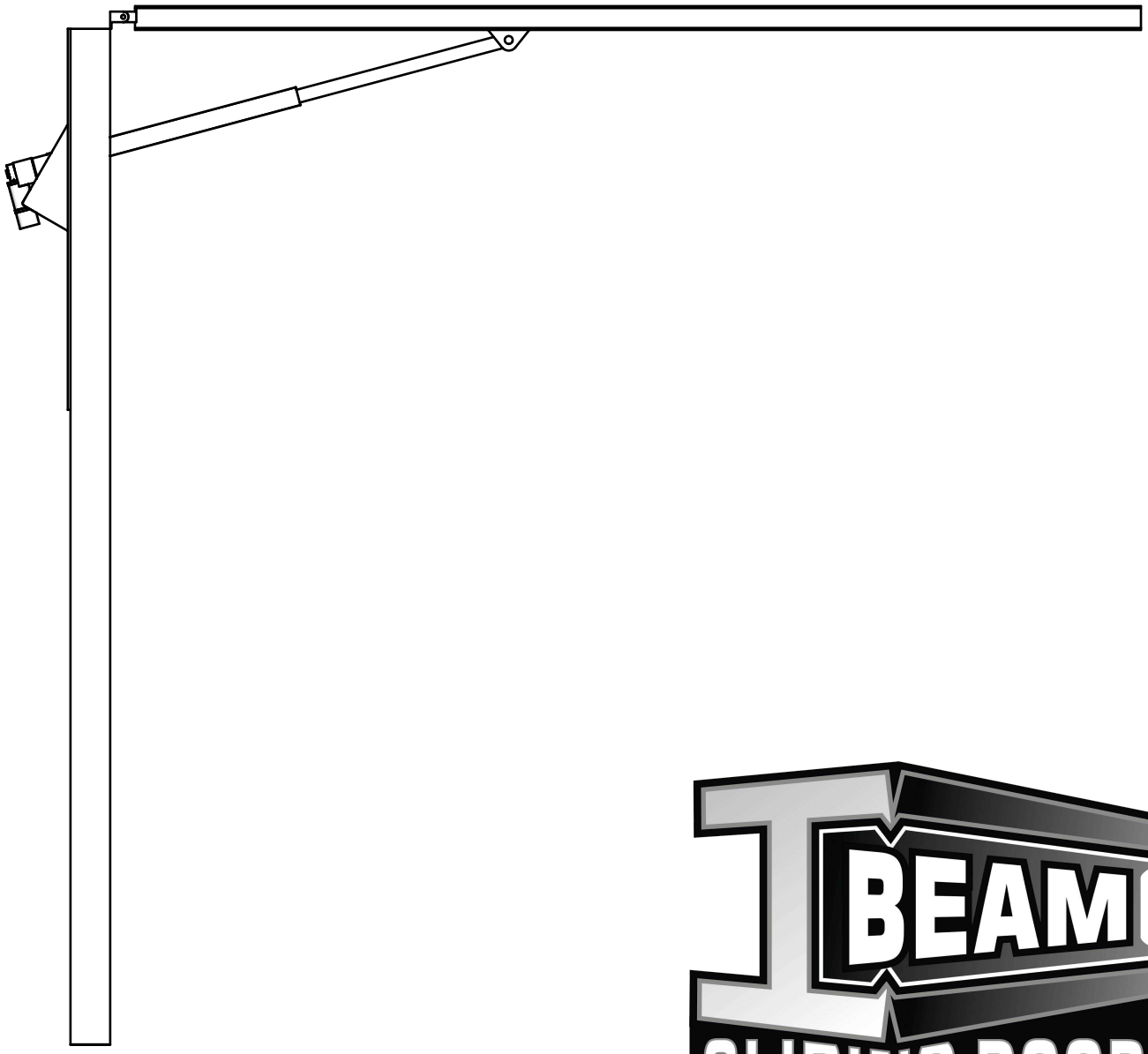
THE INCREDIBLE SWING DOOR

WWW.IBEAMDOOR.COM



IBEAM SLIDING DOORS

These Instructions are the order of operation we find most efficient to install doors.

Swing Door Instructions

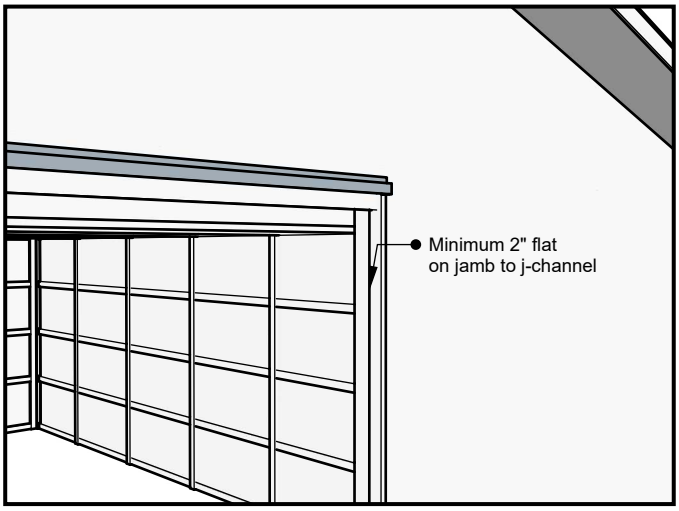
1) Ideally install 2.5” x 4.5” angle Jamb trim on building before installing jamb hinge plate.

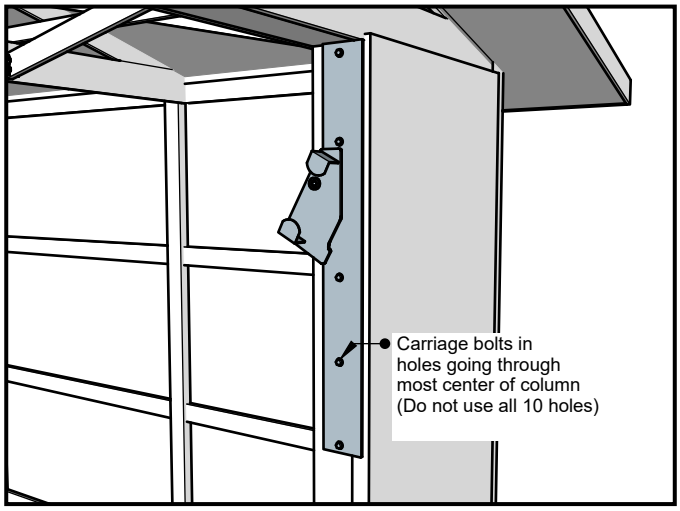
2) Install top trim on building before hinge plates are fastened if there is steel already in place above opening. This can be done after door is installed if there is no steel above door. The base of the building top trim goes 6” above door opening, that should be 1/2” above the hinge plates; face of building top trim should hang over the hinge plates. For best finished look, fold ends of this trim at each end 4” around as a boxed in end cap. Top trim goes behind steel above door. Make sure bottom of steel is straight and trim is installed straight using laser or chalk line.

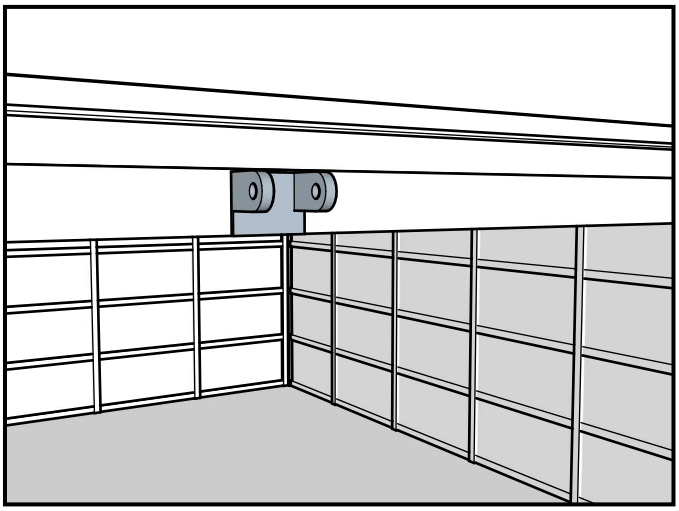
3) Attach swing door hinge plate assembly to building jambs. 1/2” carriage through bolts or welded to steel building jambs and header thoroughly. If jambs are I-beams, weld heavy tabs between I-beam flanges with angle or flat then weld plates to that. **MUST WELD ALL AROUND TOP HINGE PLATE, OR THROUGH BOLTED WITH 4 GRADE 5 CARRIAGE BOLTS**

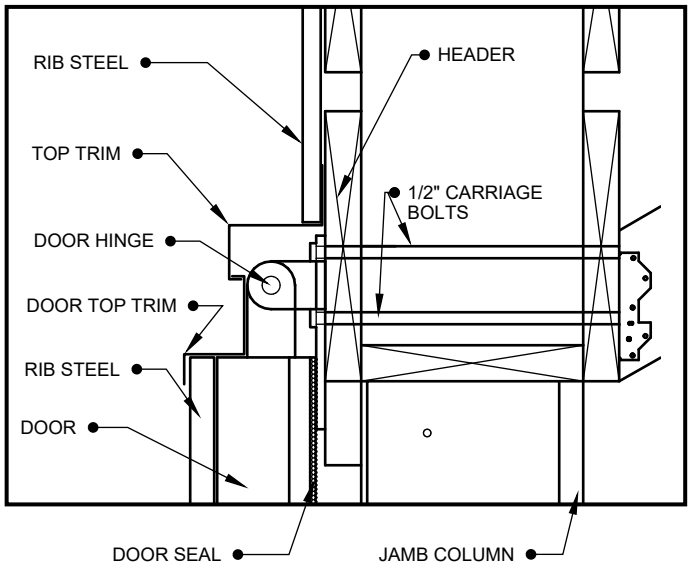
4) Drill and fasten outside hinge to building header with 2 carriage through bolts with flat washer on back side of header. These bolts go through jamb column.

5) On doors wider than 20’, Drill and fasten center hinge to header at same height as jamb hinges. Ideal to use chalk line or laser to get this height perfect. Make sure to measure or check pin heights to the laser or chalk line reference to make sure all pins are same perfect height.









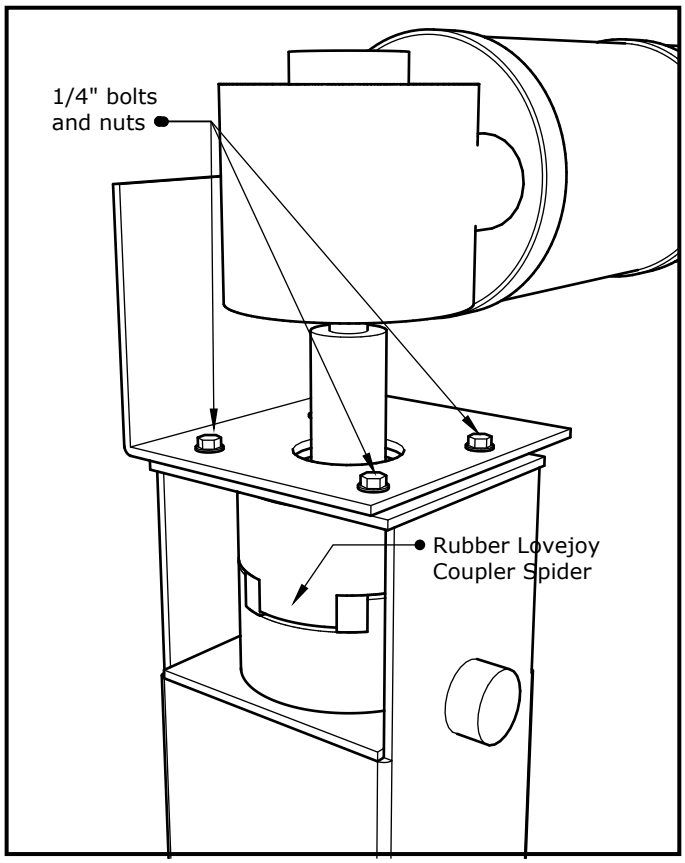
Jack and motor

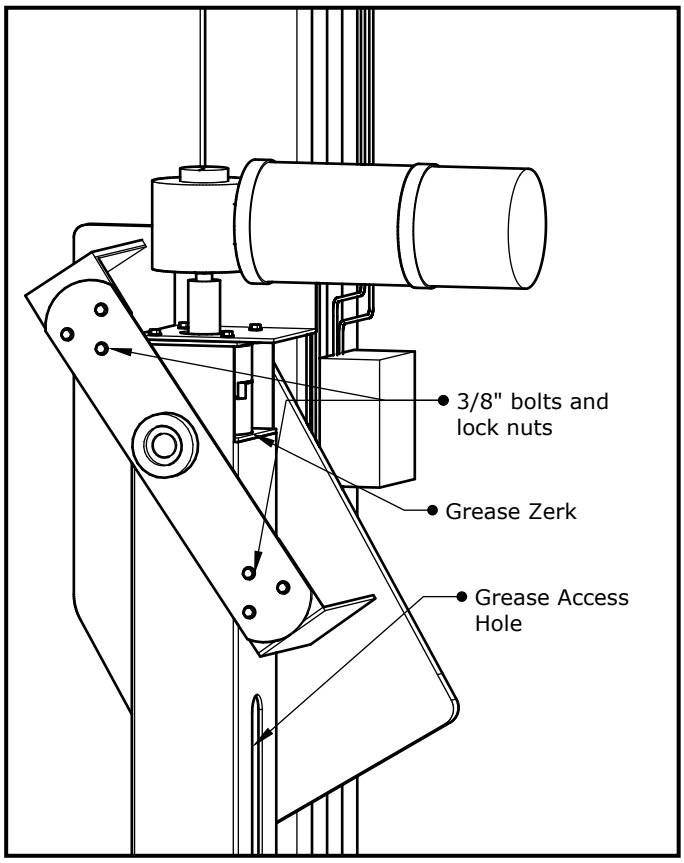
1) Lay jack on table/horses with grease access hole face up

2) Insert Lovejoy coupler rubber spider into jack love-joy, slide pre-assembled gearmotor into spider. The wire connectors on the motor need to face the grease on the back of the jack, install (4) 1/4" bolts into gearbox threaded head, careful to start fully without cross-threading then use wrench/ratchet to tighten. Grease jamb plate and horseshoe plate prior to hanging jack (right angle adapter helps with motor bolts).

3) Carefully with strong backs hang jack/motor assembly into jack pivot horseshoe jack pivot hole. You'll need to install jacks at an angle with bottom of jack outside of building couple feet to get between horseshoe tabs. **Do not drop or bind jack between horseshoe during installation.** The energy weight of the bang, even if dropped under 1ft, will snap the gearhead out of the bolts.

4) Install the outer horseshoe plate with (6) 3/8" bolts and lock nuts. Nuts go towards the outside of the assembly. Use alignment punch to align holes. Hold jack as plumb as possible when tightening nuts. Tighten nuts after all bolts inserted.





Door assembly

1) Ideal to assemble door frame on wall. Attach jack plates to verticals with provided 5/16" x 1 1/4" screws. Fill plate with screws. Hang the vertical pre-assembled frame sections into the hinge building plates, insert long (6 1/2") pin (grease pin) and use the 5/16" x 1” bolts and lock nuts to secure the pin from rotating. Girt tabs should direct inward, center has tabs on both sides.

2) If the door is wider than 24', attach the heavy duty prefabricated bottom aluminum Cee channel to the bottom tabs of the verticals with #14 self-drill screws provided. The ends of the Cee are flush with the outside and inside of the end vertices. The crown in the cee goes towards the outside.

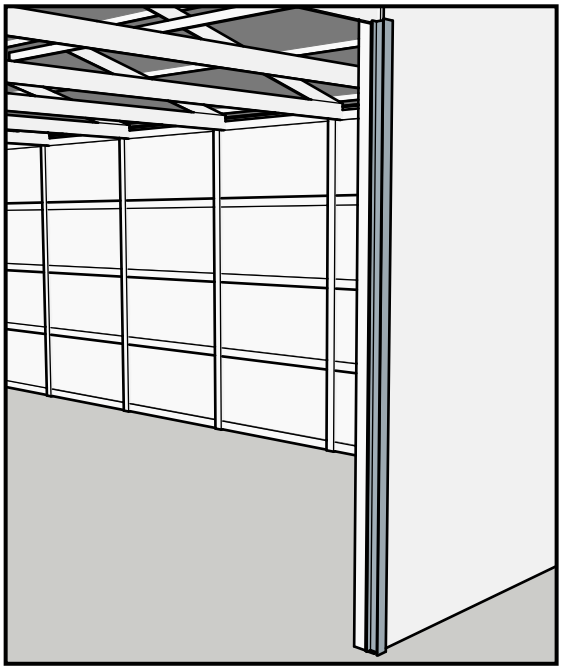
3) Connect jack to vertical with short (5") pin with 5/16" x 1" bolt and lock nut.

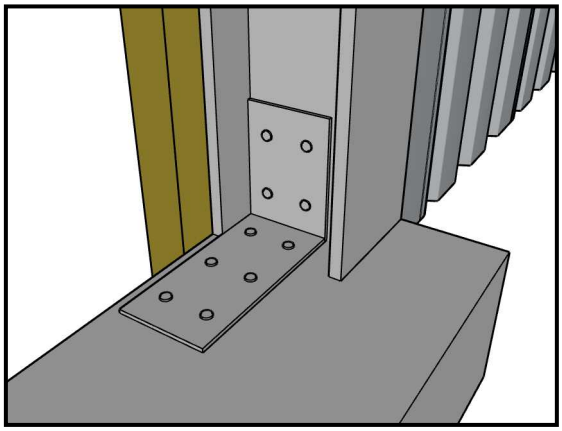
4) Install girts with #14 screws through girt brackets pre-mounted to verticals. Top girt is **below** the top bracket, the rest are mounted on top of brackets.

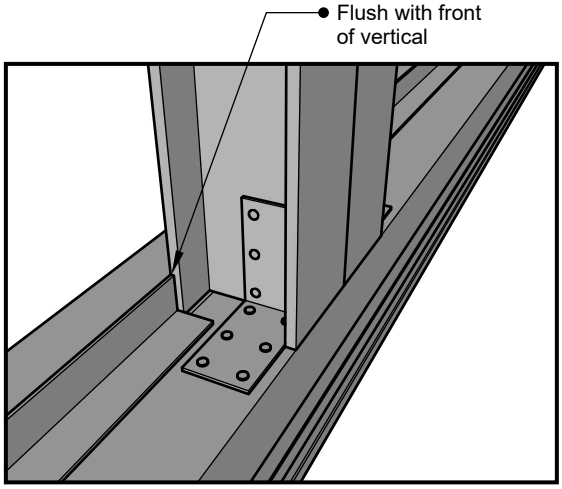
5) Girts longer than 12’ will need temporary blocking in the center to keep from sagging.

6) Doors 18’ – 25’ wide will have a stagger row of 3 1/2” vertical I-beams screwed into top and bottom of girts with center hinge angle brackets 5/16" screwed to top of top girt, center of door. Add bottom center support to girt before adding to door frame.

7) If bottom aluminum cee frame is present, install bottom 3 1/2" aluminum angle between verticals flush with outside of the verticals with #14x1” screws. Pre-drill 1/4” holes in aluminum angle to make it easier to fasten. Fasten every 2 ft.







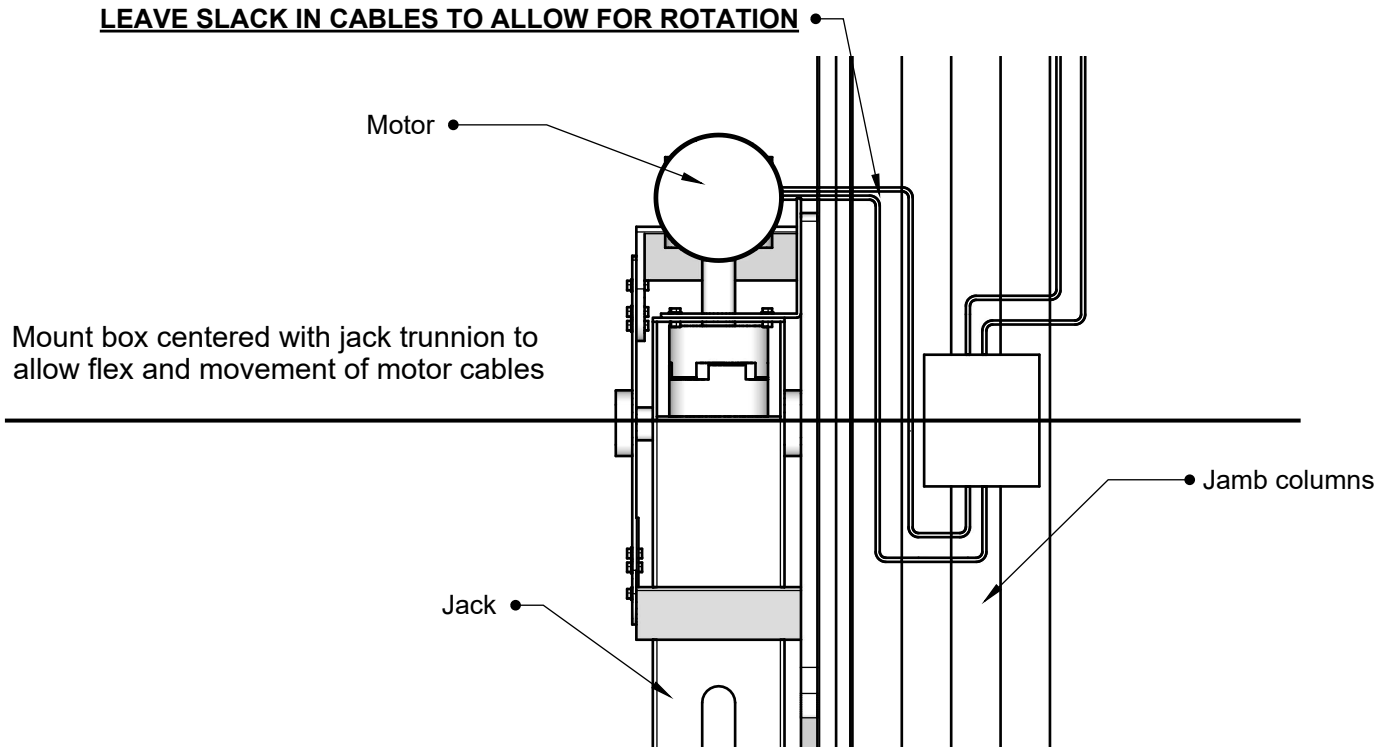
Wiring and Door Operation Setup

The power of these jacks must always be respected. If something is not right, and can't be figured out with simple trouble shooting, please call immediately!

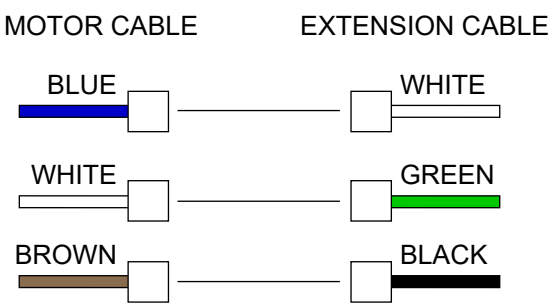
1) Attach control box inside of the building as close to the door as possible. There may only be enough wire harness to reach motors if box is placed within 3' of door. Additional harness length must be ordered if controls need to be moved to another location. The button mounted to the side of the box can be re-wired elsewhere in the building with industry standard 6 wire #18 signal wire.

2) The motor marked (R) is the right side looking at the door from inside, (L) is left

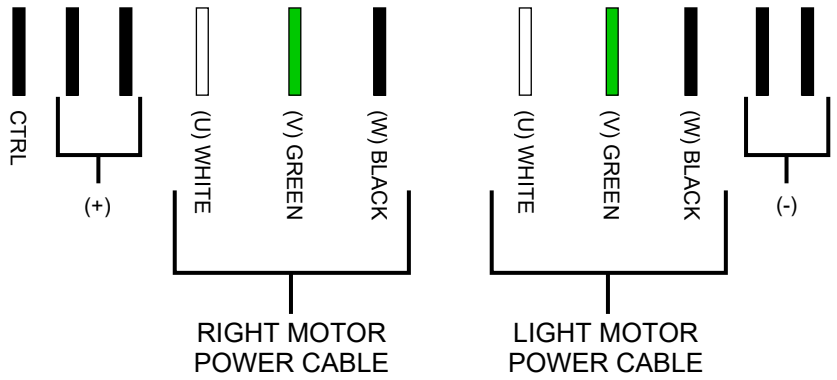
3) Start running your cables from the far motor to the box. **YOU MUST LEAVE ENOUGH SLACK ON BOTH CABLES TO ALLOW MOTOR TO ROTATE DOWN OR MOTION WILL PULL CABLES OUT OF MOTOR.** Install motor box parallel, centered with jack pivots, to allow enough slack for motor cables during operation. Follow decal diagrams on box for directions. The CAT 5 is just a snap fit. Make sure these are oriented correctly, (R)(L). Run cables neat, tie to the structure where necessery. Dangling cables improperly mounted cause more places for something to snag and the door will not work if snagged, none-the-less, it looks messy and can cause operation issues in the future.



MOTOR POWER CABLE CONNECTION



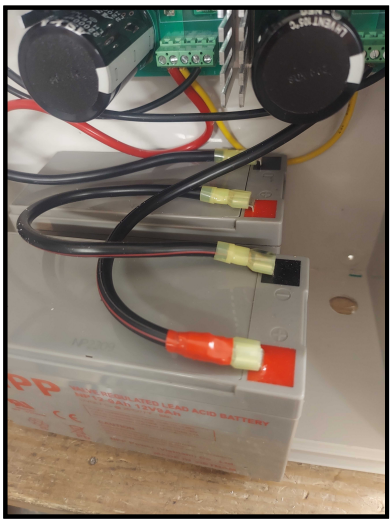
MOTOR CONTROLLER POWER CABLE CONNECTION



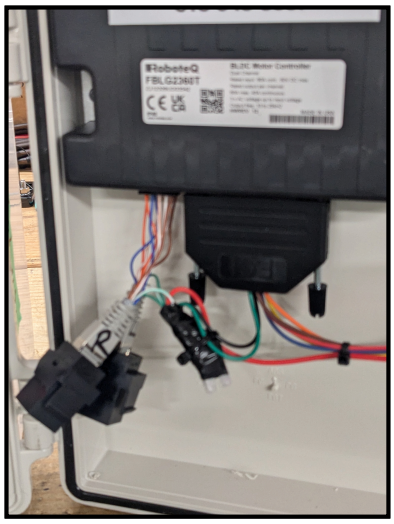
Wiring and Door Operation Setup Continued

4) Plug cables from right motor into control box marked (R) and CAT 5 recepticle marked (R), same with left (L) (See controller wire orientation detail below). Install power wires as orientedlabel shows on controller and motor ends. The strain reliefs are used for water tight connection on both ends of each cable. The additional strain relief on motor junction box is to insert CAT 5 cable. Tighten nuts and cincher nuts on all weather tight connectors.

5) Battery connection. **BEFORE OPERATING THE DOOR PLUG IN BATTERIES!!** Batteries maintain voltage through operation, they keep system charged to maintain location of the jacks, and back-driving forces create voltage, that voltage goes to the battery. With wind against the door, the back-drive voltage can be significant, very important not to over-voltage system and cause issues with controller. This is a 24v system, (2) 12v batteries, so they're connected in series. The #2 spade connectors go to the batteries, the red taped or red wire connector goes to red on 1 battery, the untaped connector (black) goes to black on the other battery. The jumper connector in the box goes from red on one battery and black on the other battery. The last battery connection may spark a little, don't be alarmed. This is caused by a temporary short, increasing voltage from 12v to 24v. If power cannot be permanently plugged into 110AC, turn breaker off when unplugged to keep batteries from draining. Re-home door(press close) after breaker is turned on to open.



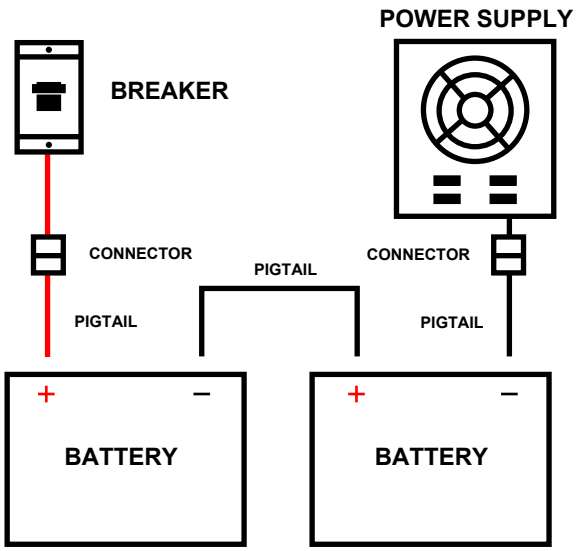
Battery Connection



Communication Cables

Buss Breaker (Shown Off)

BATTERY CONNECTION



Operation

1) The Buss breaker in the lower right of box has a red button and red arm trigger, box will arive with trigger down, power disconnected. Plug in the 110VAC to a standard recepticle outlet. Our advice is to wire a circuit for the door controller outlet to it's own service breaker. Push lever up on Buss breaker (lower left of control box), the lights on the bottom of the Roboteq Controller will illuminate, 1 green and 1 flashing red. Door is in standby fault mode.

2) Press the Close button, do not hold down button. The jacks will retract to pre-set tension, whether door is connected or not. You may need to retract the jacks to be able to extend them to install the jack pins on initial installation. Once door is connected re-home so it cycles to proper end limit. Once jacks are retracted to simultanious tension, the door is closed/homed. The only way the jacks will extend is by them knowing where to start because they need to know how far to go. The door re-homes tension on every cycle. A way to check to see if door is homed, press close, if motor brakes do not click or motors don't run, door is home.

3) On initial operation, be ready to stop the door at all times. Make sure ALL fastners are installed properly, make sure all bolts are installed on jack plates and door is safe for operation. Look at path of door, make sure it's clear, then press Open**. Watch the cables on both motors to make sure they're free from any obstruction, make sure they move with the motor without getting cables tight!** Allow the door to open to its pre-set open limit. Prior to pressing close, make sure batteries are plugged in properly, this is where the batteries are a necessity. Press Close and let door do it's thing until it pulls close and homes tight against jambs.

4) To reset door if power gets lost, **unplugged**, or obstruction detection is triggered, you may need to do a power cycle. By pushing the red button on the Buss breaker trips the lever, wait 3 seconds, flip lever back up to re-engage. Wait 3 seconds then press close. After a power cycle, the door is in fault mode, it can only go home (closed tight) to feel the tension, it doesn't know where it's at until it feels simultanious tension against the jambs. Once simultaneous amp trigger tension is triggered in controller, the jacks will extend when open button is pushed..

5) If there is a power surge/lightning strike, the breaker may sacrifice itself or trip, it may melt the contactor internally permanantly damaging Buss breaker. If the lights aren't illuminated on the Roboteq controller, either the breaker is still tripped or the breaker is broke. These are available locally or we can ship you one. Voltage through the breaker is 25-29VDC, this is variable with 110AC line voltage.

6) If Roboteq Motor Controller lights are illuminated and door doesn't work, double check all cable connections, check voltage on both sides of breaker, make sure power on wall outlet is working, disconnect batteries and check voltage on breaker or coil power transformer. The lights are located on the underside of the Roboteq Motor Controller. Voltage output of transformer is 25-29v DC.

Steel and Trim

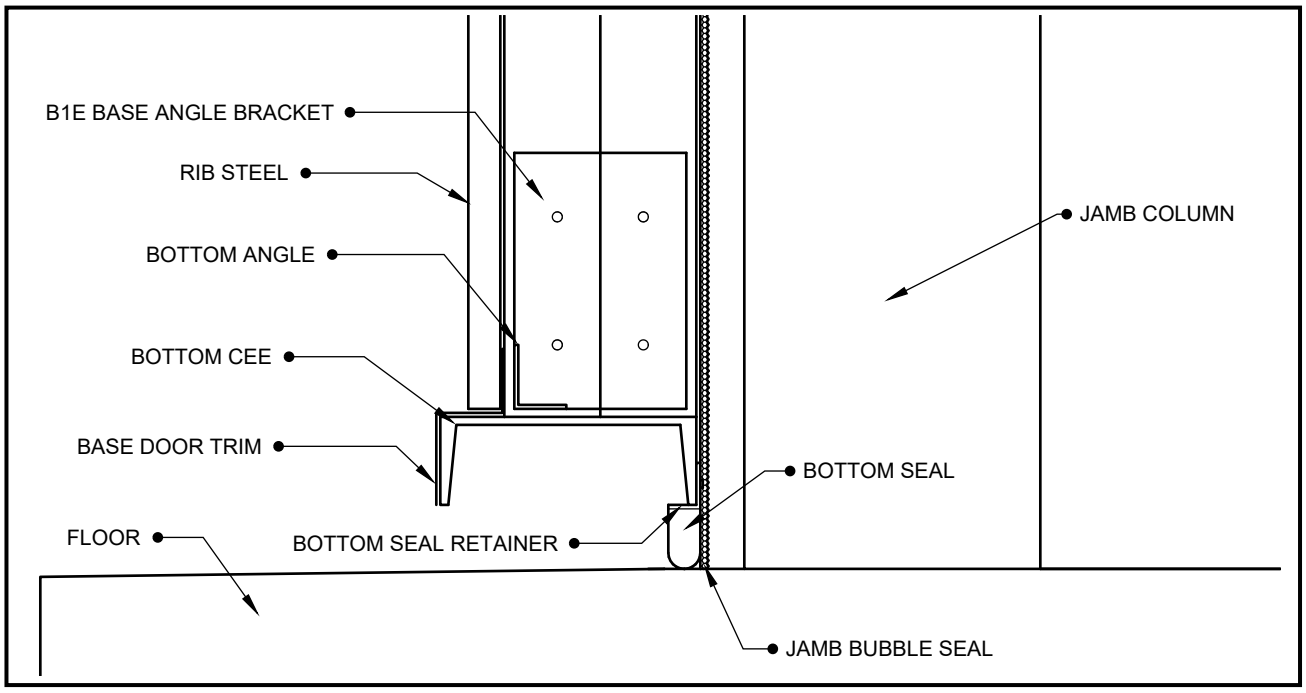
1) Make sure door is plumb with jambs before installing steel. Check clearance on jack plates to jambs. Ideal if you ratchet strap door to jambs so it stays tight against wall.

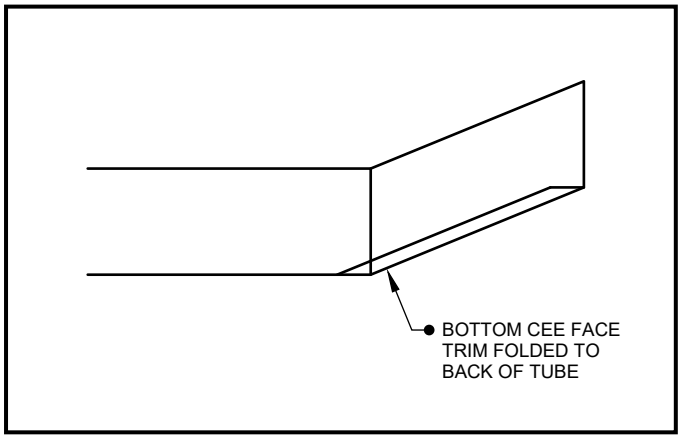
2) Install base trim first. Fold down ends 1”. Tube face trim fold around 10" or 12” (depending on width of beam) each end so it covers open ends of bottom tube beam.

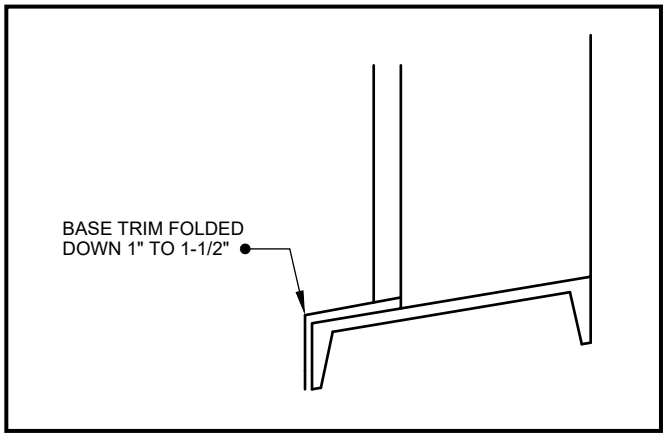
3) Install paneling. Measure girts for hole placement. For quality looking finished product measure to bottom side of I -beam girt web for bottom 2 girts then top side of girt web on upper girts so you won't see screws when door is shut and so there is no struggle installing screws into I-beam webs.

4) Install vertical frame cover trim. Cut so it notches around base trim and continues flush to bottom of door frame. Fasten through front on dog-leg hem and fasten through side into vertical I-beam return or use flat head screws on back side. Do not use 5/16" head screws on back side of trim; fasten into side flange of I or with flat head screws inside.

5) Install door top trim over ribs of steel on door with 1” screws stitched through each rib.







Seals and Gaskets

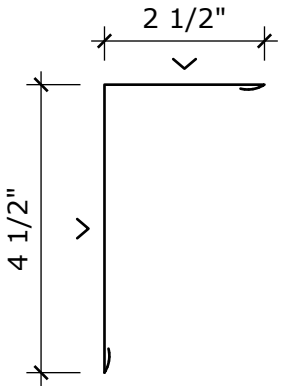
1) Easiest to do when door is operating

2) Install perimeter bubble seals 1/4” from edge of frame on the inside over the trim around the top and sides.

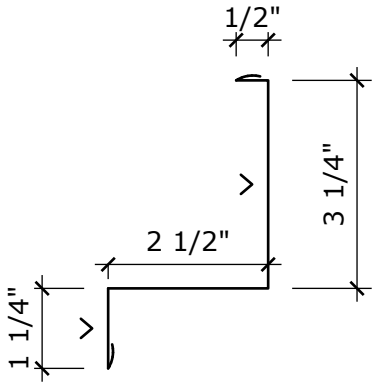
2a) Install plastic bottom seal retainer with #12 or #14 self-drill screws into tube or bottom aluminum I-beam every 2ft

3) Slide in bottom rubber gasket. May need to use WD40 or a lubricant to help slide, especially in large doors. Leave ends of the rubber 4-5” long so you can tuck excess back into ends of gaskets to seal ends.

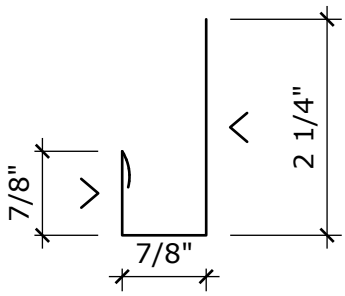
Door size _____ panel quantity _____ length _____



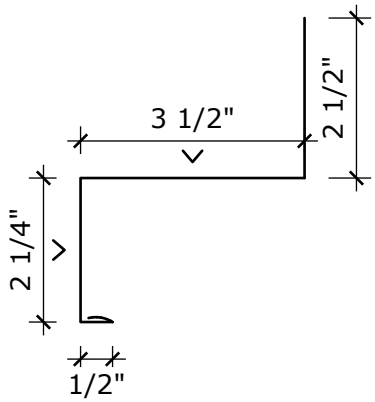
Jamb Trim



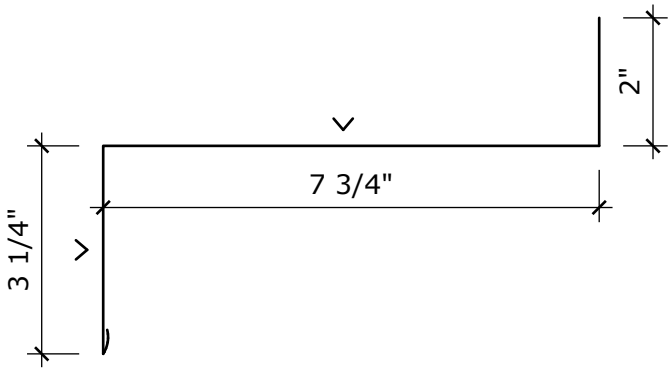
Door Top Trim
(optional vinyl gasket replaces this)



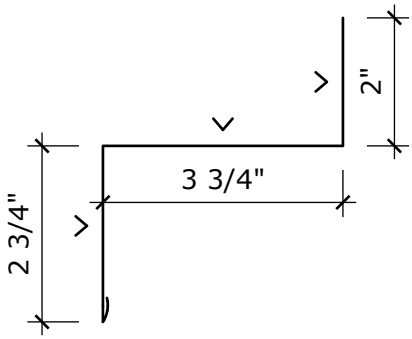
"J"-Channel
(On Building Jambs)



Top Trim
(optional vinyl gasket replaces this)

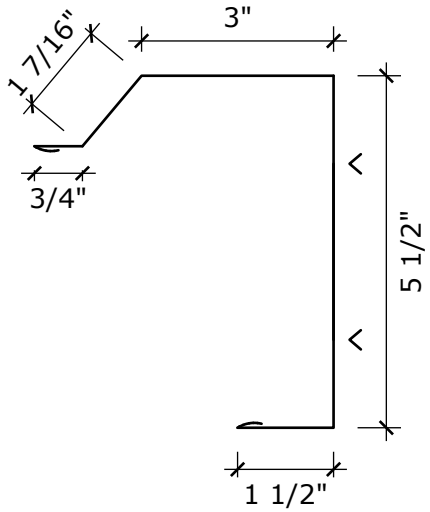


12" Bottom Aluminum Cee Trim

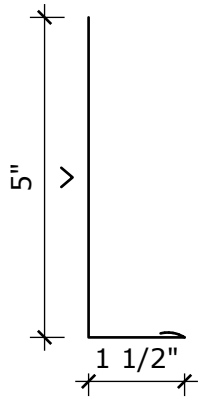


8" Bottom Aluminum Cee Trim

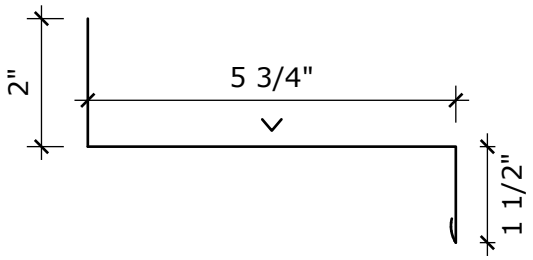
Arrows indicate painted sides



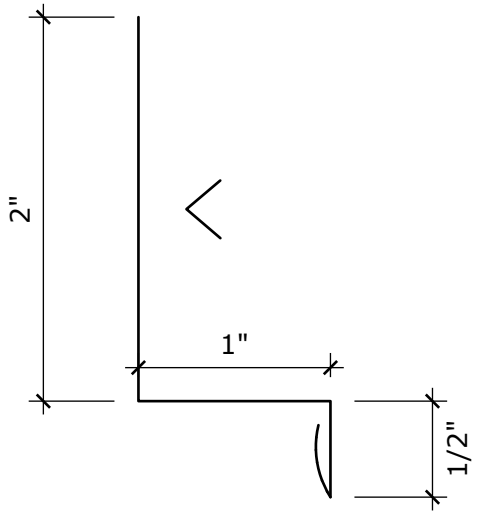
Door Vertical Trim Cover



Tube Beam Fascia and End Cap
(Doors Wider Than 25')



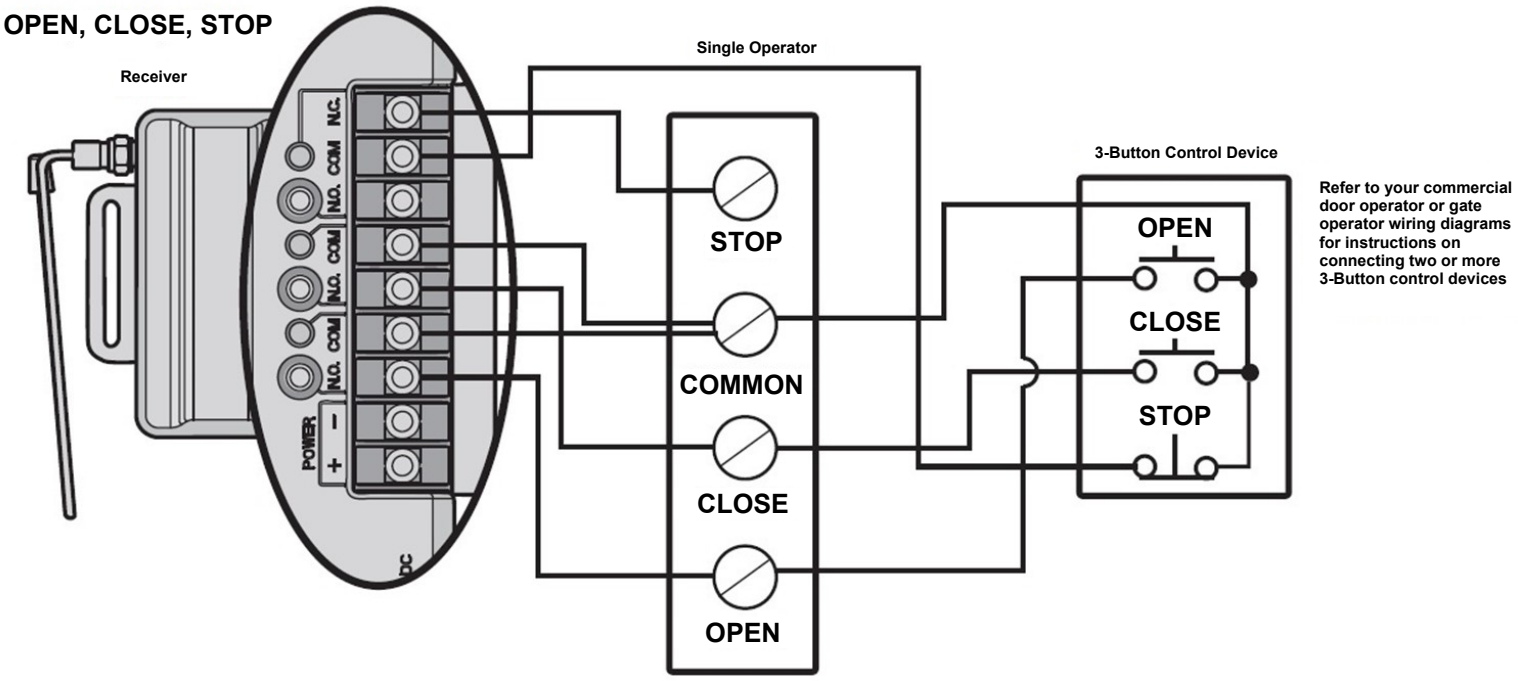
10" Bottom Tube Beam Cover
(Doors wider than 25')
***Note - On 12" Beam, 5 3/4" changes to 7 3/4"**



Base Door Trim
(Doors 25' or Less)

Arrows indicate painted sides

LiftMaster 850LM
Receiver Wiring



PROGRAMMING

PROGRAM A SINGLE BUTTON REMOTE CONTROL

1 Press and release the Learn button for the selected channel on the receiver. The corresponding LED will glow steadily for 30 seconds.

2 Within 30 seconds press and hold the button on the remote control that you wish to program to the receiver.

3 Release the remote control button when the LED on the receiver blinks, then turns off. Programming is complete.

Repeat the steps above for each remote control you would like to program.

PROGRAM A 3-BUTTON REMOTE CONTROL AS OPEN, CLOSE, AND STOP

1 Press and release the CH1 Learn button on the receiver.

2 Within 30 seconds press the desired OPEN button on the remote control. **(GREEN) OPEN**

3 Press and release the CH2 Learn button on the receiver.

4 Within 30 seconds press the desired CLOSE button on the remote control. **(YELLOW) CLOSE**

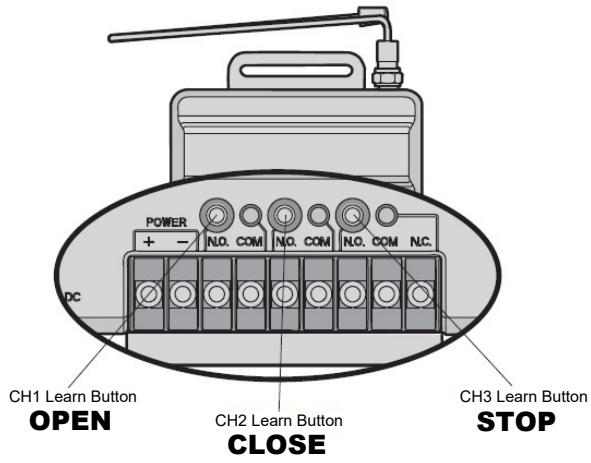
5 Press and release the CH3 Learn button on the receiver.

6 Within 30 seconds press the desired STOP button on the remote control. **(RED) STOP**

NOTE: if a remote control button is not pressed within 30 seconds, the LED next to the selected Learn button will turn OFF. In that case, repeat the programming.

TO ERASE THE MEMORY

1 Press and hold the Learn button for the channel you want to erase. Release the button when the corresponding LED turns off; the memory has been erased.



SPECIFICATIONS

Contact Rating.....5 Amps 28 Vac or dc Max.
Power.....9-30V AC or 9-34V DC, 50mA, 60Hz
RF Frequency:.....310, 315, and 390 MHz

NOTE: If your operator does not meet the power specifications you will need a transformer (Model 85LM plug-in or 95LM wired-in).

COMPATIBLE ACCESSORIES

Remote Controls.....Models 811LM, 813LM, 891LM, 893LM, 890MAX, 893MAX, 895MAX, 892LT, 894LT
Keypads.....Models 877LM, 877MAX
Antenna Extension Kits.....Models 86LM, 86LMT
Antenna Only.....K77-36541