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# INSTALLATION INSTRUCTIONS

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## Automated Dual Horizontal Door System

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This device complies with part 15 of the FCC rules. Operation is subject to the following 2 conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio or television communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment to an outlet on a circuit other than that to which the receiver is connected

Consult the dealer or an experienced radio/TV technician for help

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# CM6DH SERIES

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CSAV, Inc., and its affiliated corporations and subsidiaries (collectively, "CSAV"), intend to make this manual accurate and complete. However, CSAV makes no claim that the information contained herein covers all details, conditions or variations, nor does it provide for every possible contingency in connection with the installation or use of this product. The information contained in this document is subject to change without notice or obligation of any kind. CSAV makes no representation of warranty, expressed or implied, regarding the information contained herein. CSAV assumes no responsibility for accuracy, completeness or sufficiency of the information contained in this document.



## IMPORTANT WARNINGS AND CAUTIONS!

The Alert messages **DANGER**, **WARNING**, **CAUTION**, **IMPORTANT**, and **NOTE** are used throughout these instructions and on the product to alert the reader and/or operator of the existence of dangerous situations, conditions and/or important operational and maintenance information.

### "SAVE THESE INSTRUCTIONS"



**WARNING:** WARNING alerts you to the possibility of serious injury or death if you do not follow the instructions.



**CAUTION:** A CAUTION alerts you to the possibility of damage or destruction of equipment if you do not follow the corresponding instructions.



**WARNING:** FAILURE TO READ AND FOLLOW THE FOLLOWING INSTRUCTIONS CAN RESULT IN SERIOUS PERSONAL INJURY, DAMAGE TO EQUIPMENT OR VOIDING OF FACTORY WARRANTY. It is the installer's responsibility to make sure all components are properly assembled and installed using the instructions provided. Read all instructions before using this furnishing.



**DANGER: TO REDUCE THE RISK OF ELECTRIC SHOCK:**

- ALWAYS unplug this furnishing from the electrical outlet before cleaning.



**WARNING:** TO REDUCE THE RISK OF BURNS, FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS:

- Unplug from outlet before putting on or taking off parts.
- Close supervision is necessary when this furnishing is being used by, or near, children, invalids, or disabled persons.
- Use this furnishing only for its intended use as directed in these instructions. DO NOT use attachments not recommended by the manufacturer.
- NEVER operate this furnishing if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into water. Return the furnishing to a service center for examination and repair.
- Keep the cord away from heated surfaces.
- NEVER operate the furnishing with the air openings blocked. Keep the air openings free of lint, and the like.
- NEVER drop or insert anything into any opening.
- DO NOT use outdoors.
- DO NOT operate where aerosol (spray) products are being used, or where oxygen is being administered.
- To disconnect, turn all controls to the off position, then remove plug from outlet.



**WARNING:** RISK OF ELECTRICAL SHOCK! Connect this device to a properly grounded outlet only.

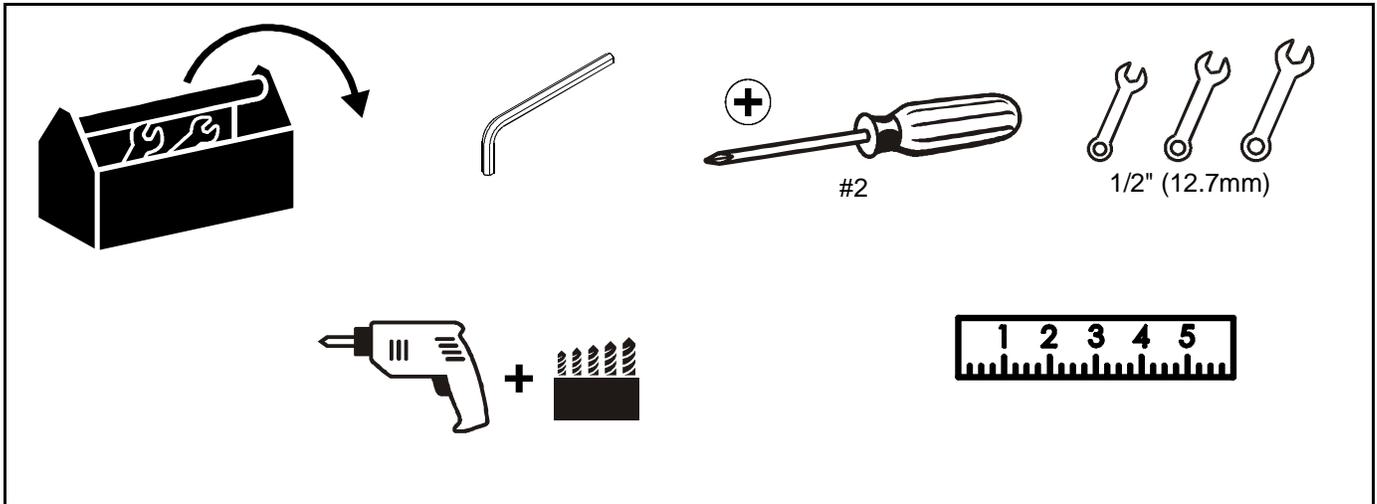


**CAUTION:** ONE END OF POWER CORD MUST REMAIN ACCESSIBLE AT ALL TIMES! DO NOT block or impede access to plug at any time!

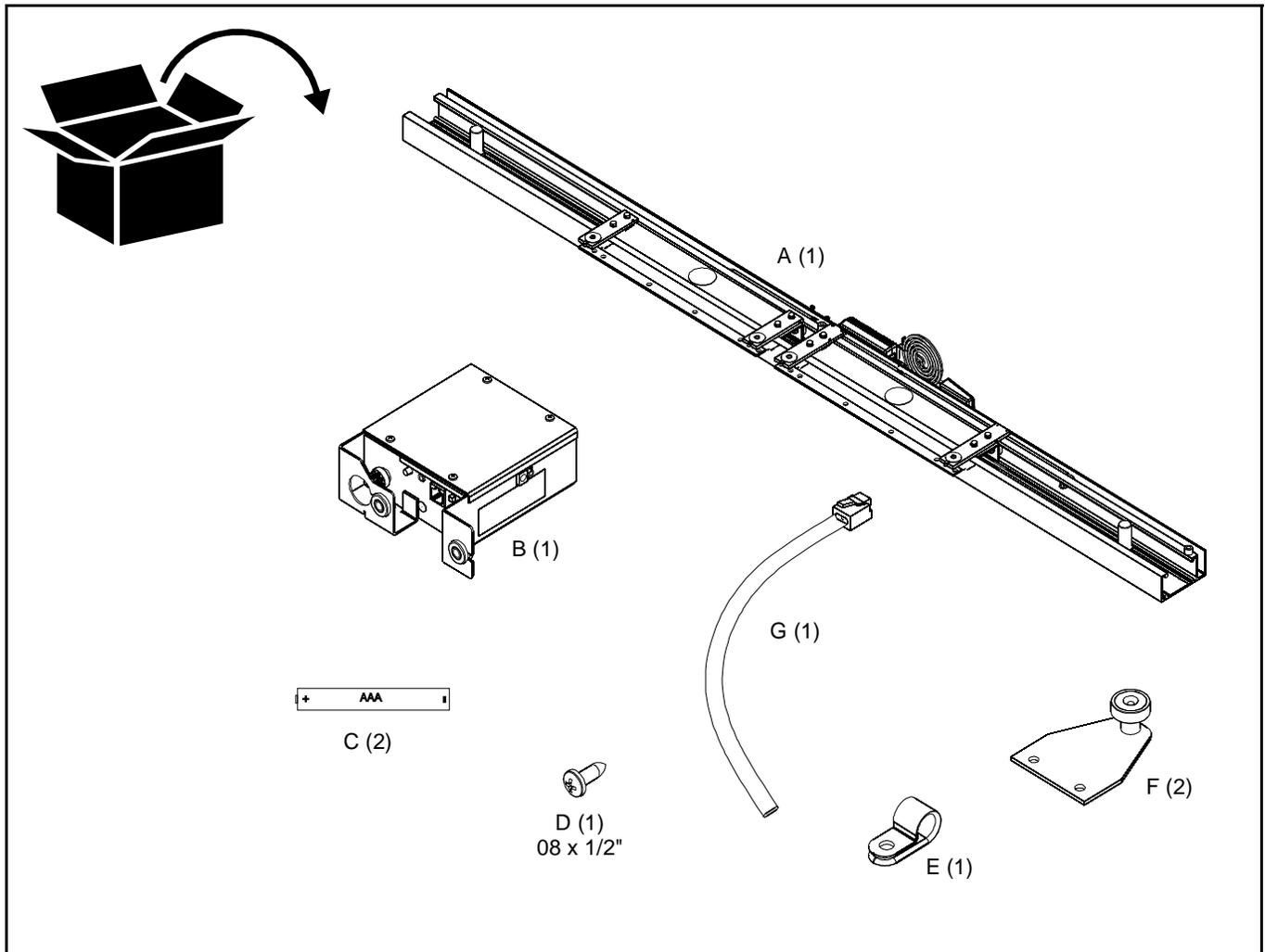


**CAUTION:** Changes or modifications to this unit not expressly approved by the manufacturer can void the units FCC compliance rating and make the unit illegal to operate.

**TOOLS REQUIRED FOR INSTALLATION**



**PARTS**



## INSTALLATION

### Cabinet Considerations

1. Header must not extend beyond top of track.
2. Guide wheel must have free play in toe space.
3. Doors must not exceed 50 lbs (each).
4. Allow ample room for drawers to open past doors, and for doors to move in front of cabinet, as well as above floor or carpet.
5. Use of a quality surge protection device is suggested for mounting on top of cabinet to make electrical hook-up of the mechanism and lights.

### Installing to Cabinet

1. Place mechanism (A) on top of cabinet. (See Figure 1)
2. Align center of track with center of the door opening.
3. Attach using #8 or #10 screws through the holes in track.
4. Attach motor box to the track following instructions in box. (See Figure 2)

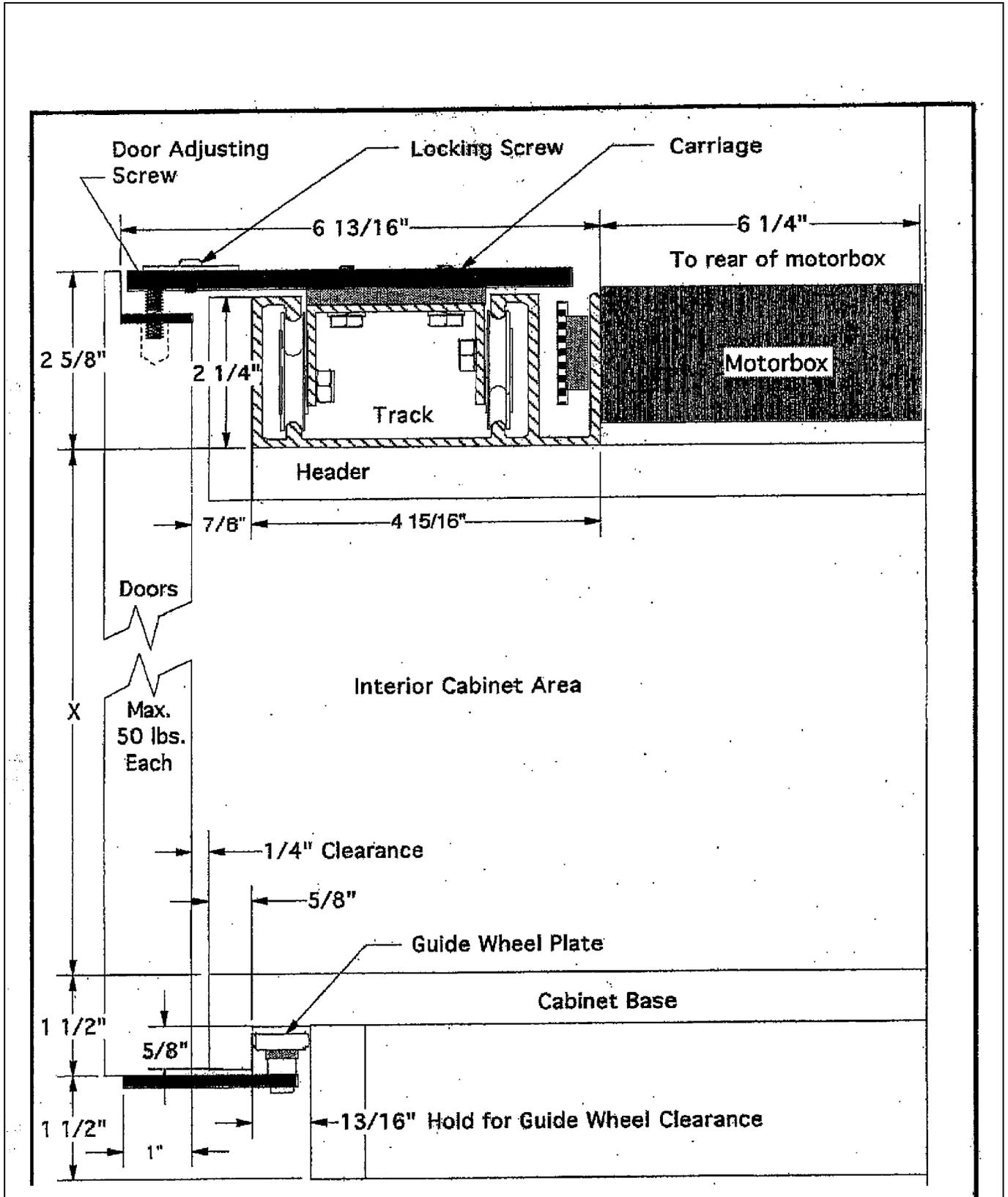


Figure 1

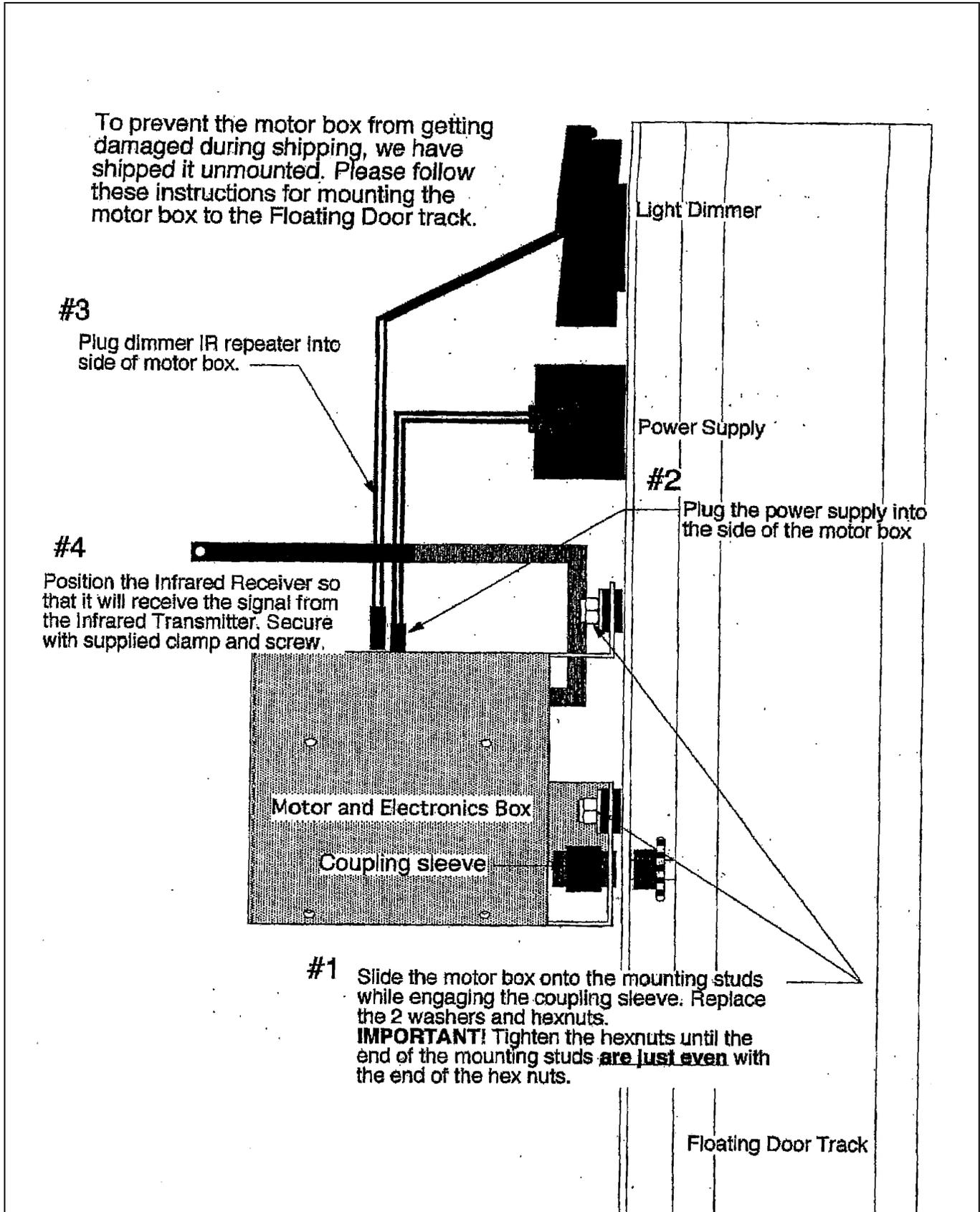


Figure 2

### Hanging and Adjusting Doors

1. Remove door hanger from mechanism by removing locking screws and washers. (See Figure 3)

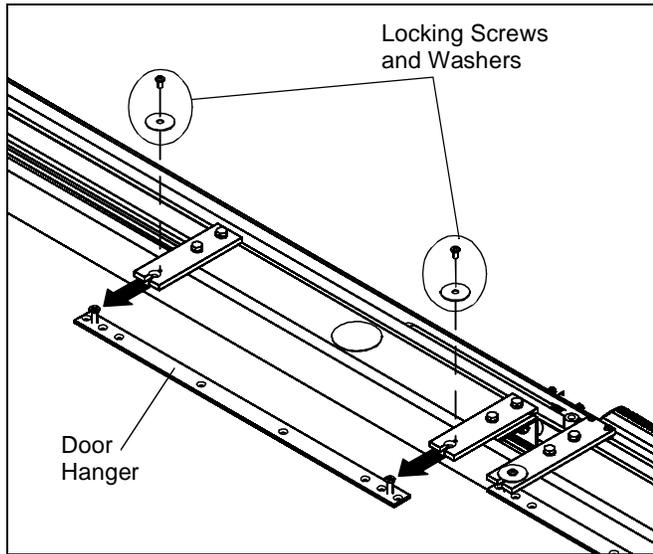


Figure 3

2. Center door hanger to top of door and secure with eight flat head screws of sufficient length to support weight of door. (See Figure 4)

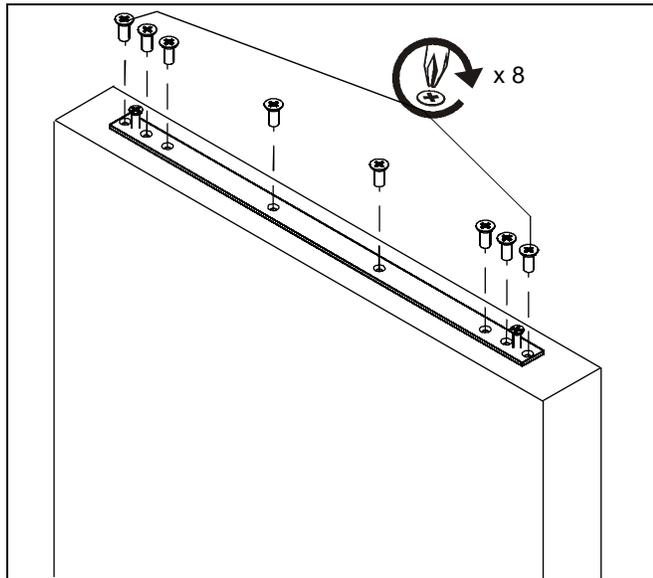


Figure 4

3. Attach one guidewheel plate (F) to bottom center of each door. (See Figure 5)

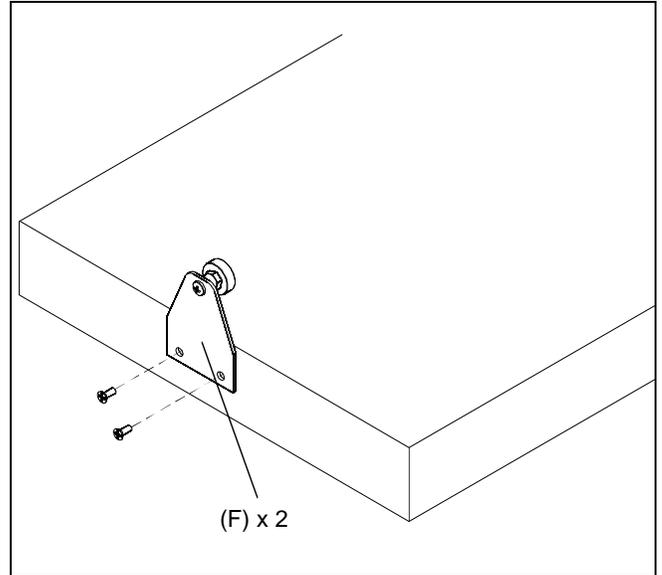


Figure 5

4. Move carriages to one half open position by activating mechanism and pressing button a second time when carriage reaches desired position. (See **Mechanism Activation** section).
5. Lift door and engage guidewheel into guidewheel space.
6. Tip top of door in, engaging the pendant bolts into keyhole in carriage arms. (See Figure 6)

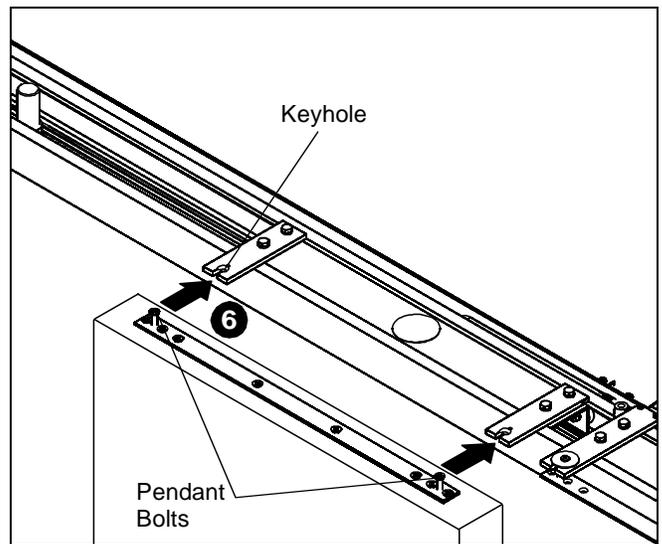


Figure 6

7. Adjust height and alignment of doors by turning the pendant bolts. (See Figure 7)
8. After adjustment is complete, replace the washers and locking screws. (See Figure 7)

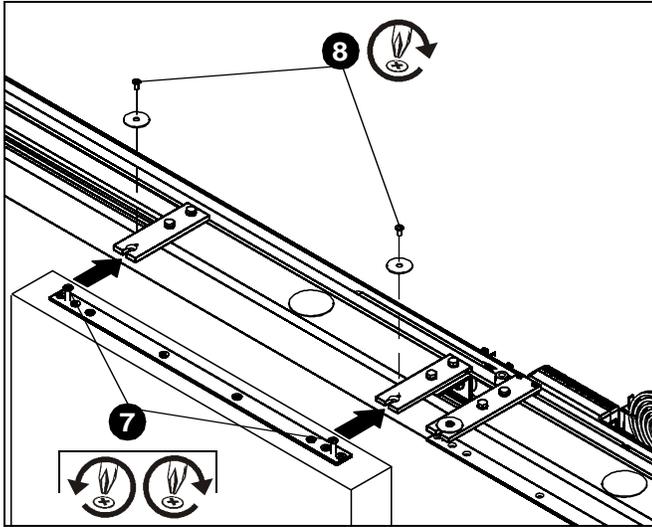


Figure 7

**IR Sensor Placement**

The placement of the IR sensor can be crucial to proper operation of the system. A flexible IR sensor is provided to make it easier to achieve reliable operation.

In most applications, the IR sensor may be installed on top of the cabinet. However, tall and/or dark colored ceilings can absorb the IR signal. If inconsistent operation is encountered there are two alternatives.

- One, the flexible IR sensor eye can be placed so that it gives the sensor "line of sight" to the signal from the remote controller. Often this merely involves placing the IR sensor so that it peeks up over the top of the cabinet. It doesn't have to be much, just enough to give "line of sight".
- Two, an IR sensor extension cord can be used to position the IR sensor in the cabinet near to the other remote controlled units. (For example, near to the VCR or DVD player)

**Install Light Dimmer Module (Optional)**

With the dimmer option installed cabinet lighting can be switched on or off or dimmed using the left buttons on the systems remote control.

To install the optional dimmer:

1. Plug 115VAC lighting into the back of the Light Dimmer Module.
2. Plug the other end of Dimmer Module cord into a 115VAC grounded receptacle on motor assembly.



**CAUTION:** The Dimmer is for 120 volt incandescent or Halogen lamps of at least 25 watts and should not to exceed 300 watts total.

The system also provides the option of creating and saving two different lighting "scenes". Please refer to the Remote Control instructions for information on how to configure "scenes".

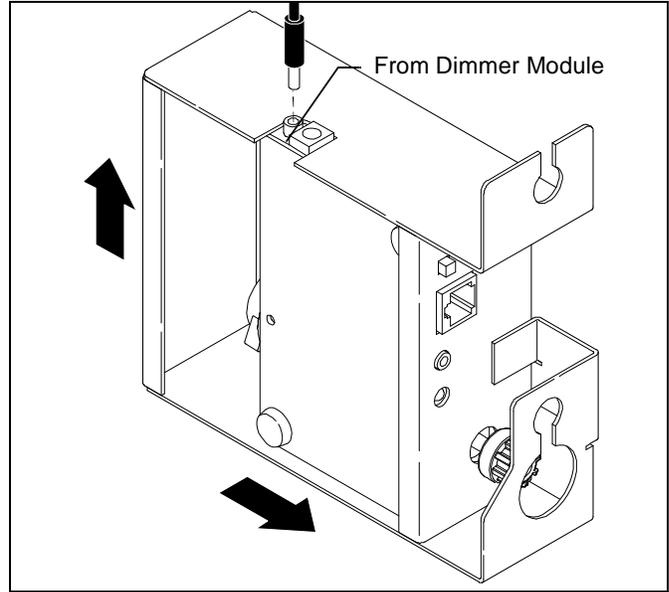


Figure 8

**System Activation**

1. Insert plug from the power supply into the jack on the top of the motor box.

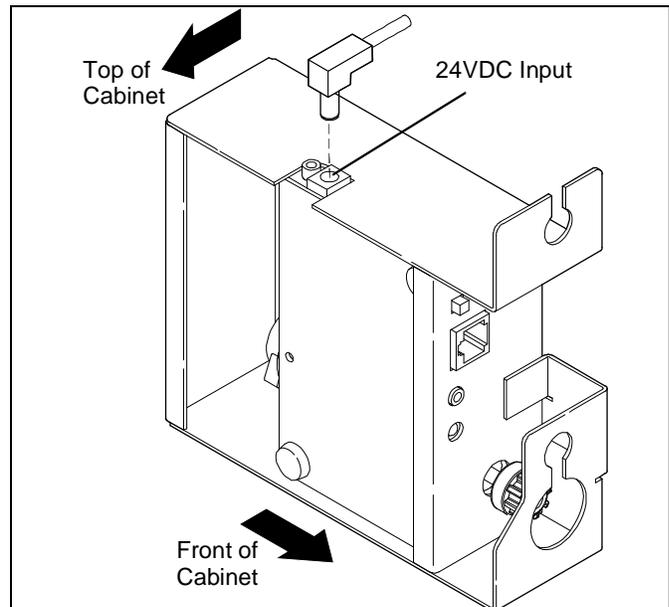


Figure 9

2. Plug Powercord into 115VAC outlet.

**IMPORTANT ! :** A quality surge protection device is recommended.

3. Make sure nothing is obstructing movement of doors,
4. Press and release the Activator Button on the front of the Motor Box or the "Close Door button on the Remote Control. (The doors should travel to the fully closed position)

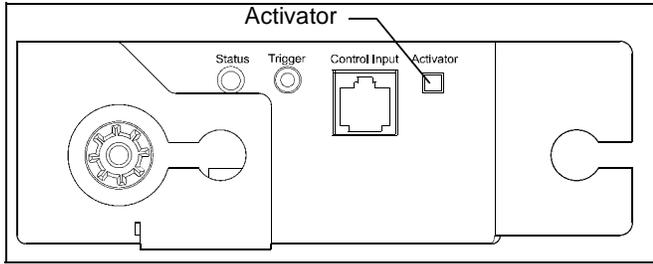


Figure 10

5. Press the "Open Door" button on the Remote Control.

**NOTE:** If a different travel distance is required see "Door Travel Adjustment" below.

**ADJUSTMENTS**

**Adjust Door Travel Distance**

To adjust door travel distance:

1. Press and hold the activator button on the front of the motor box for 13 seconds.

The Status Light on the front of the motor box will begin to blink alternately red and green. When this starts to happen release the Activator Button. When put into "Learn Mode" the system runs back and forth several times and measures its environment, such as open and closed locations etc. The system will then stop and remember these learned measurements.

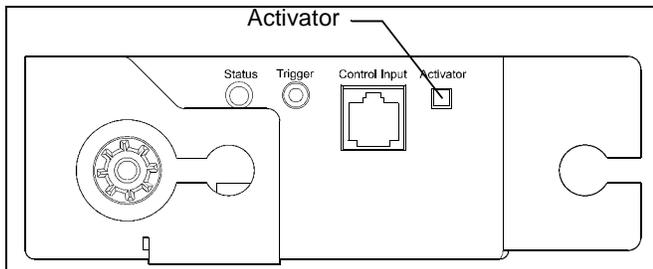


Figure 11

**System Controls and Indicators**

**Learn Mode**

The CM6DH system has no limit switches. The system uses an encoder on the motor to collect data and send it to the micro processor's memory. The software "learns" about its environment (speed, time duration, stop points, etc.) during the initial setup of the unit and retains that information until requested to "relearn" its environment.

The unit is shipped pre-set from the factory and will then continually adjust to its environment on each activation.

If for some reason you want to place the system into "Learn Mode" (such as to stop at other than its normal stop points), Press and hold the red activator button on the front of the motor box for approximately 13 seconds and then release it when the Status Light flashes quickly red, green, red, green, red, green.

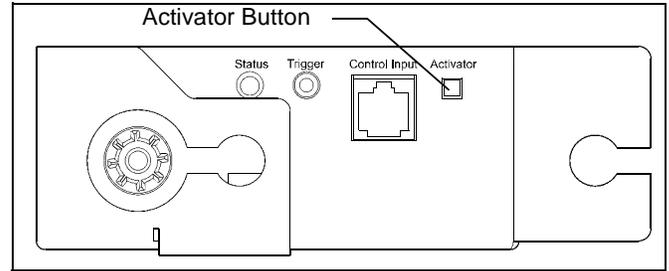


Figure 12

The controller will then be in "Learn Mode" (The door will move for 3 seconds, stop for 10 seconds, and when it starts moving again it will be in its "Learn Mode").

When put into "Learn Mode" the mechanism runs back and forth several times and measures its environment, such as open and closed locations etc., and then stops and remembers these learned measurements, so that next time the system runs it knows where to start and stop.

**Status Light Codes**

There is a light on the front of the mechanism motor box that will tell through its pattern of flashes and colors what the mechanism is doing.

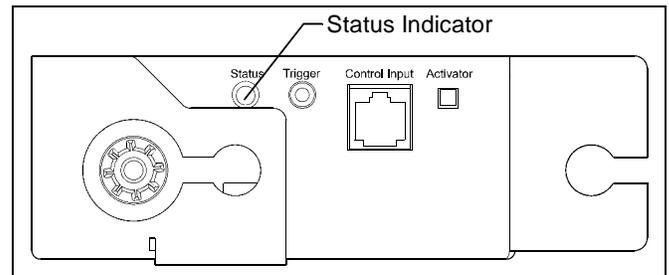


Figure 13

**Normal Doors At Rest** - The Status Light will be on steady green.

**Normal Run Motion of Doors** - The Status Light will flash in groups of 2 green followed by a pause. In normal run motion the doors on the system have a variable speed. The doors will start slowly, accelerate to a fast speed, and then slow down before coming to a stop.

**Doors Obstructed** - The Status Light will flash in groups of 3 red followed by a pause. If the doors meet an obstruction they will sense the obstruction, stop momentarily, and move in the opposite direction for a few seconds. ---- Remove the obstruction and then activate the doors. They should return to normal run motion.

**Doors Obstructed Both Ways** - The Status Light will flash in groups of 4 red followed by a pause. Similar to Doors Obstructed but doors are prevented from moving in either direction. ---- Remove the obstruction and then activate the doors. They should return to normal run motion.

**Travel Too Far** - The Status Light will flash in groups of 5 red followed by a pause. The motor is running but the doors are not moving. ---- Has the motor box been uncoupled from the

track, or is the motor box bent, causing it to become uncoupled from the track?

**Power Loss** - The Status Light will be on solid red. ---- There has been a power loss (due to an electrical storm, etc.). When next activated the doors will move at a slow speed to their full closed position. If the doors are already closed they will not move. The Status Light will return to solid green and the doors are ready for normal activation.

**Optional Control Input Connections**

**Control Input- 8 position RJ 45 modular phone jack**

Discrete control for use with 3rd party control.

- Position 8- Open
- Position 7- Stop

IR Receiver "Eye" input for Eubank, Inc. supplied external IR receiver only.

- Position 6 - V out
- Position 5 - Vcc, 5v

Radio Power for external RF receiver only.

- Position 4 - 24 VDC

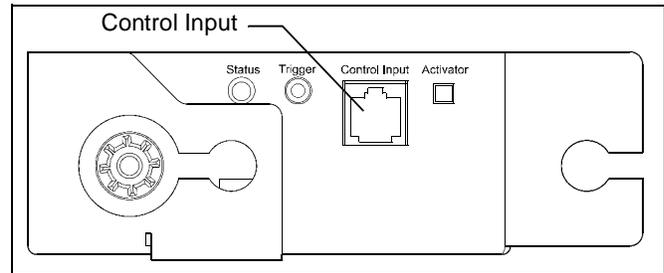
Sequence control for use with 3rd party control.

- Position 3 - Sequence- Open, Stop, Close, Stop
- Position 2 - Common

Discrete control for use with 3rd party control.

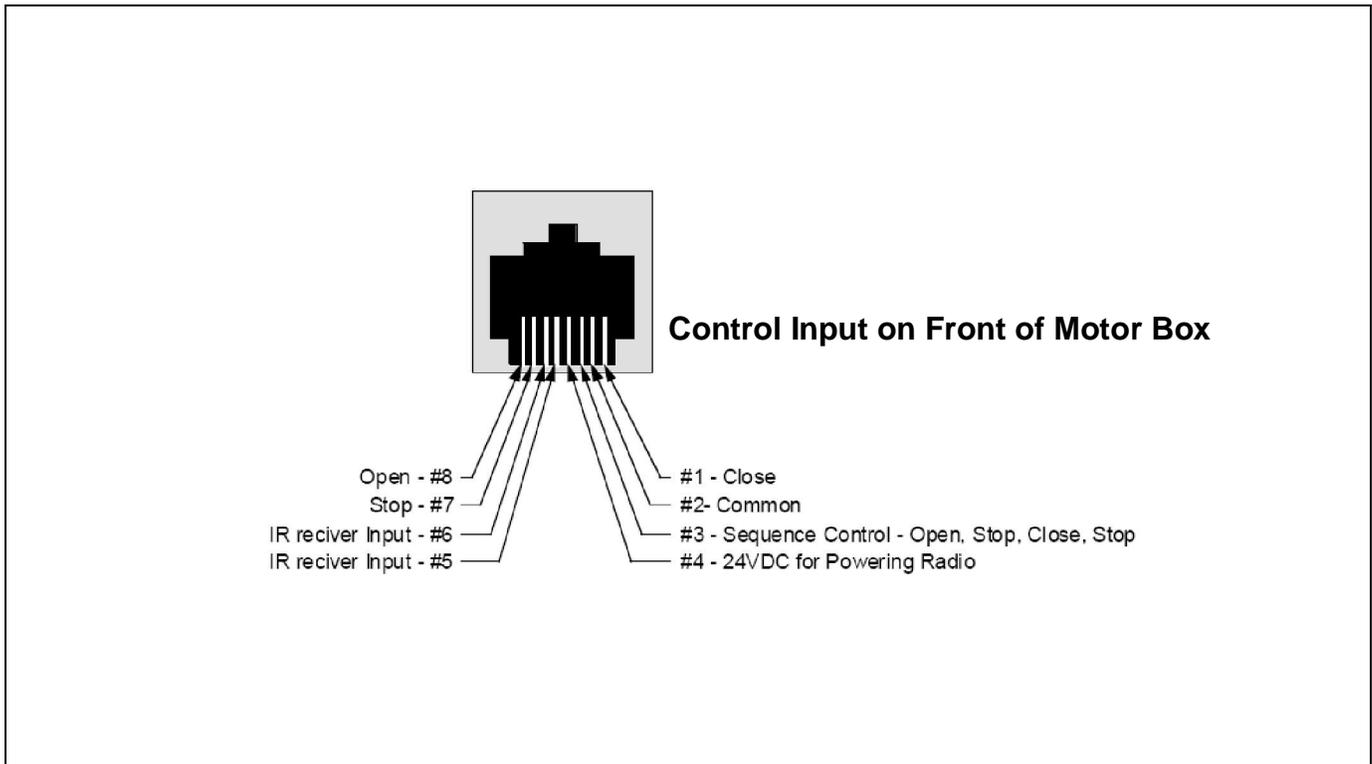
- Position 1 - Close

**Control Input on Front of Motor Box**



**Figure 14**

**NOTE:** Making a momentary dry contact closure between the common and the open, closed, stop, or sequence will activate the system in that mode.



**Figure 15**





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