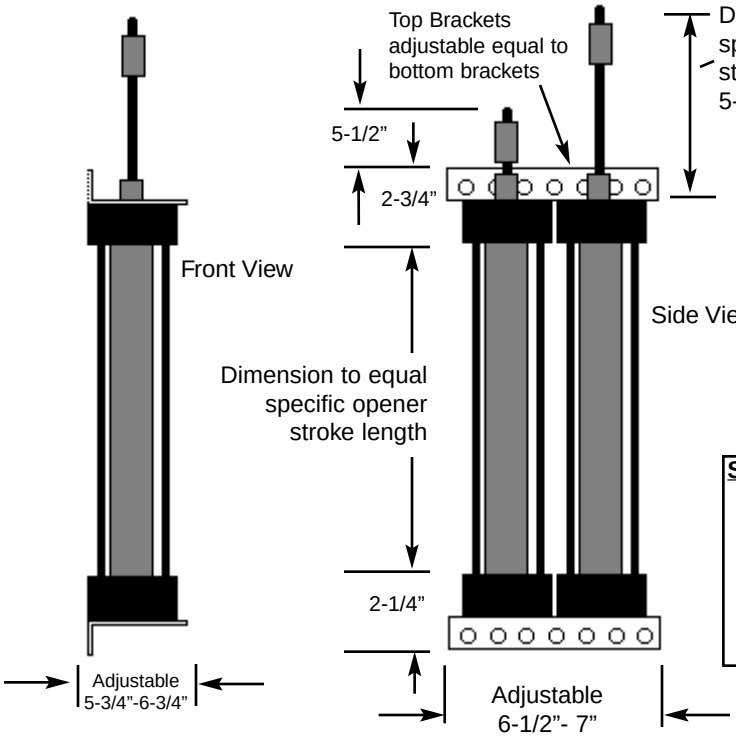
The air-powered operator is designed to start slow, move rapidly through the middle range of operation, and slow to a gentle close. Decreasing the air pressure coming into the operator as described in the above Air filter-regulator adjustment can control the doors intermediate speed. The stopping speed is controlled by the flow controls located on the flow control kit.

***DO NOT IGNORE YOUR AIR COMPRESSOR!**

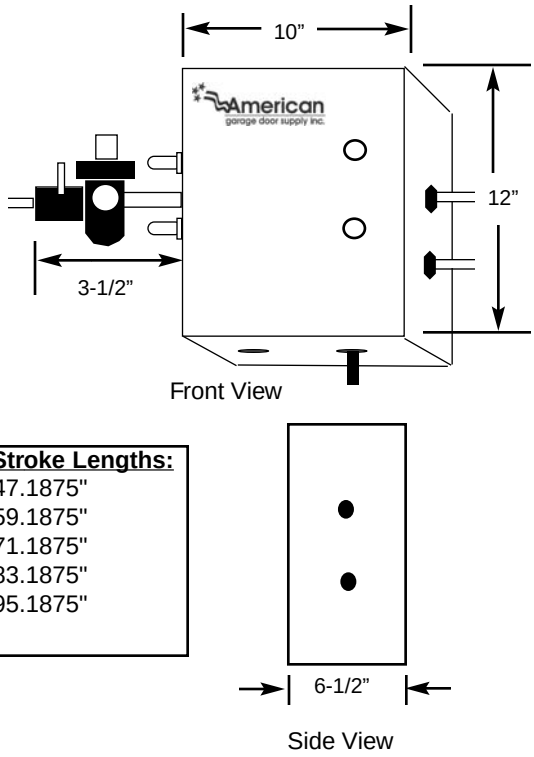
Compressing air creates a lot of water. There is a drain at the bottom of your air compressor that should be opened to let water out of your tank. (Daily attention may be required). Automatic drains are available for your compressor as well as in-line air dryers; all you need to do is contact your local compressor dealer. Also available from American Garage Door Supply, Inc. is a large volume water separator for those applications that require much larger water separation.

Air-Powered Door Openers
Model SL Specifications

Cylinder



Control Box



Specific Opener Stroke Lengths:

8' Opener	47.1875"
10' Opener	59.1875"
12' Opener	71.1875"
14' Opener	83.1875"
16' Opener	95.1875"

Standard Specifications

Model Specific:
The Air-Powered Opener will be Model SL as manufactured by American Garage Door Supply Inc., Bemidji, MN. **1-800-233-1487**

Related Work- Door preparation, miscellaneous or structural metal work, field electrical wiring, signal wiring, wire, conduit, fuses, air tubing, air fittings, and disconnect switches are in the scope of other divisions or trades.

Product:
Supply Model SL, heavy duty, chain drive, dual cylinder, jackshaft type opener(s) for the height of the door. Doors over 144 square feet requires dual opener system.

General:
Provide Air-Powered Door Opener assembly of size and capacity recommended by door manufacturer; complete with air cylinders and factory supplied, control box with valve, filter regulator, OSHA shut-off valve, inline dryer, push button stations, safety photoeyes and other accessories required for proper operation.

Control Circuit:
24 VAC Electrical circuit with 120 VAC Primary power.

Mounting and Limits
Opener to be equipped with a 1” x 12 tooth driven sprocket for the door shaft with # 41 chain. Limits to be set by mechanical means by adjustment of the pistons and aluminum collar. Operator shall be capable of driving the door at variable speeds. Operator shall be capable of mounting on either side of the door and shall be capable of driving the door at a speed of approximately 12” to 18” per second.

Execution
Install the air-powered opener in accordance with American Garage Door Supply Instructions and standards and in compliance with applicable federal, state or local regulations.

Manufactured by
American garage door supply inc.
1225 Industrial Park Dr. SE, Bemidji, MN. 56601

For more information call: **(800) 233-1487**
or Fax: **(218) 751-6551**

American Garage Door Supply reserves the right to make design or specification changes without notice.

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Air-Powered Door Openers
CFM Requirements

To figure the CFM required, use the following formula.

1. Multiply the stroke (in inches) of the cylinder you are using by .00284 cubic feet of displacement per inch. This is the cubic ft. required for 1/2 cycle (open or close)

2. Multiply the previous 1/2 cycle required times 2 for a per cycle measurement. (Note: for dual opener systems you must multiply by 4)

3. Multiply item number 4 by the number of cycles you intend to operate in one minute. This will vary to fit your traffic flow, size of door and etc. A 10' high door under normal operating conditions will open and close 3 times a minute.

Stroke Lengths of Cylinder:

8' Opener	47.1875"
10' Opener	59.1875"
12' Opener	71.1875"
14' Opener	83.1875"
16' Opener	95.1875"

Example: 12' high door cycling 3 times per minute.
1. 71.1875 x .00284 = .2021 Cu. Ft. of Displacement (Per 1/2 Cycle Open or Close)
2. .2021 x 2 = .4042 Cu. Ft. of Displacement (Per Complete Cycle/ Open & Close)
3. .4042x 3 = 1.2126 CFM Required per Opener.

Manufactured by American garage door supply inc.
1225 Industrial Park Dr. SE, Bemidji, MN. 56601

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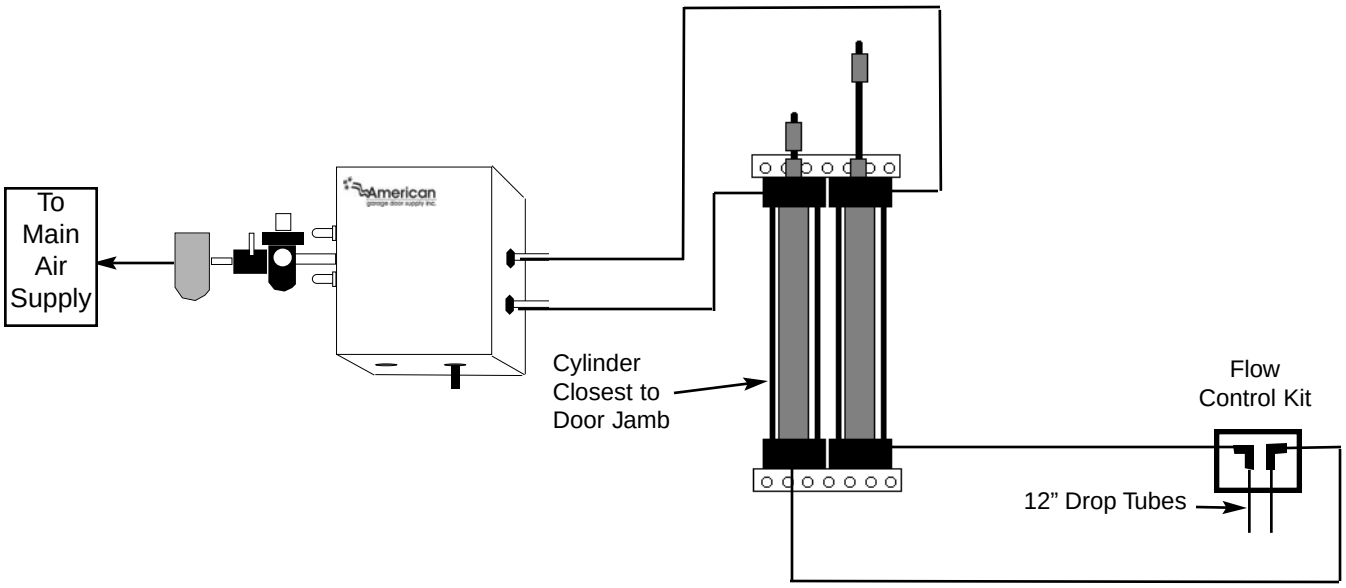
or Fax: **(218) 751-6551**

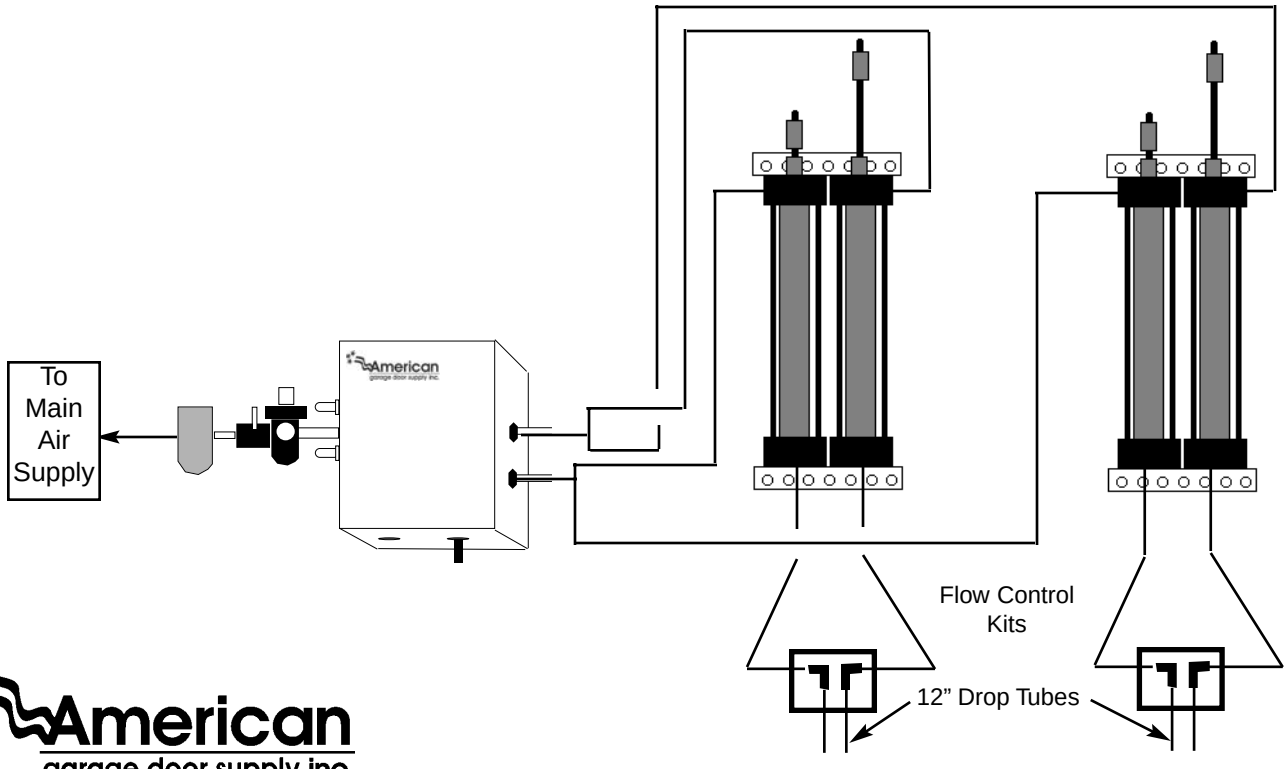
American Garage Door Supply reserves the right to make design or specification changes without notice.

Supralift Plumbing Detail

Single System



Dual System



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garage door supply inc.

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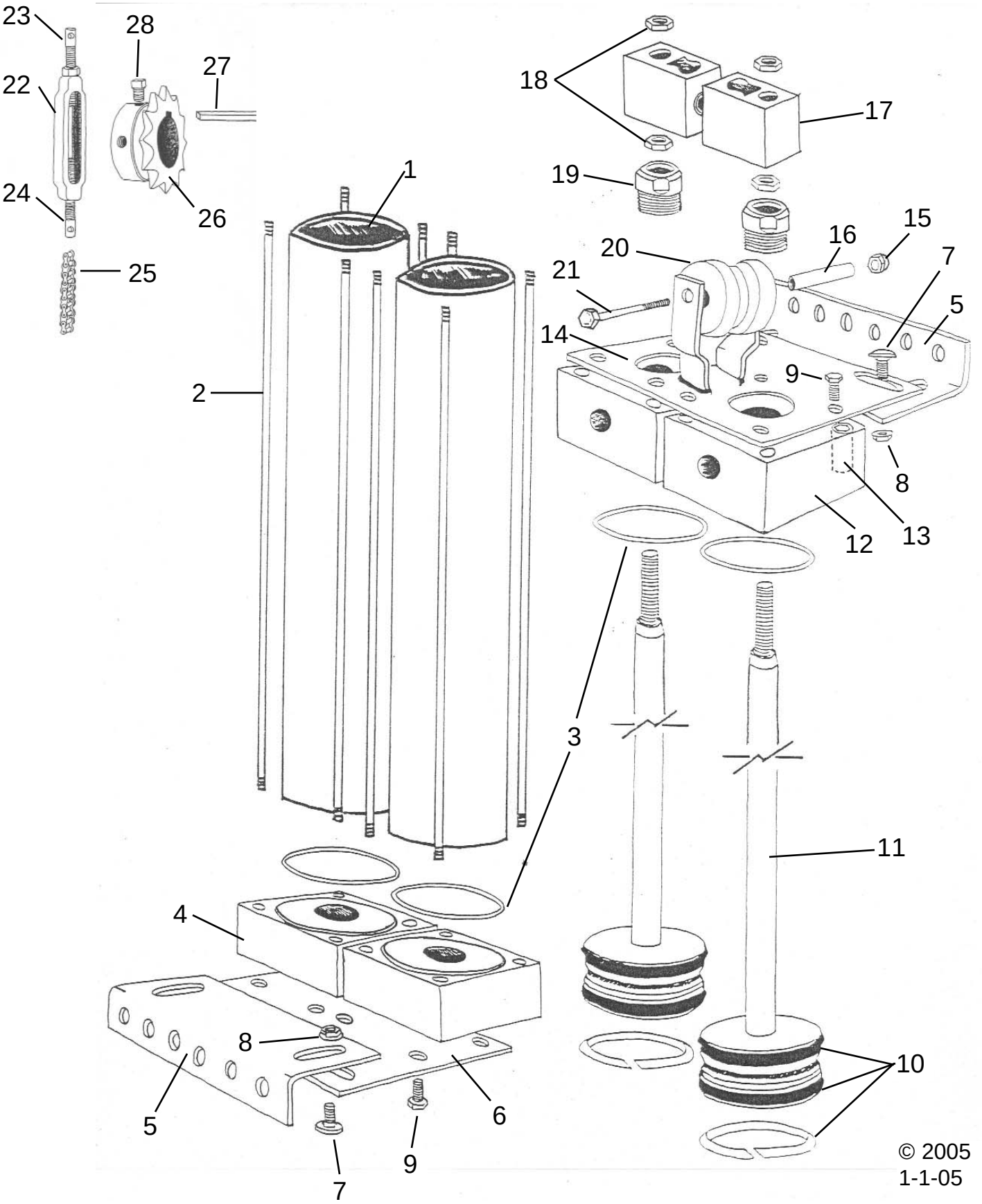
Supralift Parts Diagram



Supralift Parts List

#	Part #	Description
1	SLCT08	Supralift Cylinder Tube Only, 8'
1	SLCT10	Supralift Cylinder Tube Only, 10'
1	SLCT12	Supralift Cylinder Tube Only, 12'
2	SLCTR08	Supralift Cylinder Retaining Rod, 8'(**)
2	SLCTR10	Supralift Cylinder Retaining Rod, 10' (**)
2	SLCTR12	Supralift Cylinder Retaining Rod, 12' (**)
3	SLOR-N	Seal, Tube
4	SLBC	Bottom End Cap
5	SLTB4	SS Track Bracket
6	SLBB2	SS Bottom Plate
7	RBLTS51634	Carriage Bolt, 5/16" x 3/4" SS
8	NUTFS516	Flanged Hex Nut, 5/16"-18 SS
9	HBLTS51658	Hex Head Bolt 5/16" x 5/8" SS (**)
10	SLCYKIT	Wear Sleeve Ring & Piston Seals (Seal Kit)
11	SLPR8	Supralift Piston Rod, 8'
11	SLPR10	Supralift Piston Rod, 10'
11	SLPR12	Supralift Piston Rod, 12'
12	SLTC	Top Cap - New Style with Bushing Threads
13	SLSN	Sleeve Nut, SS (**)
14	SLTB2	SS Top Plate
15	NUTLS14	Hex Nut, Self Locking 1/4" SS
16	SLBS	SS Idler Sleeve
17	SLAC	Aluminum Collar
17	SLSC12	1/2” x 1/2” SS Set Screw (**)
18	SLJNUT	7/16"-20 SS Jambnut (**)
19	SLBUSH	Threaded Seal, SS Bushing Only (**)
20	SLP1	Idler Pulley
21	HBLTS14214	Pulley Bolt, 1/4" x 2.1/4" S/S
22	SLTBS	5/16" Aluminum Turnbuckle Body
23	SLST-LH	Left Hand Thread Turnbuckle Stud, S/S (**)
24	SLST-RH	Right Hand Thread Turnbuckle Stud, S/S (**)
25	SLWP08	8' Waterproof Chain
25	SLWP10	10' Waterproof Chain
25	SLWP12	12' Waterproof Chain
26	41B12SS	12 Tooth, # 41 SS Sprocket
27	SSK	1/4" x 3" SS Keystock
28	SLSC51612	Sq. Head SS Set Screw 5/16" x 1/2" (**)
XX	SLFLKIT	Flow Control Kit
XX	SLEV	Brass Speed Control Valve (Older Units)

Important!
For ease of maintenance and service Anti-Seize gel is recommended on the items with **

1-1-05

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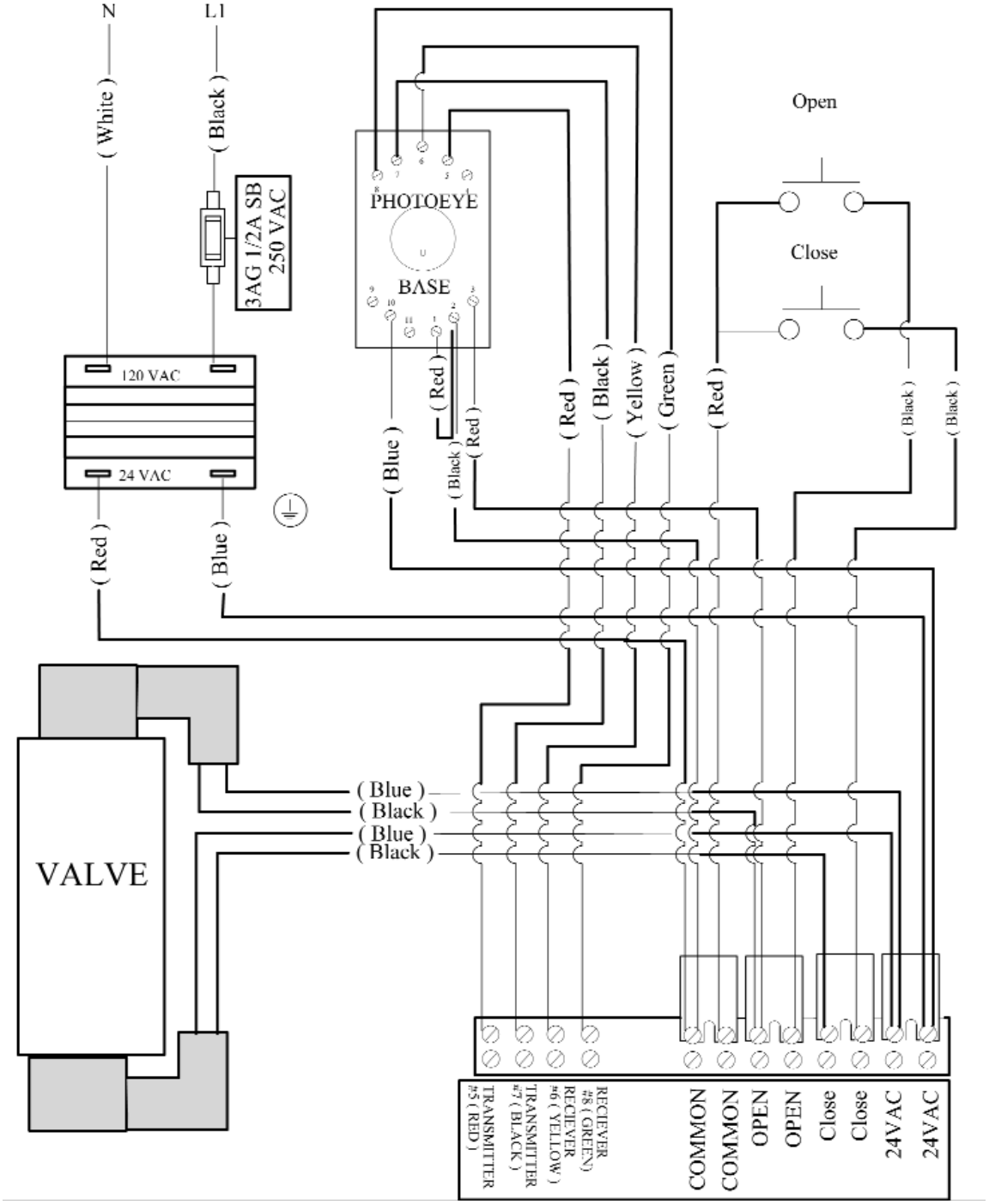
Control Box Wiring Diagram New Style

120 VAC
1 Phase (Primary Voltage)
24 VAC (Secondary Voltage)

1-1-05



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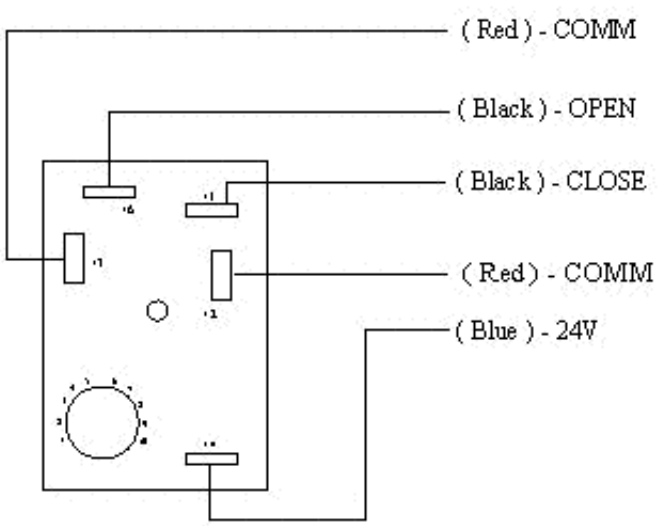
Control Box Wiring Diagram
Optional Controls

1-1-05

TIMER



SAFETY EDGE

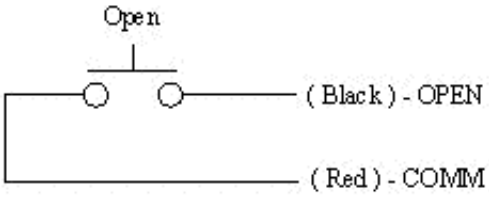
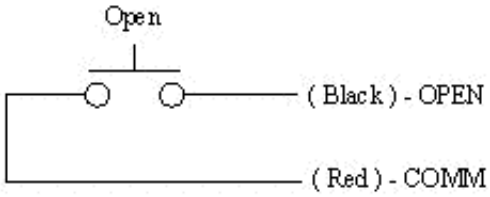
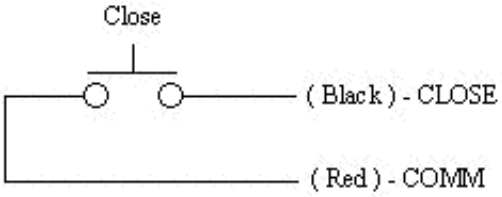
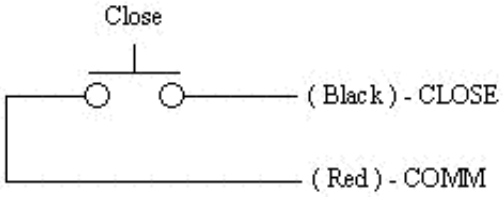


PHOTO EYES



LOOP DETECTOR





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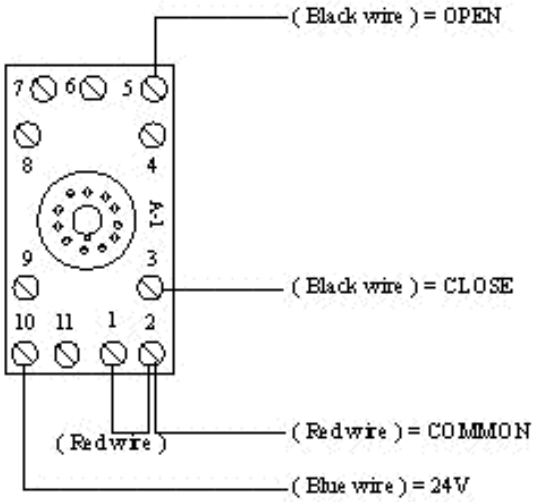
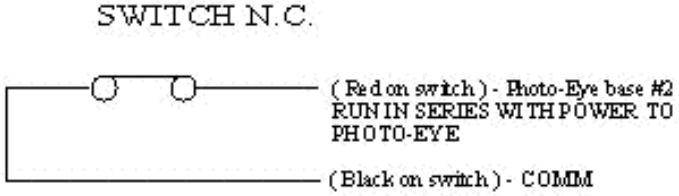
Control Box Wiring Diagram
Optional Controls

1-1-05

MACROMATIC TIMER



SENTROL MODEL # 2204AU MAGNETIC SWITCH



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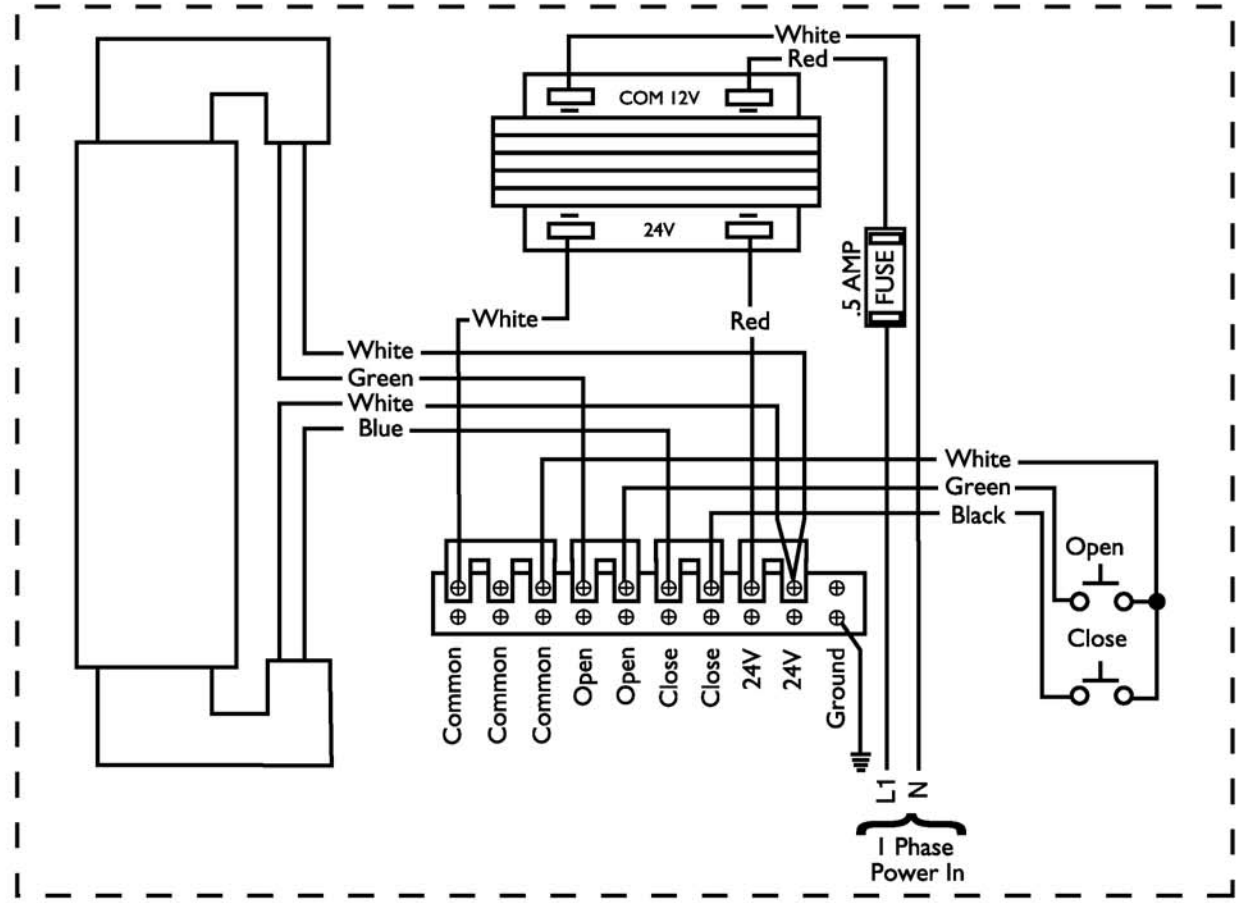
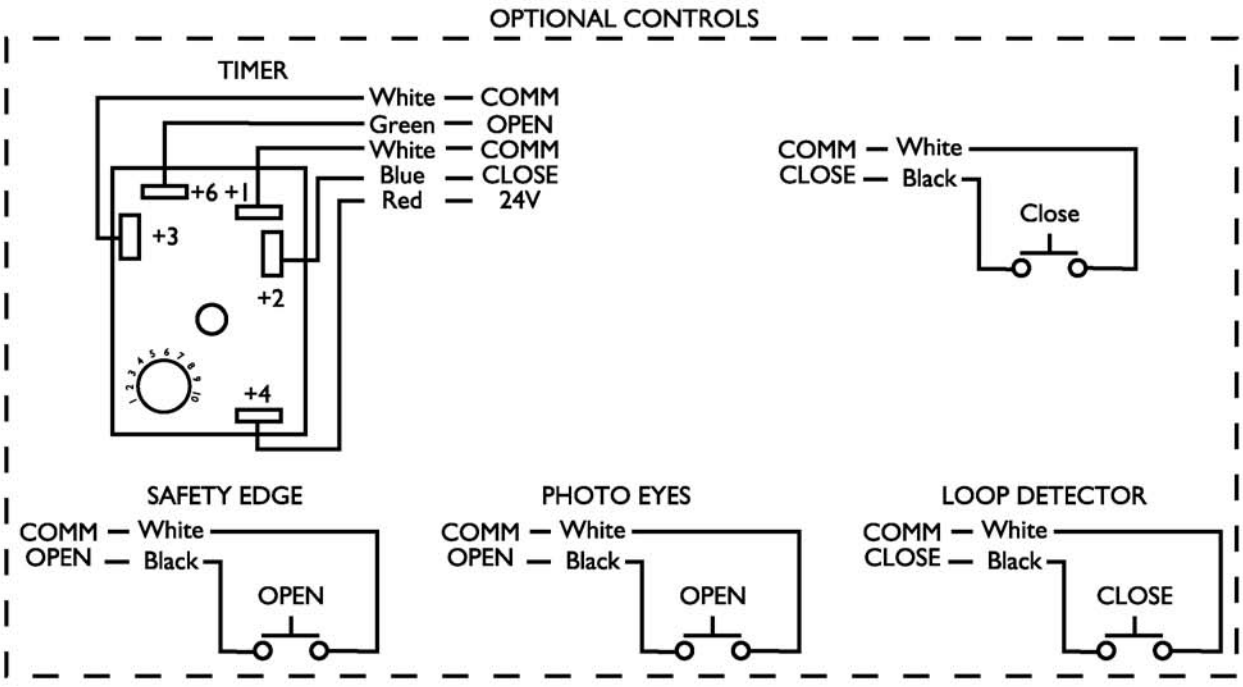
Control Box Wiring Diagram Old Style

1-1-05

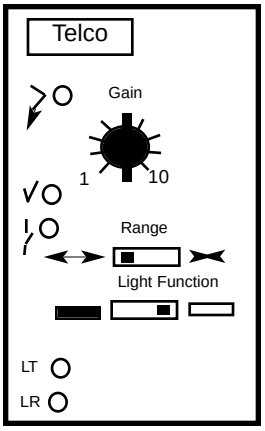




Telco Manual Amplifier Photoeye Wiring Diagram

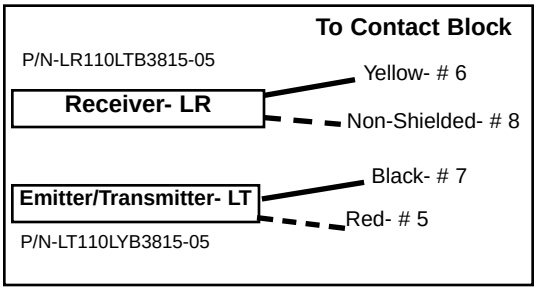
1-1-05

Amplifier
Part # PA11-B302T-05

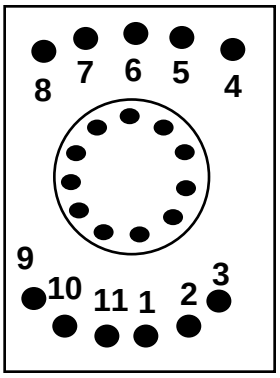


Range Switch should be set on **Long Range** ◄►
Light Function Switch Should be set on **Light** ▭
(Non-Failsafe Mode)

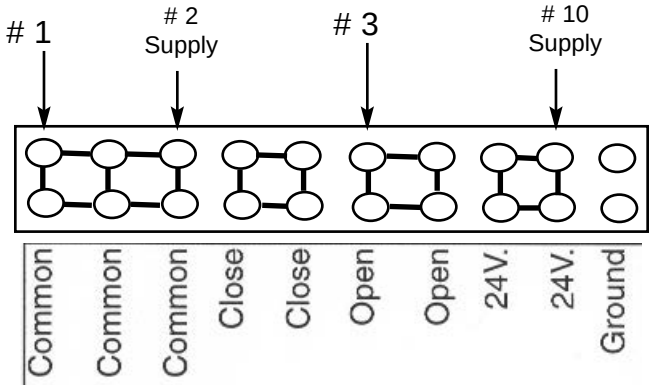
Photoeye Sensors



Contact Block 11 Pin Socket



Operator Terminal Strip



Wiring Eyes

Wire numbered terminals on contact block to appropriate numbers listed on Receiver, Transmitter and Terminal Strip. Once wired, plug in amplifier to 11 pin socket located on contact block.

Operation

Adjust gain adjustment on amplifier dial clockwise until green light turns on.

When adjusting, the eyes must be more that 5 feet apart.

Red LR or LT failure LED indicates a sensor failure. The failure can be due to a broken or shorted wiring or a defective sensor. Check wiring and if O.K, change the sensor.

Splicing

If sensor cables need to be lengthened. Splice cables with similar wire type and size. **Example-** Use shielded cable for shielded wire on sensor and use non-shielded wire for non-shielded sensor wire.

Attention!!!

This diagram shows photoeyes wired in non-failsafe mode. If you choose to wire in fail safe mode, wire #4 from the contact block to open on operator terminal strip instead of #3. The light function switch should be set to dark. ■

Warning: In failsafe mode, if either photo-eye or system fails, the door will open automatically.

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www.carwashdoors.com

Note: This wiring Diagram is set up for Supralift & Magnelift Air-Powered Operators. For Electric Operators, please refer to electrical wiring diagram of your electric operator for terminal strip locations for Open, Common and 24 V. Power.

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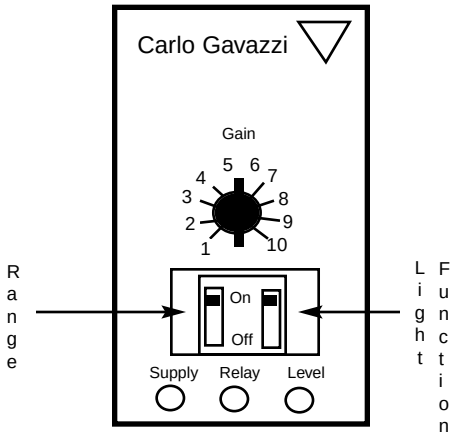
Carlo Gavazzi Manual Amplifier Photoeye Wiring Diagram- Old Style

1-1-05

Amplifier
Part # S1420156024



Range Switch should be set on 100%- "**ON"**
Light Function Switch Should be set on Dark- "**ON"**
(Failsafe Mode)

Wiring Eyes

Wire numbered terminals on contact block to appropriate numbers listed on Receiver, Transmitter and Terminal Strip. Once wired, plug in amplifier to 11 pin socket located on contact block.

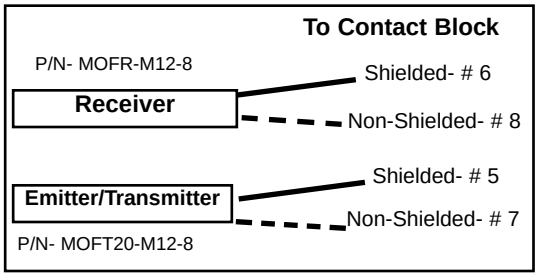
Operation

Adjust gain adjustment dial on amplifier clockwise until yellow level light turns on.
When adjusting, photoeyes must be more that 5 feet apart.

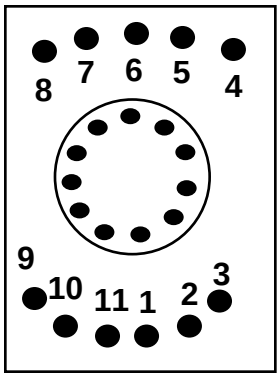
Splicing

If sensor cables need to be lengthened. Splice cables with similar wire type and size.
Example- Use shielded cable for shielded wire on sensor and use non-shielded wire for non-shielded sensor wire.

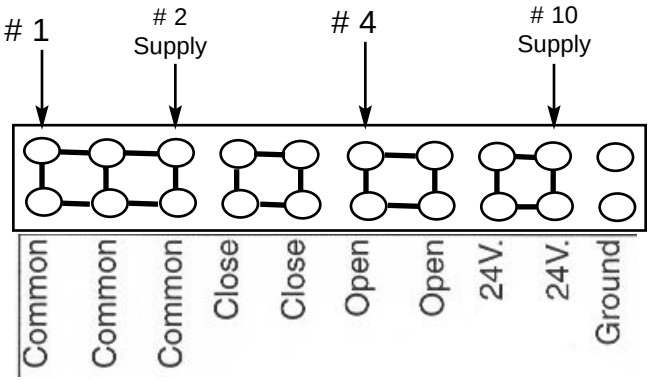
Photoeye Sensors



Contact Block
11 Pin Socket



Operator Terminal Strip



Attention!!!
This diagram shows photoeyes wired in fail safe mode, if either photoeye or system fails, the door will open.
If you choose not to wire in fail safe mode, wire # 3 from the contact block to open on operator terminal strip instead of #4. The #1 dipswitch should be set to off.

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Note: This wiring Diagram is set up for Supralift & Magnelift Air-Powered Operators. For Electric Operators, please refer to electrical wiring diagram of your electric operator for terminal strip locations for Open, Common and 24 V. Power.

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Carlo Gavazzi Manual Amplifier Photoeye

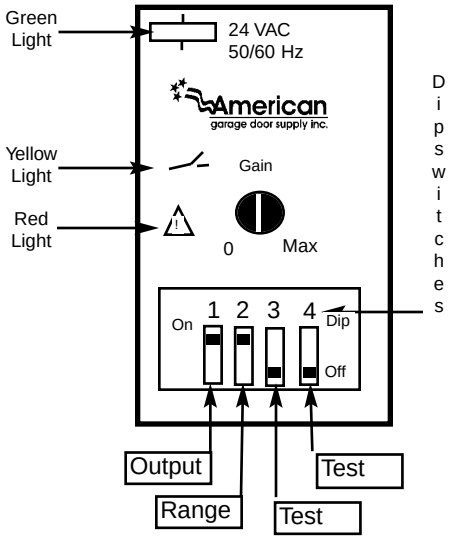
With Self Diagnostics

Wiring Diagram

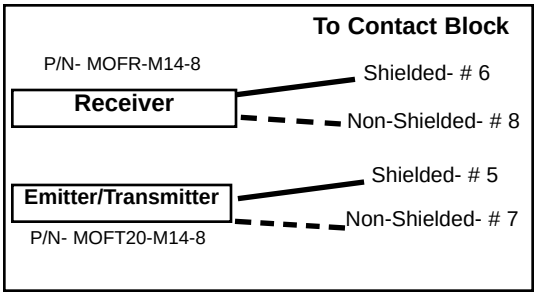
1-1-05

Amplifier

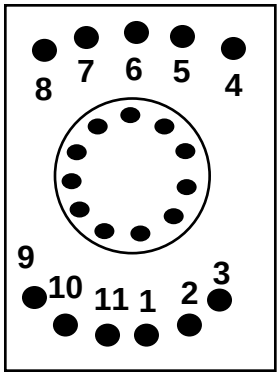
Part # MOFR24A



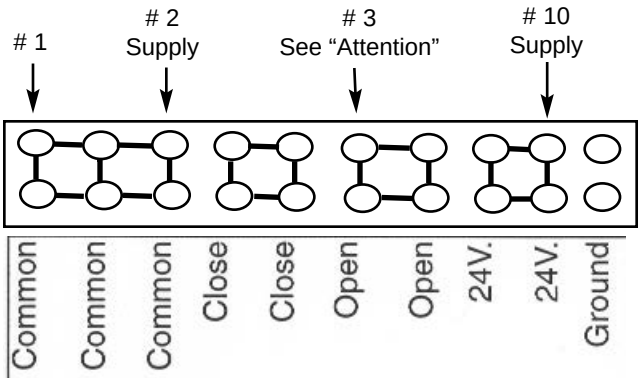
Photoeye Sensors



Contact Block 11 Pin Socket



Operator Terminal Strip



Note: This wiring Diagram is set up for Supralift & Magnelift Air-Powered Operators. For Electric Operators, please refer to electrical wiring diagram of your electric operator for terminal strip locations for Open, Common and 24 V. Power.

Wiring Eyes

Wire numbered terminals on contact block to appropriate numbers listed on Receiver, Transmitter and Terminal Strip.
Once wired, plug in amplifier to 11 pin socket located on contact block.

Operation

Power Up: Green light on upper left hand corner should be on.
Turn gain up until yellow light turns on

When adjusting, photeyes must be more than 5 feet apart.

Non-Failsafe Operation Dipswitch Setting: #1 Up/break, #2 Up/100% Range, #3 Down, #4 Down.

Testing

Transmitter Eye- Flip dipswitch # 3 Up. Yellow & red light flash simultaneously 3 times. If yellow light stays on the transmitter is o.k. If red light stays on transmitter is faulty.

Receiver Eye- Flip dipswitch # 4 up. Use same testing as transmitter eye.

Amplifier- Flip dipswitch # 3 and # 4 Up. Red and yellow light flash alternately. If yellow light stays on Amplifier is o.k. If red light stays on amplifier is faulty.

Splicing

If sensor cables need to be lengthened. Splice cables with similar wire type and size. **Example-** Use shielded cable for shielded wire on sensor and use non-shielded wire for non-shielded sensor wire.

Attention

This diagram shows photoeyes wired in non-failsafe mode. If you choose to wire in fail safe mode, wire #4 from the contact block to open on operator terminal strip instead of #3. The #1 dipswitch should be set to down/make.
Warning: In failsafe mode, if either photo-eye or system fails, the door will open automatically.

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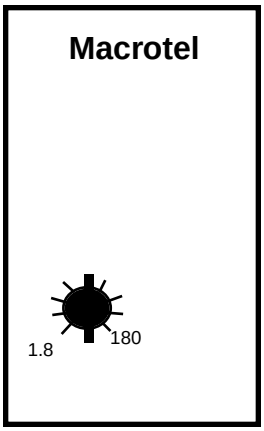
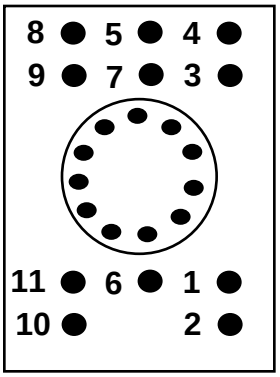
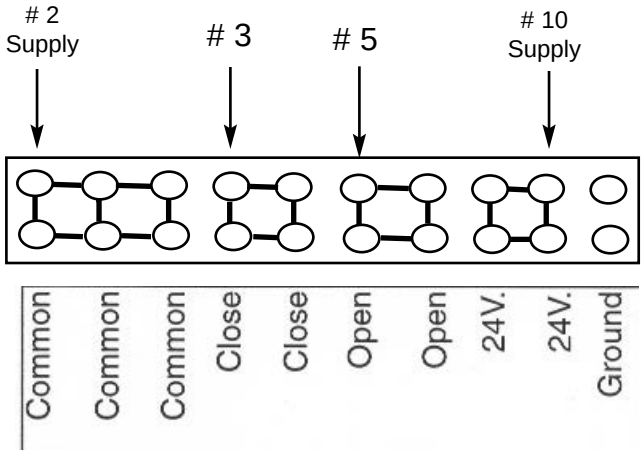
Macrotel Timer
Wiring Diagram
1-1-05

Timer



Contact Block
11 Pin Socket





Wiring Contact Block

Place jumper wire between # 1 and # 2 on Contact block. Wire from contact block to opener terminal strip to coincide with diagram below.

Adjusting Timer

Adjust time adjustment on timer amplifier dial clockwise or counterclockwise to adjust time.

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Note: This wiring Diagram is set up for Supralift & Magnelift Air-Powered Operators only.

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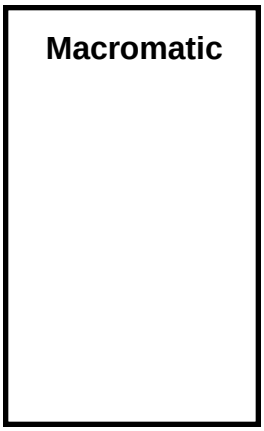
One Shot Macromatic Timer

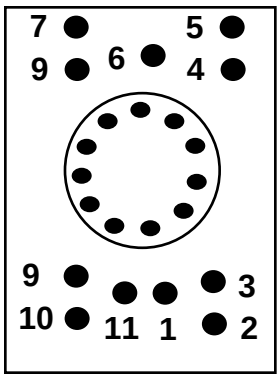
Wiring Diagram - 120 V or 24V

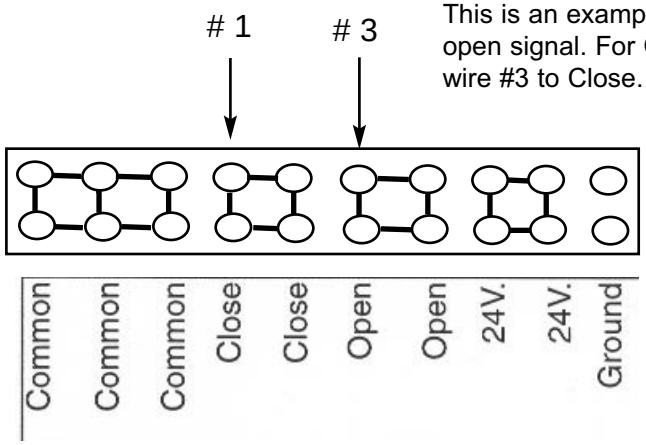
10-11-07

One Shot Timer



Contact Block
11 Pin Socket





This is an example of a open signal. For Close, wire #3 to Close.

Wiring Contact Block

1. Primary Power to the Unit-

The Macromatic Time Delay Relay requires power at all times to power the unit. Wire primary power to the unit by connecting #2 and # 10 to the correct power source.
For 120VAC one shot timers use 120VAC (Polarity not important) or 120VDC (Polarity is important)
Use the same rules for 24volt timer.

2. Power Trigger-

The power trigger is the input into the timer from your equipment or other electrical accessory that is triggering the timer to work. Use 5 and 7 on the contact block for connection to your incoming signal.
This signal should be a continuous signal with the same voltage as the timer primary power.
For 120VAC one shot timers use 120VAC (Polarity not important) or 120VDC (Polarity is important) Again for 24 Volt timers use the same rules.

2. Output to Opener-

Wire the contact block to your opener. Terminals 1 and 3 are normally open and 1 and 4 are normally closed. In most cases use 1 and 3. Wire 1 and 3 to the common and open or closed (dependent upon the functionality you require.
Note: Other N.O and N.C contacts are available for multifunctionality and operate at the same time as the former mentioned terminals. N.C is 11 and 8 and N.O is 11 and 9.

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Note: This wiring Diagram is set up for Supralift & NuMax Air-Powered Operators only.

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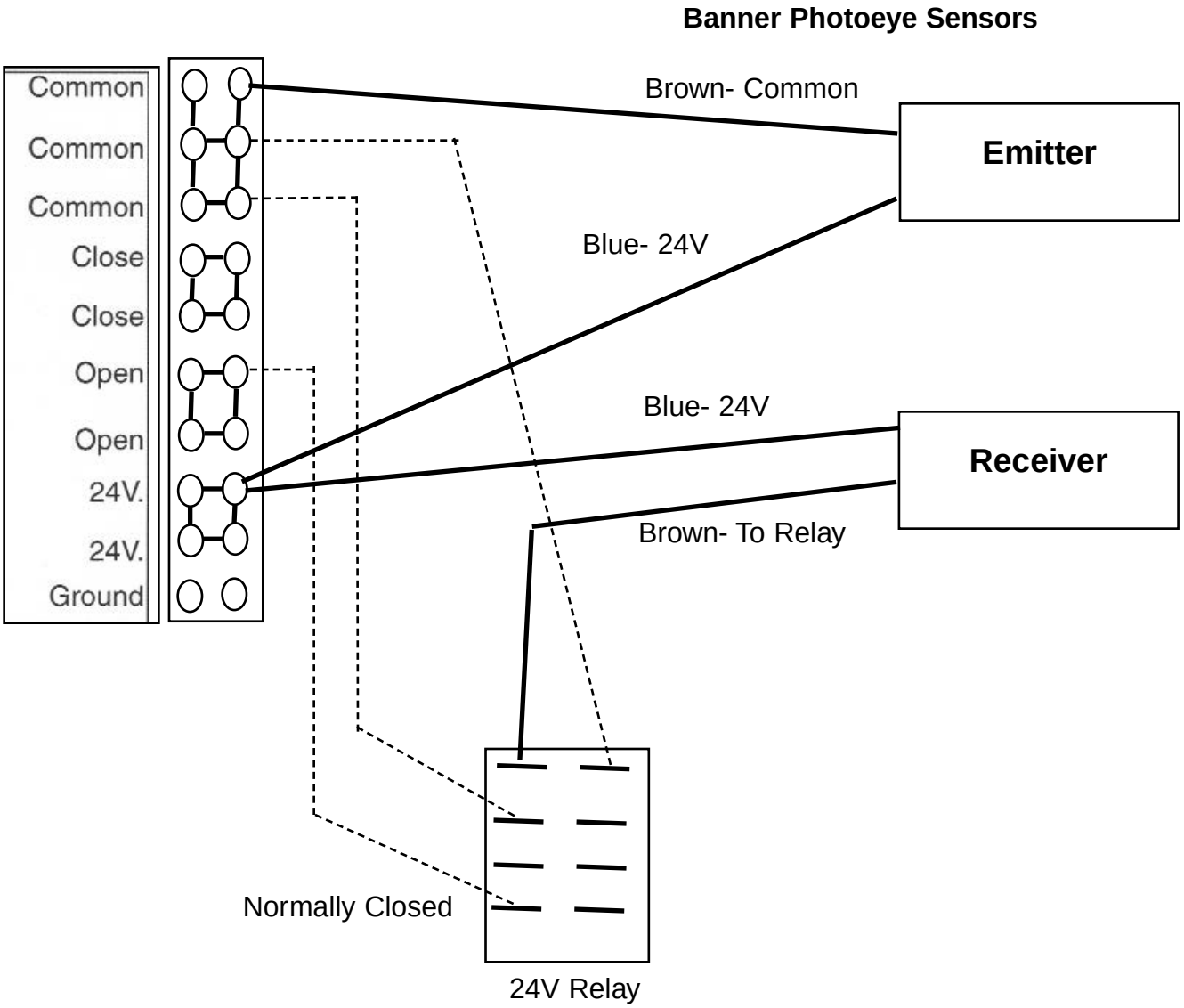
Banner- 24 VAC

Wiring Diagram

1-1-05



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Note: This wiring Diagram is set up for Supralift & Magnelift Air-Powered Operators only.

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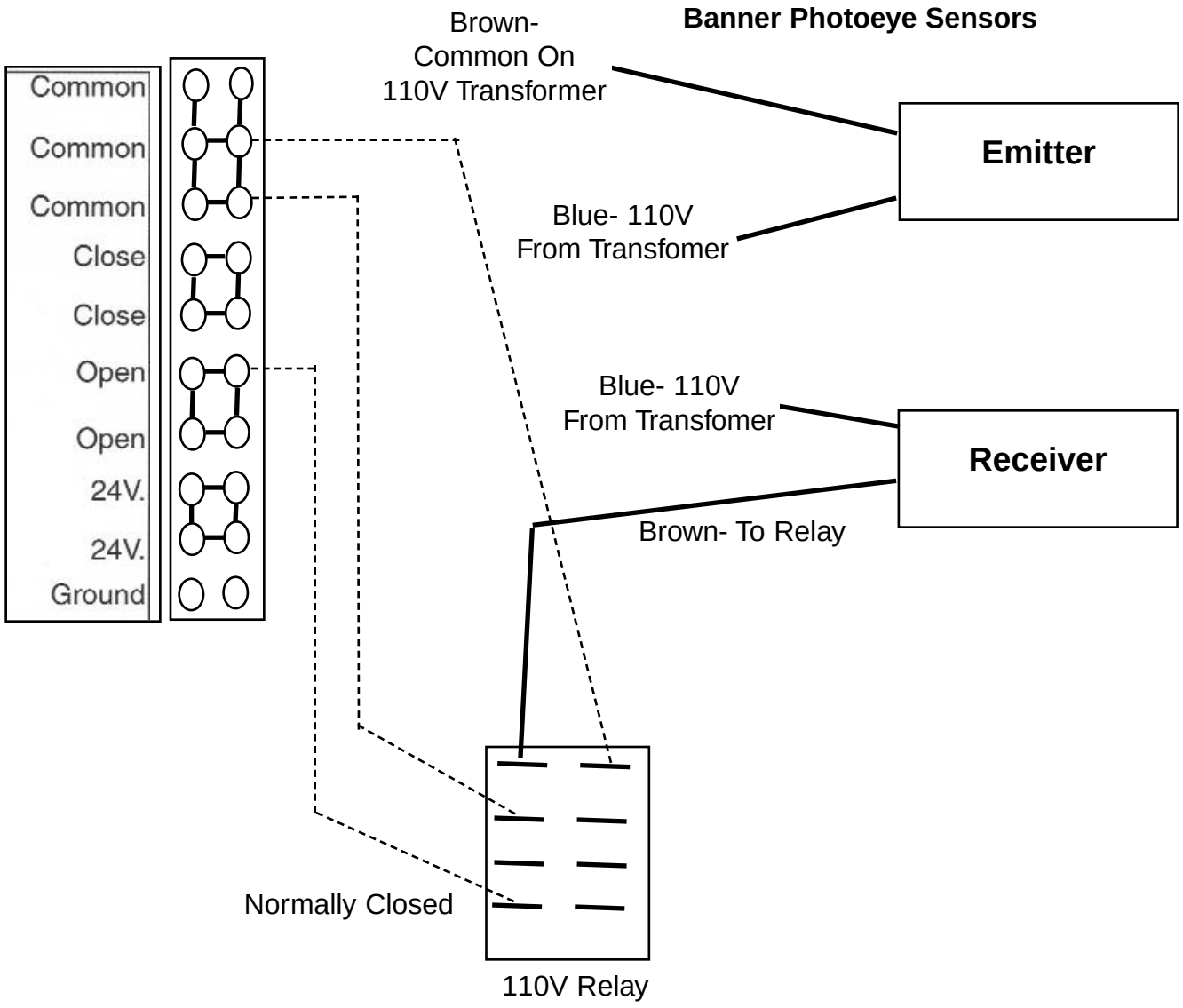
Banner- 110 VAC
Wiring Diagram
1-1-05



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Note: This wiring Diagram is set up for Supralift & Magnelift Air-Powered Operators only.

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Wiring Magnetic Switch with Safety Reverse Converter (SRC)

(For photoeyes, bottom edges, etc.)

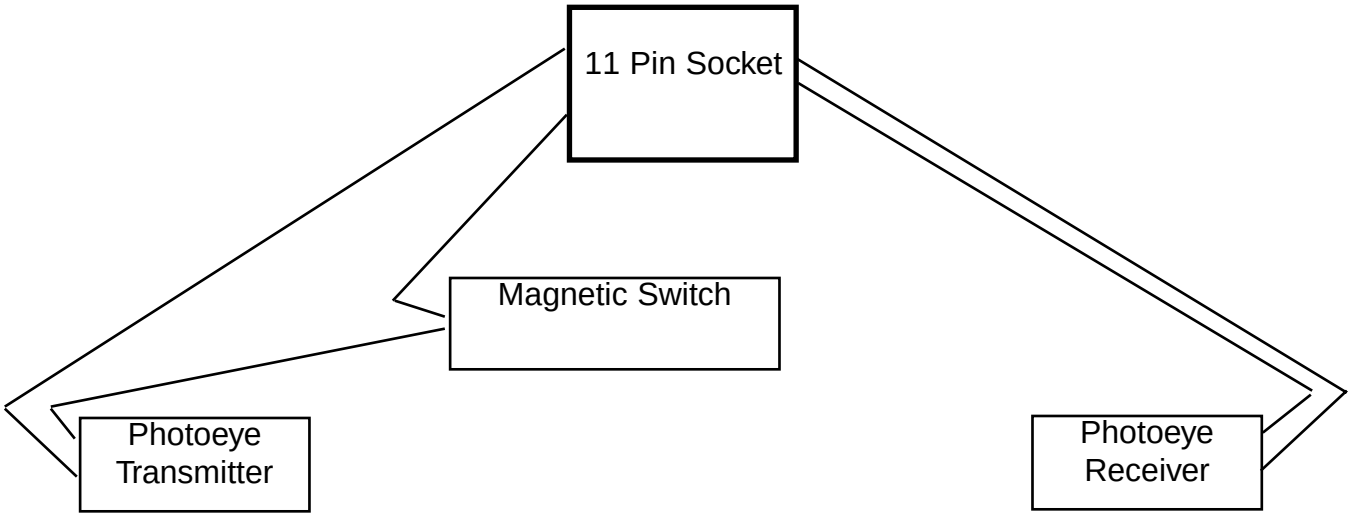
The Magnetic Limit Switch is wired inline with either one of the two wires coming from the obstruction sensor (photoeye, bottom edge, etc.)

Place the Magnetic switch at a convenient location (usually at the top of the door and the adjoining wall)
Note: The magnet should be within 1/2" of the sensor when the door is in the closed position.

The magnetic switch has 3 wires: Black-common; Green-normally open; Red- normally closed.
You want this switch to be normally closed so use the Black and Red.

If you have questions, please call the factory at **1-800-233-1487**

Example



American garage door supply inc.
1-800-233-1487
www.carwashdoors.com

American Garage Door Supply, Inc.
10 Year Limited Warranty

We promise to replace any part of our Supralift™ pneumatic door opener if found defective for a period of 10 years from the date of purchase!!

That's our warranty! We are so certain that our Supralift™ pneumatic door opener will meet your expectations that we warrant them for ten years.

This warranty does not include any parts that are not manufactured by American Garage Door Supply, Inc. but purchased from our suppliers. These items carry a
separate warranty depending on the supplier.

This warranty does not extend to any labor, travel, or freight charges, which may be required to repair or replace any defective part. Nor shall our warranty extend to cover any damages or claims with respect to any products that in any way or degree have been altered, processed or improperly handled or installed.

This warranty does not extend to cover claims of condensation due to normal temperature changes, nor shall it extend to cover any damages due to improper maintenance, normal wear, misuse, abuse or accident. Inline (Point of Equipment)
dryers are required for warranty to be valid. Working components such as seals, chain and control box components are not covered under this warranty.

Except as expressly provided in this warranty policy, American Garage Door Supply, Inc. makes no representation or warranty of any kind, expressed or implied with respect to the products. No agent, employee or representative of American Garage Door Supply, Inc. to any affirmation, representation or warranty excepts as stated in such warranty policy.

Any warranties or representations, or any remedies for breach thereof, which distributor may provide to it's customers, which are different from or in addition to the warranties and remedies provided by American Garage Door Supply, Inc. shall not be bound in any matter whatsoever.

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