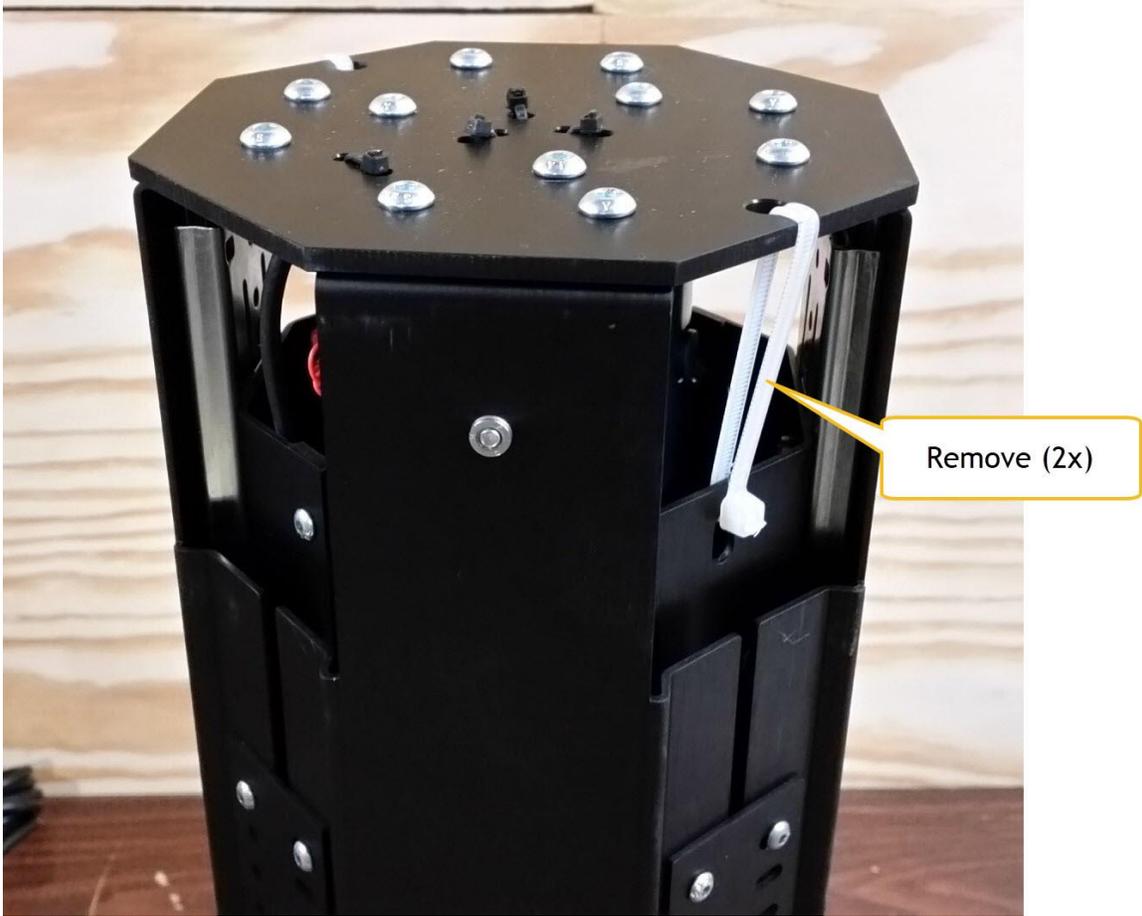


PL2017A Pulpit Lift for The Church of Jesus Christ of Latter Day Saints



The PL2017A pulpit lift combines and replaces the LDS2005A and LDS2006A pulpit lifts. This lift model can be used to replace Gifford Lifts, Pulpit Man Lifts, Techna-Base Lifts, LDS2004A, LDS2006A, LDS2005A lifts, and many others.

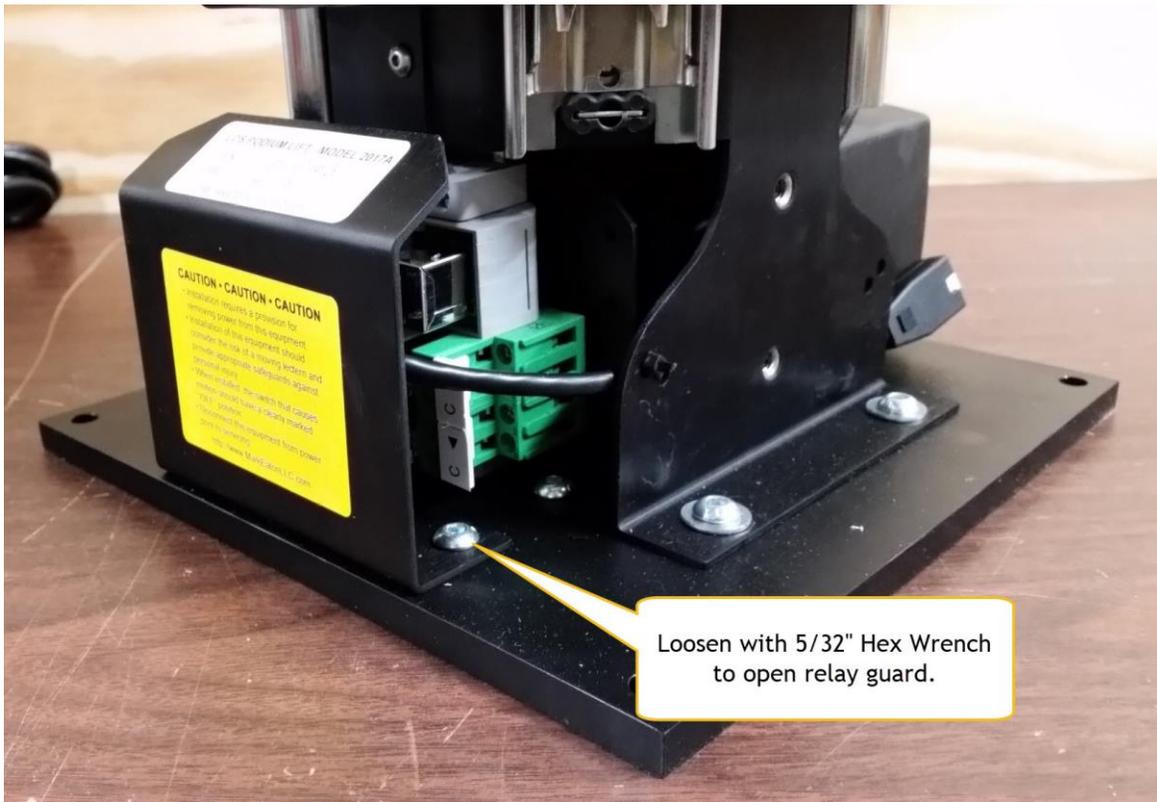


Remove the lift from the box.

Hold down on the top of the lift. It is spring loaded.

Cut and remove the two white zip ties.

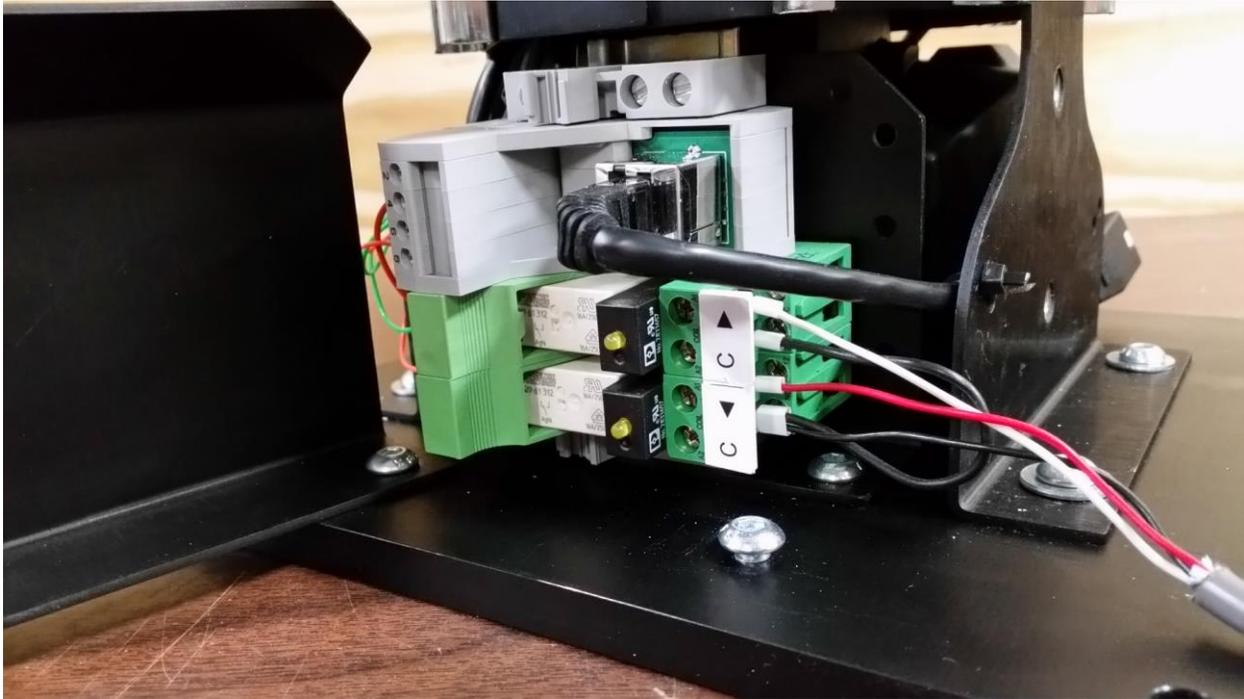
DO NOT cut the black zip ties.



Open the relay guard by loosening screw (5/32 hex wrench).

Swing relay guard open and connect Bishop's Control Panel (BCP).





White = Up
Red = Down
Black or Green = Common
Loop Common wire between both relays.

IMPORTANT: Close Relay guard and tighten screw.

Use only 20 - 24 AWG, 3-conductor cable with the colors indicated above to connect the lift to the Bishop's Control Panel.

DO NOT use CAT5 or similar wire for this purpose. The relays are not designed to support this type of wire.

DO NOT use 2-conductor cable with a shield wire as the 3rd conductor. This is a fire and shock hazard.



Connect lift motor cable to motor extension cable, then connect extension cable to port 1 on control box.

Connect RJ45 cable to either RJ45 socket on the control box.

Connect power cord to power socket on the control box.

Special power cords are available for locations worldwide.

The lift will not lower without having the weight of the wood work installed (40lbs). If the neck and lectern being installed weighs more than 40 lbs., the safety switch must be adjusted. If the neck and lectern weight less than 40 lbs. the safety switch must be adjusted.

As shipped the bridge plates which join the four corner of the outer column together are located in the lowest position. They may be adjusted to fit your application.

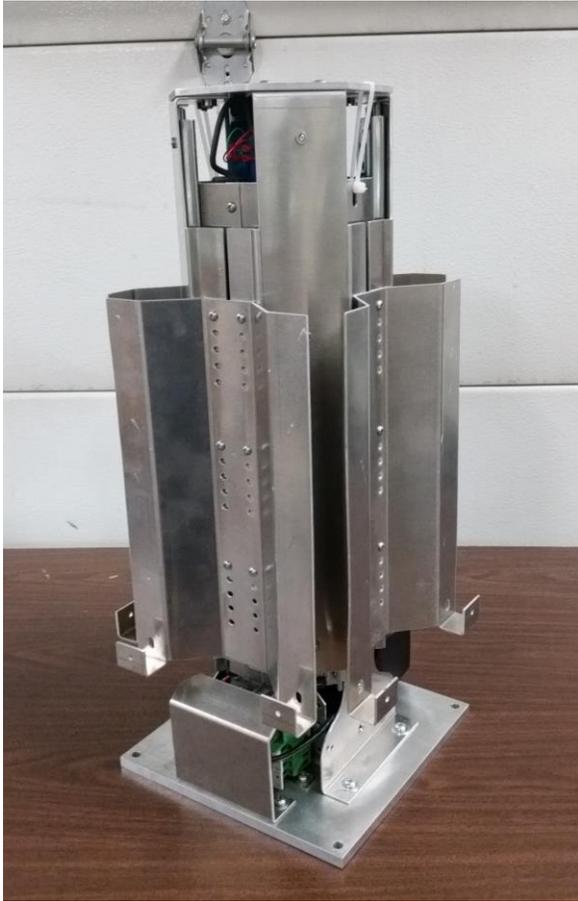


In the case shown above, the bridge plates are aligned at the same level for a neck with a square bottom.

In the case below, the front bridge plate has been move up to accommodate a neck that is cut away for motor clearance. This is most typically found when replacing a Gifford Lift.



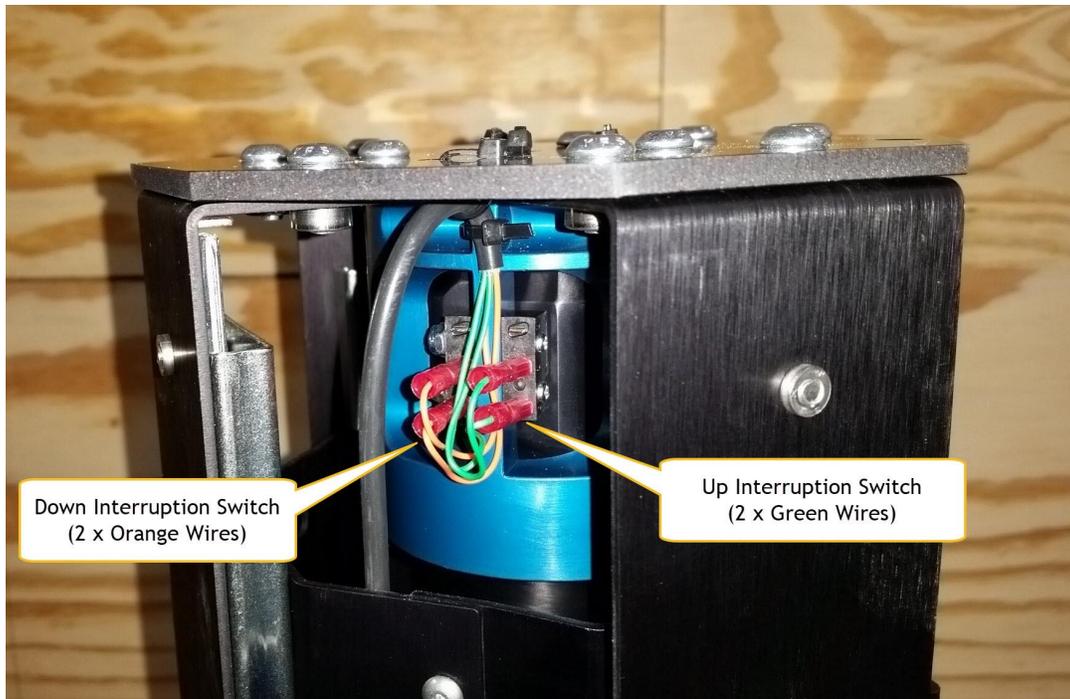
The small bridge plates can be replaced with large bridge plates to accommodate the larger neck used on chain drive lifts and Techna-Base lifts. Both sets of bridge plates are included in every shipment.



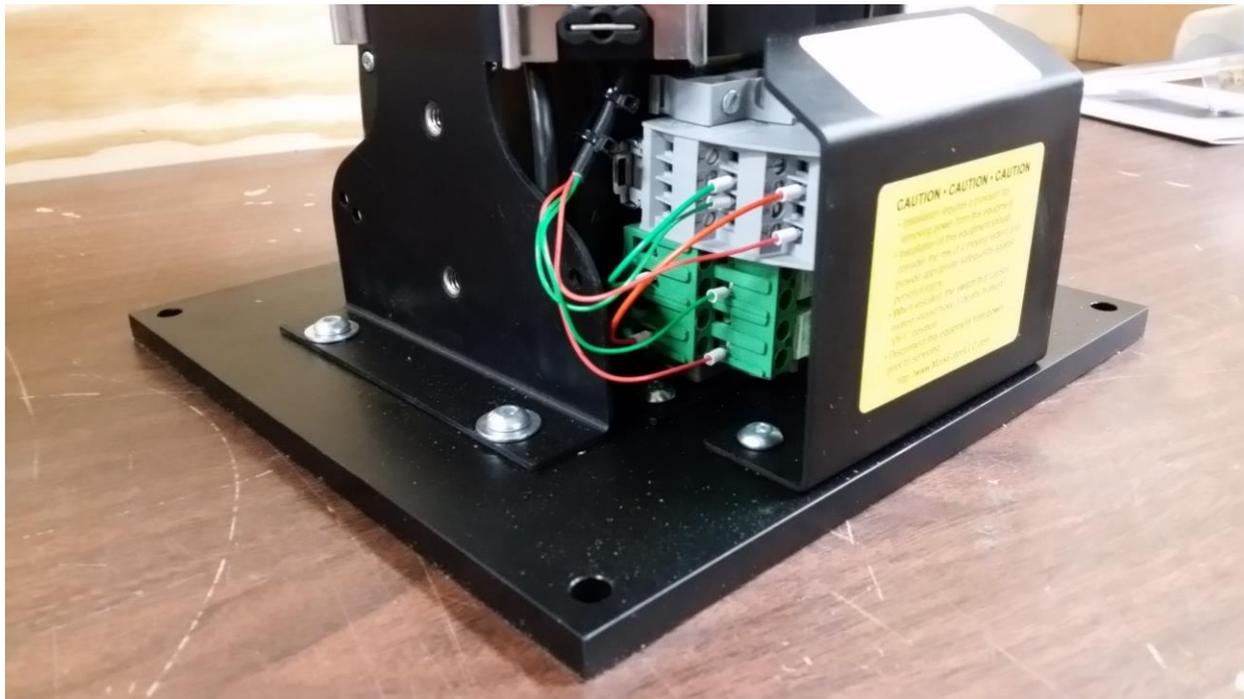
Any maintenance work can be performed on this lift with the following list of tools:

- 3/32 hex wrench
- 5/32 hex wrench
- No. 1 Phillip's screwdriver
- 1/8" (0.120) straight blade screwdriver
- 1/4" Nut Driver
- No. 30 Torx bit/driver

All solder connections at the safety switch have been eliminated and replaced with crimp on connectors.



This is a reference image showing the wire connections on the left side of the relays.



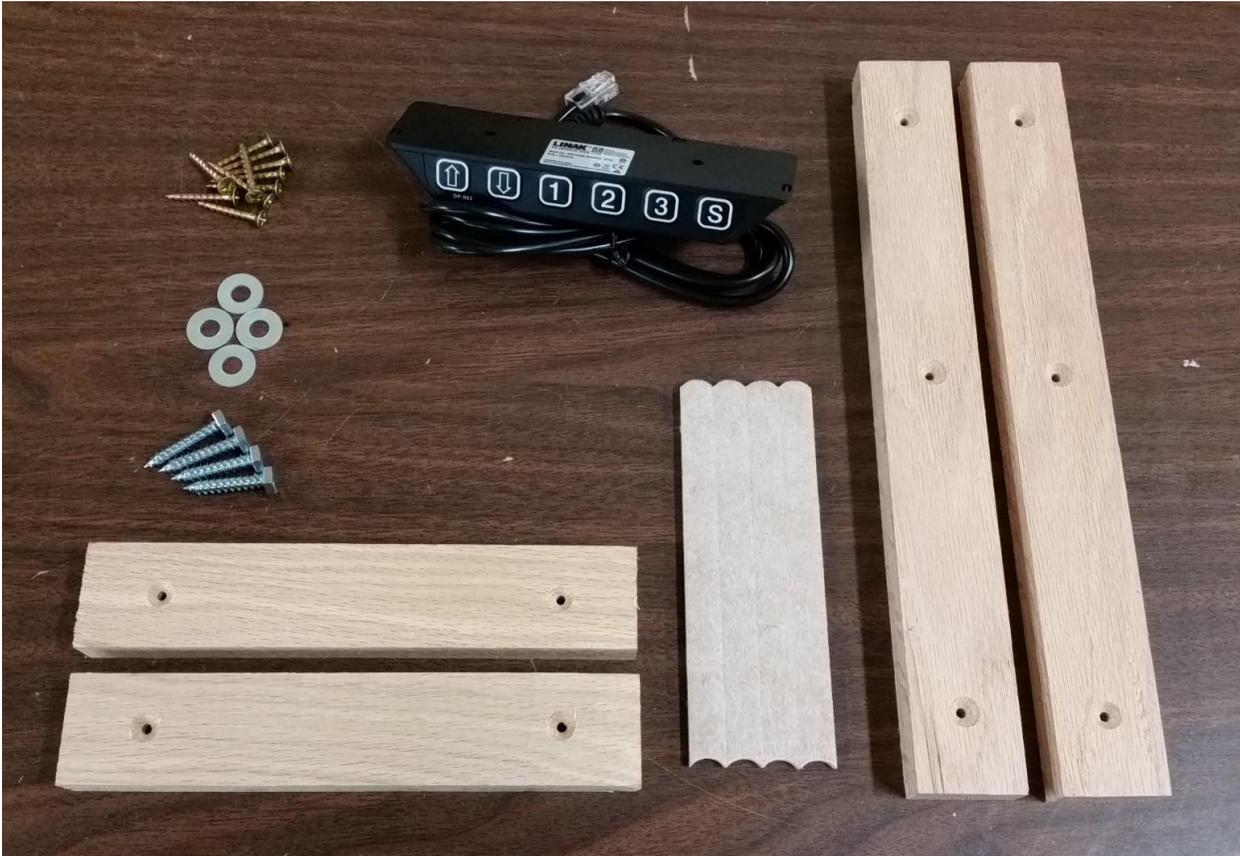
Orange wires control downward motion.

Green wires control upward motion.

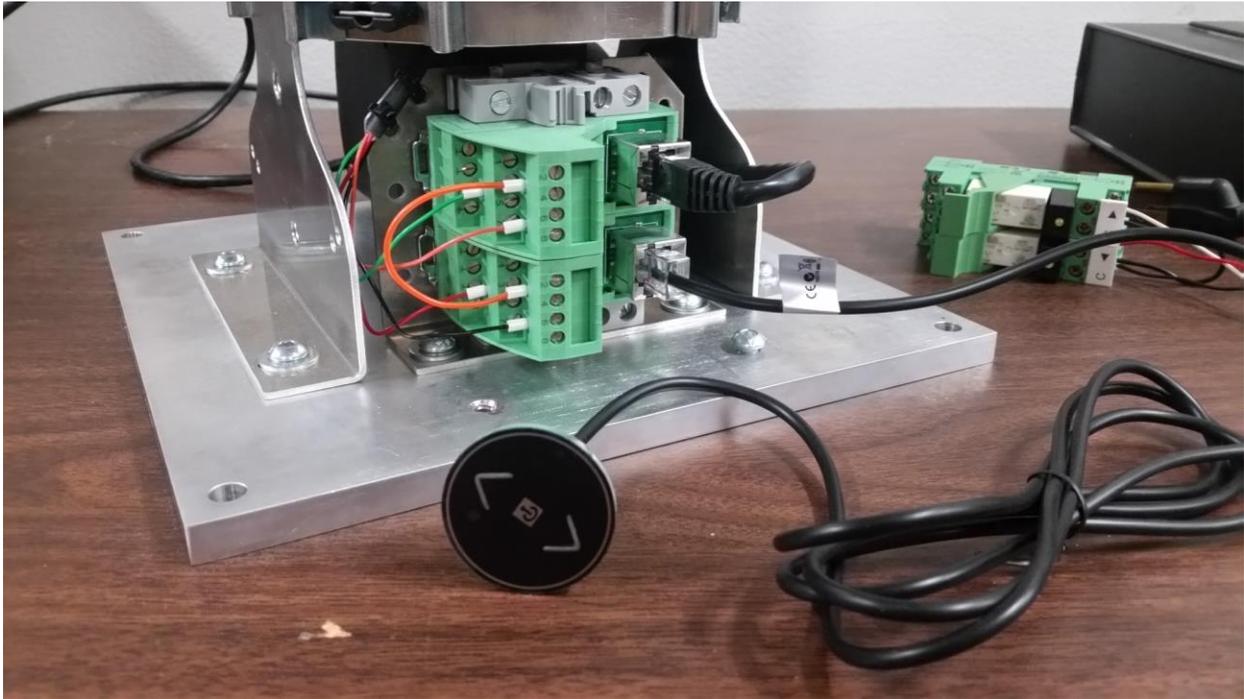
This desk panel is included with the lift to allow the stroke of the lift to be “programmed” during lift installation for applications that require less than 12” of stroke. This is typically the case with many Gifford Lift replacements. This device is also useful in troubleshooting.



An installation kit is also included.



A universal control panel can be purchased separately for use on portable pulpits and can be used to replace the up/down controls on a “Bishop’s Control Panel”.



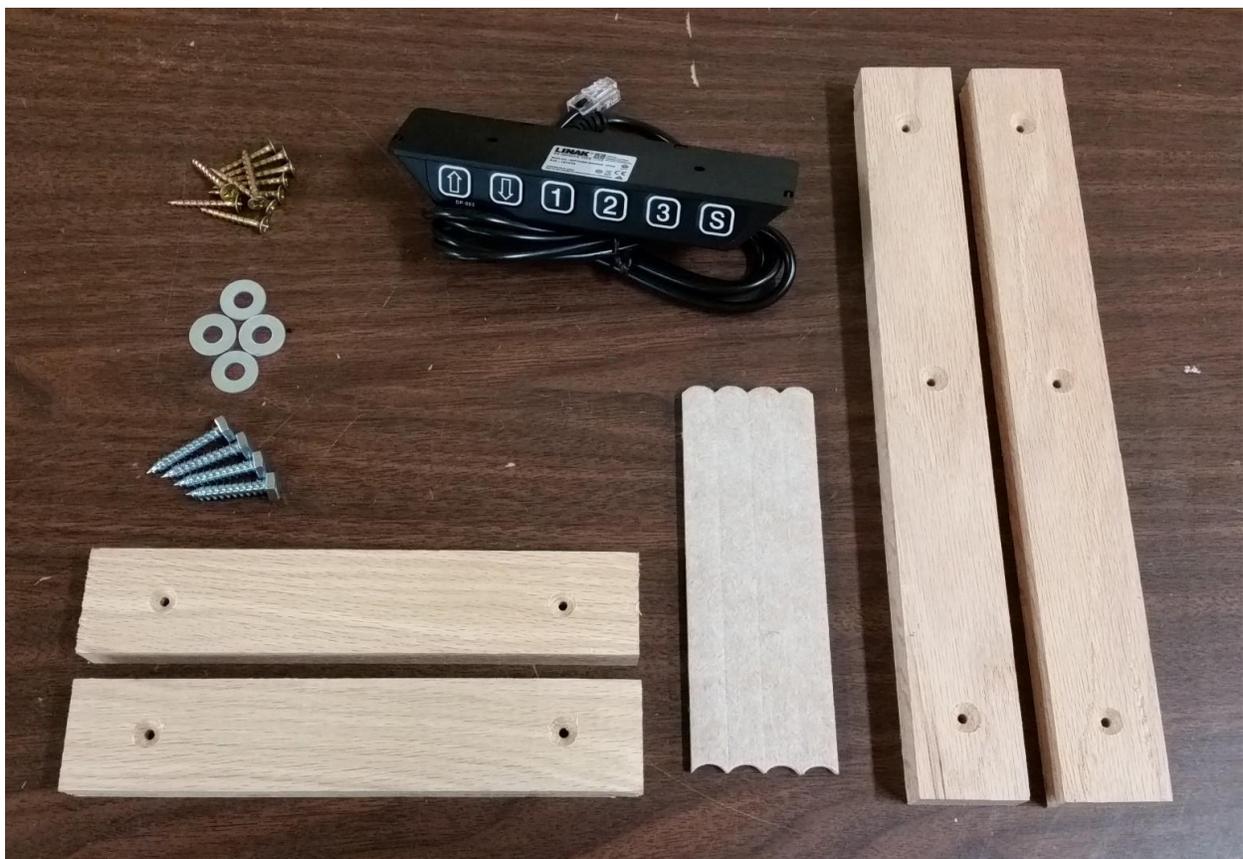
The standard control relays are removed (shown in the upper right) and a second RJ45 interface block is installed in their place. The universal control panel is connected to the RJ45 connection on the second block. The membrane disk with the UP and DOWN buttons can be inlaid into the pulpit cabinet, lectern, or Bishop’s Control Pedestal.

LDS20017A Installation Kit

Contents:

- 2 - 1x2 x 8" Oak board
- 2 - 1x2 x 12" Oak board
- 4 - 1/4 x 1/2 by 6" adhesive felt pads
- 10 - 1-1/4in grabber screws
- 4 - 1/4in hex head lag screws 1-1/2in long
- 4 - 1/4in flat washers
- 6 - 6" zip ties
- 1 - DP1U desk panel (use for setting stroke < 12")

The mechanic should have everything else - wood to build a shelf to mount the lift on if required, etc.



Desk Panel for LDS2017A Pulpit Lift for The Church of Jesus Christ of Latter Day Saints



Plug this desk panel into port A1 or A2 of the LDS2017A lift control box (CBD6).

The UP Arrow button will run the lift to the internal upper limit switch

The Down Arrow button will run the lift to the internal lower limit switch.

With the lift at the lower limit, if you press and hold the Down Arrow for 15-30 sec the lift will lower and raise (squat) approx. ¼". This process is known as "homing" or "zeroing" the lift.

Once the lift has been homed you can run it up to a given height, for example the stain line on the neck then press the S button and the number 1 button at the same time to store that location as a soft upper limit. Once this soft limit is set the Bishop's' control panel will only run the lift down to lower internal limit and up to the soft limit. You will need to use the UP Arrow on this desk panel to run the lift higher. This process can be repeated as needed.

Keep this panel in your truck or FM Office to use on future installations or for trouble shooting.

Troubleshooting

(For units manufactured after May 1, 2017)

Step 1:

Connect the Bishop's Control Panel (BCP) to the green and white Phoenix relays behind the relay guard in the center of the lifting column. Use a 3-conductor, 20-24 AWG cable [RED, WHITE, & BLACK or GREEN wires] (customer supplied) per the attached schematic. OR, connect a Universal Bishop's Control Panel (UBCP) per instruction supplied with that device.

Step 2:

Apply power to the sound system, which should then supply 24VDC to the BCP (see documentation provided with the sound system). Plug the power cord for the CBD6 into the surge cube and then plug the surge cube into an outlet - 120VAC systems ONLY. Alternately, do not use the surge cube and plug the CBD6 into a 100V or 220-240VAC outlet using the correct power cord per the country of installation or an adapter.

Step 3A (Testing with a Sound System Bishop's Control Panel):

Connect a BCP to the lift relays per the attached schematic.

Press the "UP" button on the BCP. The light on the Phoenix relay labeled (C ►) will light up and the lift will rise.

If the lift does not rise, it may be at the top of its stroke, Press the "DOWN" arrow on the BCP. The light on the Phoenix relay labeled (C ◀) will light up and the lift will lower.

If the lift is not at the upper end of stroke then it may be loaded with too much weight (more than 30 lbs.). Remove any weight from the top of the lift and try again. If the problem persists, the safety switch may need to be adjusted.

Press the "DOWN" arrow button on the BCP. The light on the Phoenix relay labeled (C ◀) will light up and lift will lower.

If the lift does not lower, it may be at the bottom of its stroke, Press the "UP" arrow on the BCP. The light on the Phoenix relay labeled (C ►) will light up and the lift will rise.

If the lift is not at the lower end of stroke then an object may be blocking its travel path. Remove any object that may be between the lectern and the top of the pulpit.

If there is nothing blocking the path of the lectern, the safety switch may need to be adjusted.

Step 3B (Testing with a Universal Bishop's Control Panel):

Connect a UBCP per instruction supplied with that device.

Press the "UP" side on UBCP to cause the lift to rise.

If the lift does not rise, it may be at the top of its stroke, Press the "DOWN" side of the UBCP and the lift will lower.

If the lift is not at the upper end of stroke then it may be loaded with too much weight (more than 30 lbs.). Remove any weight from the top of the lift and try again. If the problem persists, the safety switch may to be need adjusted.

Press the "DOWN" side on the UBCP to cause the lift to lower.

If the lift is not at the lower end of stroke then an object may be blocking its travel path.

Remove any object that may be trapped between the lectern and the top of the pulpit cabinet.

If there is nothing blocking the path of the lectern then the safety switch may need to be adjusted.

Failure/Test Points:

There are a total of 10 possible failure/test points:

- 1 power source - Check the outlet in the cabinet to make sure that it is providing the proper power for you system 100VAC, 120VAC or 230VAC. If there is no power at the outlet check the building's circuit breakers, fuses, and wiring.
- 1 Desk Panel – plug the desk panel show on page 12 into the control box and follow the instruction on page 12.
- 1 Bishop's Control Panel (BCP) - To bypass the BCP disconnect it from the Phoenix relays on the lift. To activate the Phoenix relays on the lift, use a battery to apply 24VDC/3A across the A1 and A2 terminals of the same relay.
- 2 Phoenix relays on the lifting column – one (C ►) 'UP' and one (C ◄) 'DOWN'
To bypass the Phoenix relays touch a test lead or scrap of wire from contact 21 to contact 24 on the same relay. **CAUTION:** This will activate the lift column if the CB9 has power.
- 1 safety switch assembly - To bypass the safety switch assembly without removing the neck and lectern touch a test lead, or a scrap of wire, to short across terminals 4 & 8 (two orange wires) on the RJ45 terminal block (gray) for DOWN movement. Or, touch a test lead, or a scrap of wire, to short across terminals 3 & 5 (two green wires) on the RJ45 terminal block (gray) for UP movement. See bottom image on page 8 reference. **CAUTION:** This will activate the lift if the CBD6 control box has power.
- 2 safety switches (DB2's) inside the lifting column - See top image on page 8 for reference.
To bypass these relays, remove the lectern from the lifting column. To bypass the UP switch, unplug the green wires from the right switch. Connect a test lead, or scrap of wire, between the connectors on these wires, and then try running the lift UP. To bypass the DOWN switch, unplug the orange wires from the left switch. Connect a test lead, or scrap of wire, between the connectors on these wires, and then try running the lift DOWN. **CAUTION:** This will activate the lift if the CBD6 has power and either the BCP is activated, or the Phoenix relays are bypassed as in the steps above.
- 1 LA31 actuator - This is the black actuator in the center of the lifting column; replace if defective. This is not a user serviceable part. This actuator is rated for 10% duty cycle. For example after running a full up and down stroke you should wait 5-6 min before running again. Running too much will over heat the motor and causes a knocking noise. If this occurs, let the actuator cool off for an hour and test again.
- 1 CBD6 control box - This is the long black box mounted inside the pulpit cabinet; replace if defective. This is not a user serviceable part. Insure that the power, lift motor, and safety switch cables are plugged into the CBD6 properly. The cords are keyed. The actuator must be connected to Port-1. The safety switch cable can plug into either RJ46 port.

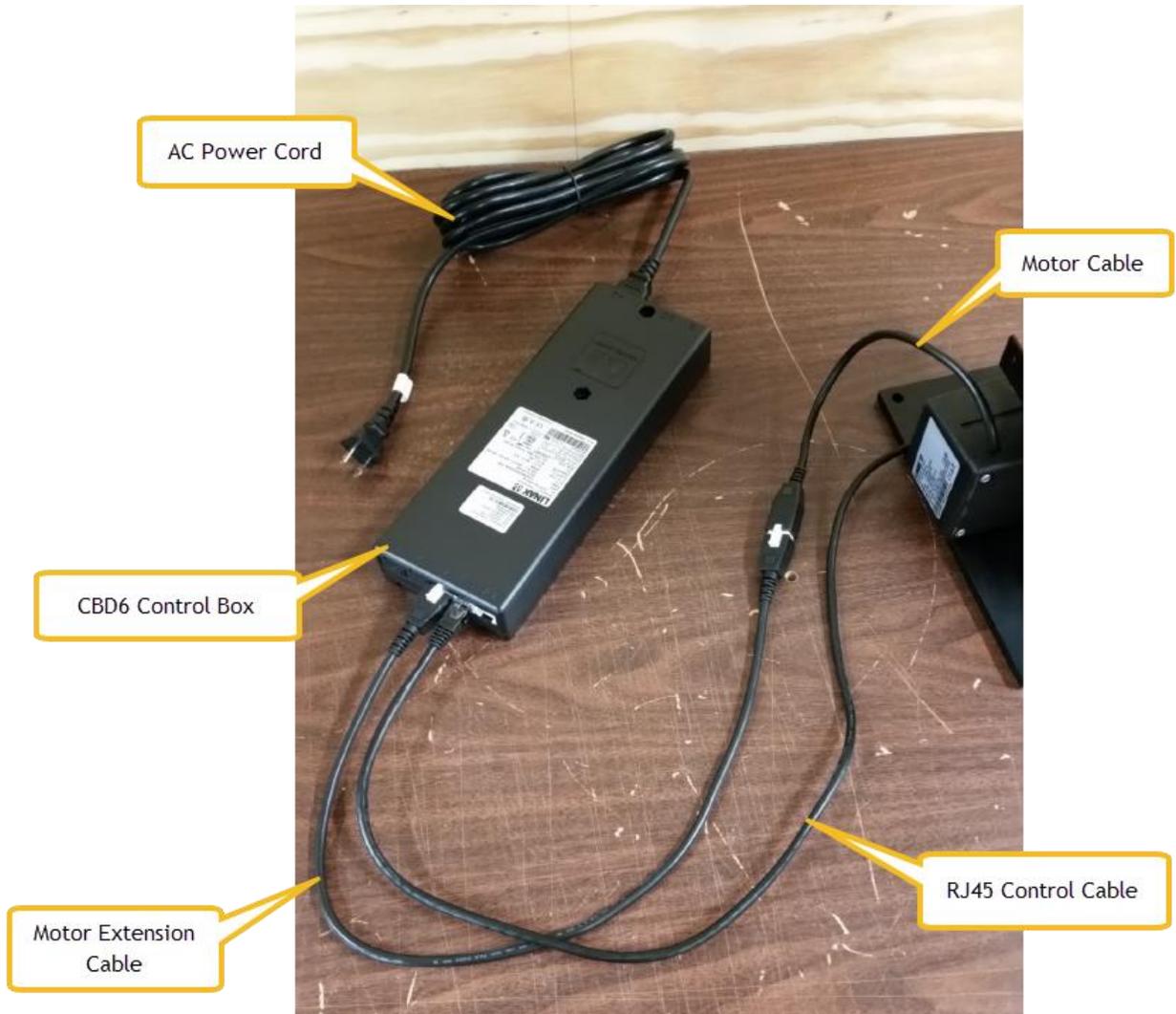
Visit the web site at <http://www.markeatonllc.com> for additional trouble shooting information, or call 801-380-7935 for telephone tech support.

VISUAL

Troubleshooting Guide:

PL2017A Pulpit Lift

ALL cables must be connected to the CBD6 Control Box for proper operation.

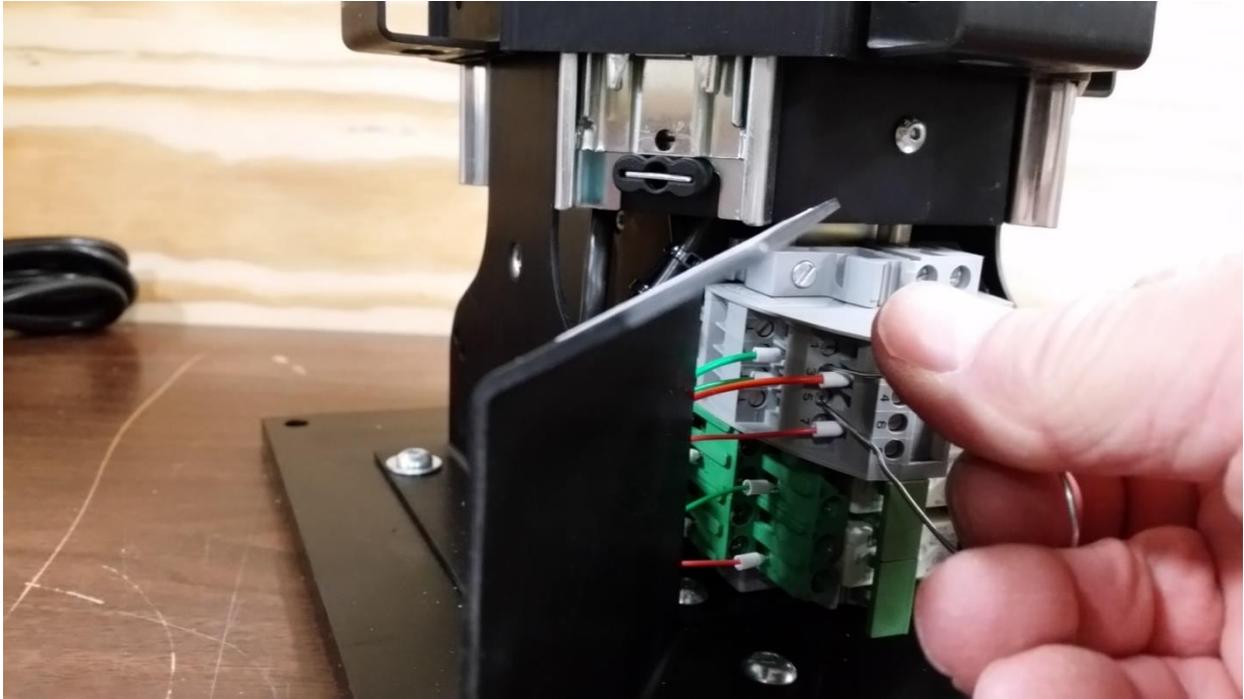


Check the outlet for proper AC power: 90-240VAC, single phase, 50-60 Hz.

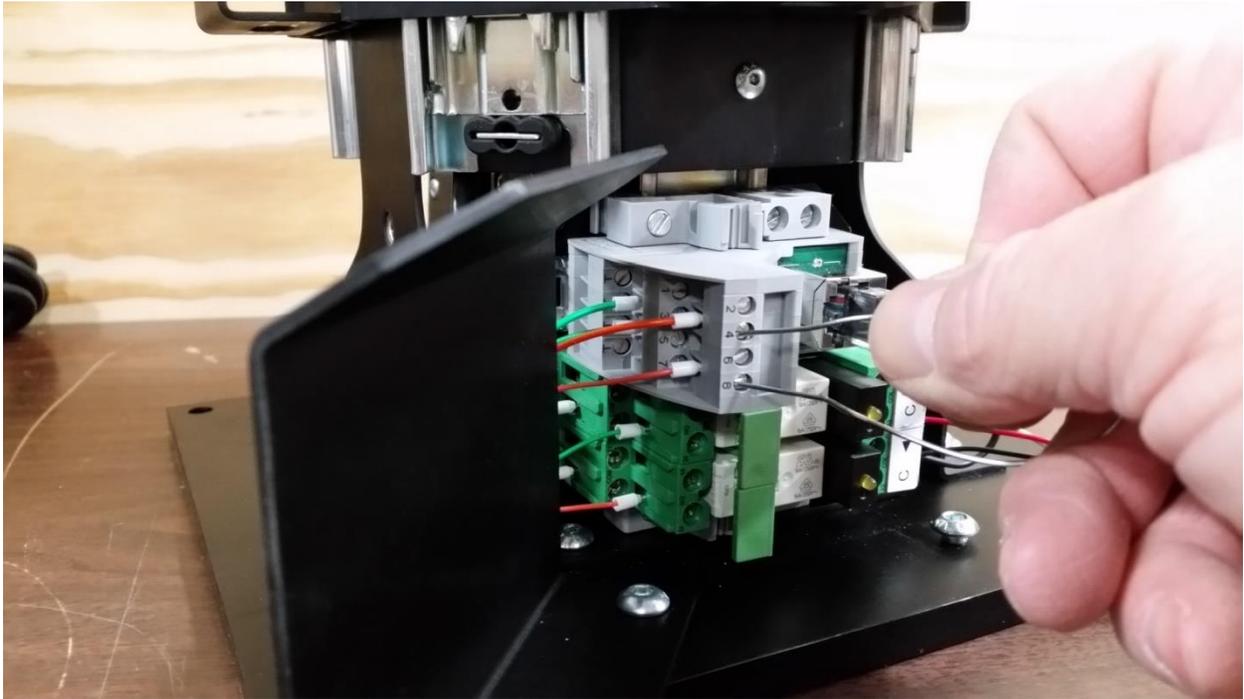
There is no power indicator on the CBD6 Control box. But there is on the surge cube that this lift should be plugged into.



You can run the pulpit lift UP, without the Bishop's Control Panel, by touching a paper clip to terminals screws 3 and 5 as shown here:

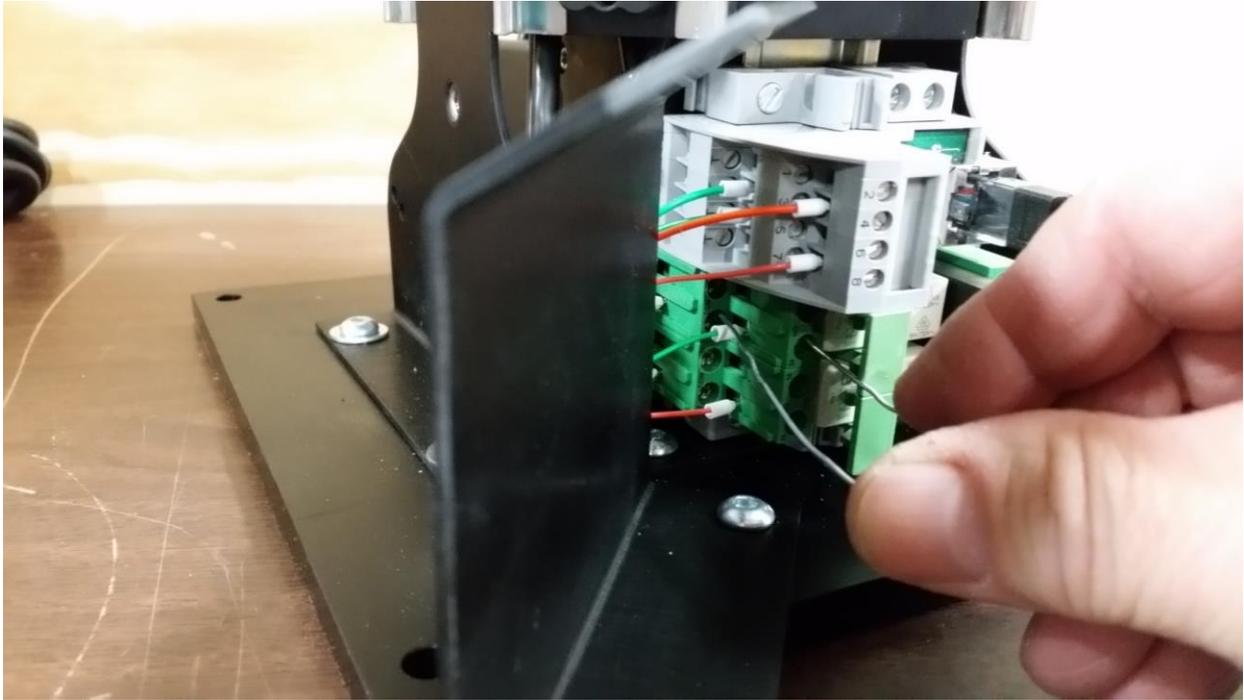


You can run the pulpit lift DOWN, without the Bishop's Control Panel, by touching a paper clip to terminals screws 4 and 8 as shown here:

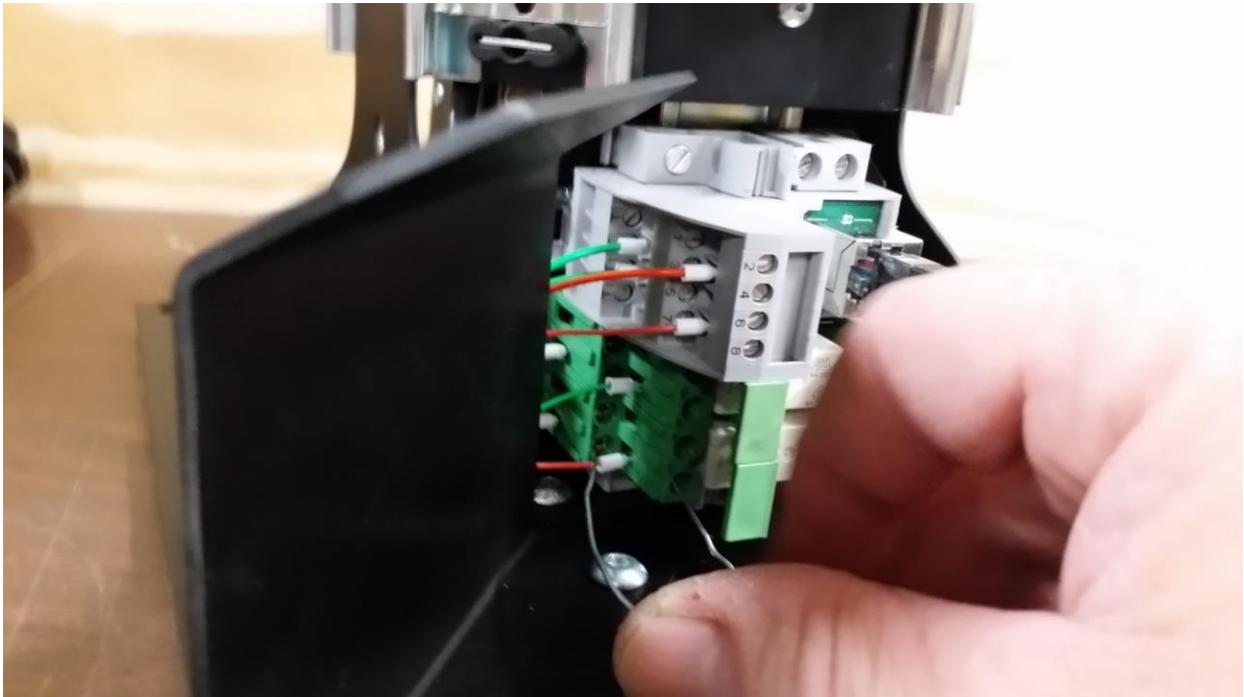


These tests bypass the safety switch!!!

You can run the pulpit lift UP, without the Bishop's Control Panel, by touching a paper clip to terminals screws 24 and 21 (green to green) as shown here:

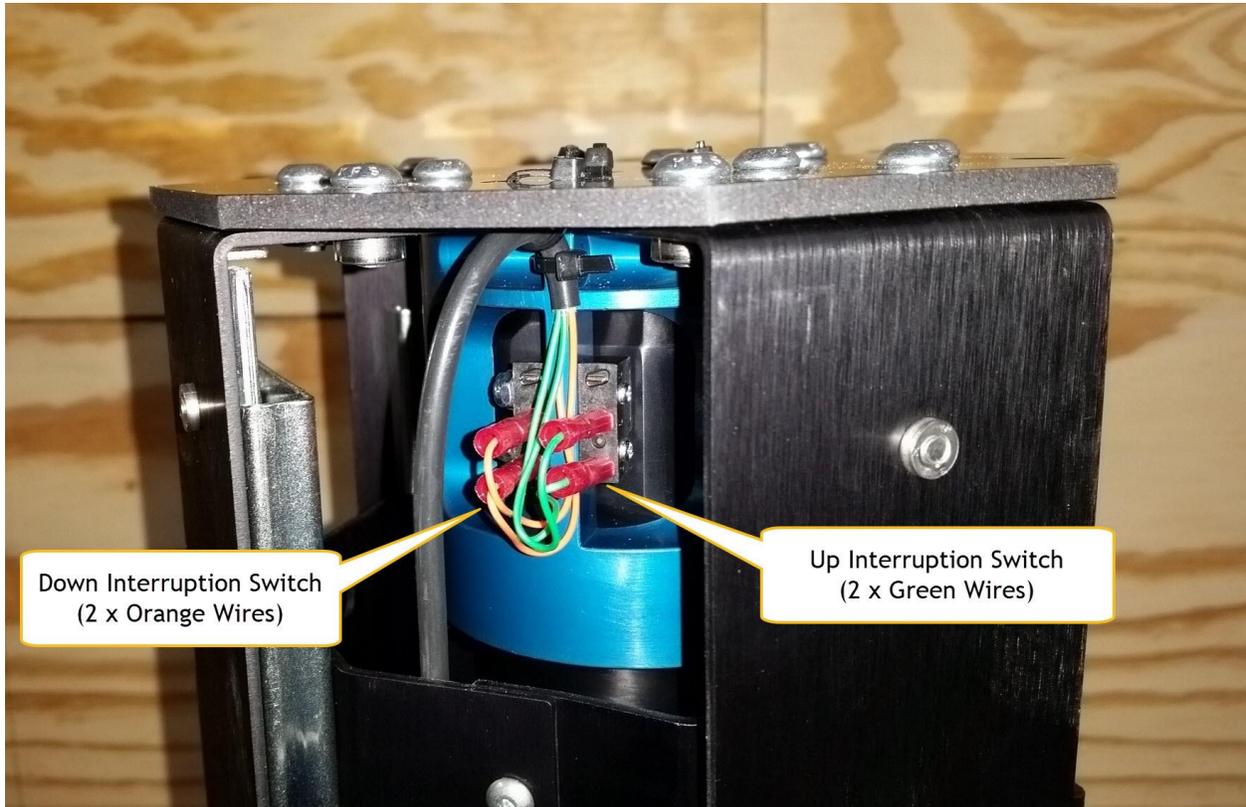


You can run the pulpit lift DOWN, without the Bishop's Control Panel, by touching a paper clip to terminals screws 24 and 21 (orange to orange) as shown here:

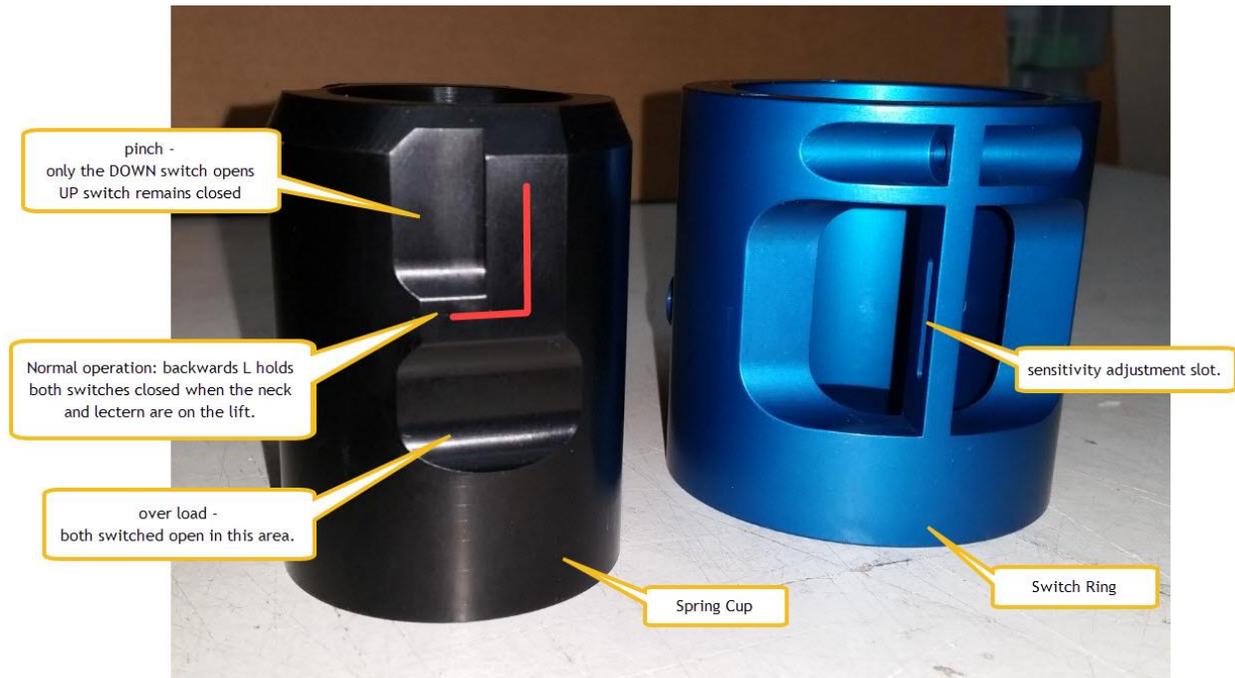


These tests operate the lift THROUGH the safety switch located at the top of the lift.

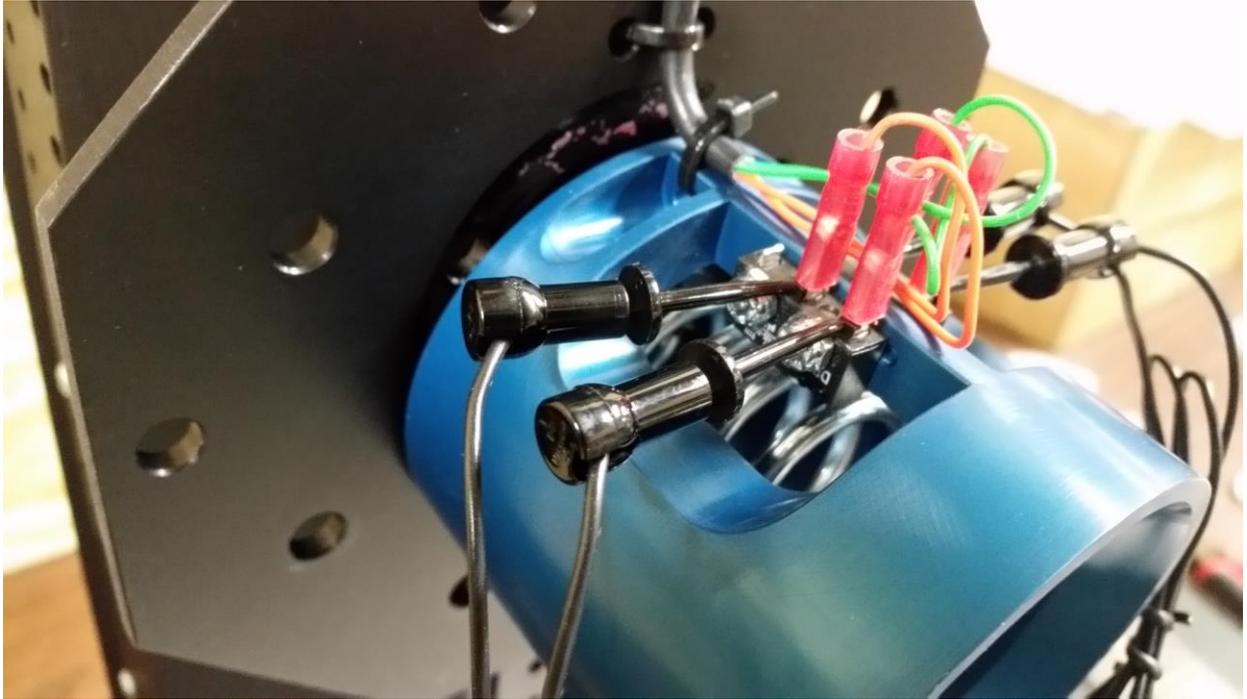
The safety switch, located at the top of the pulpit lift holds two micro switches which must be held closed for the lift top operate.



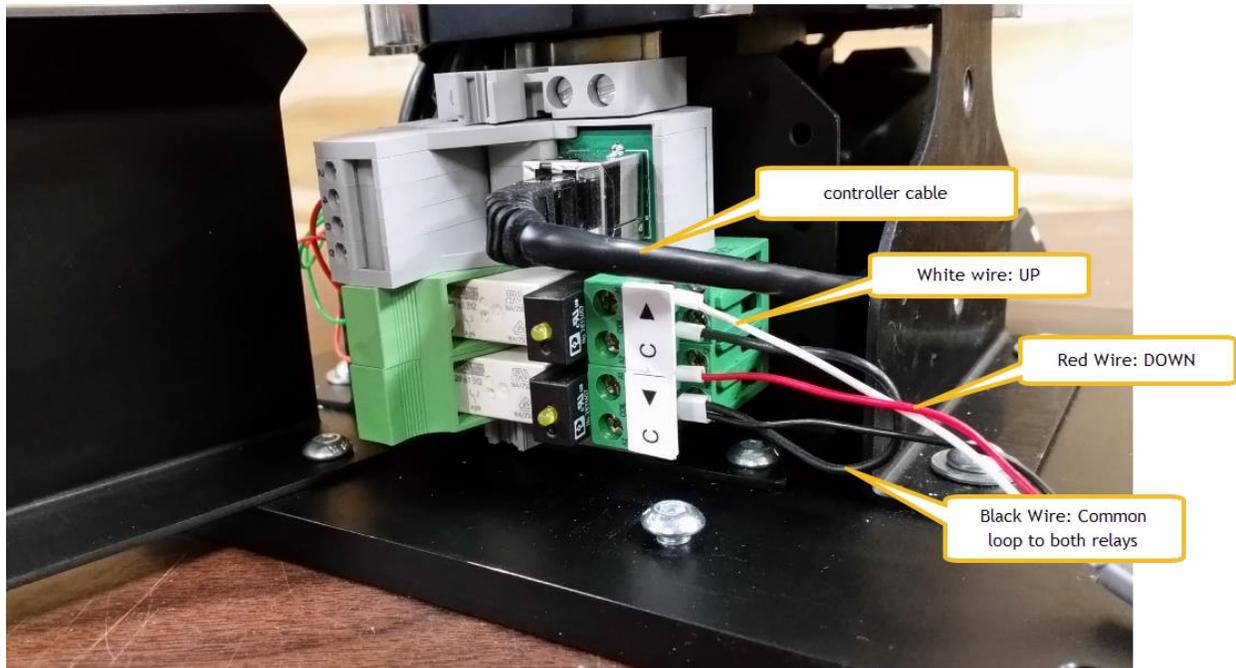
The blue part is called the switch ring. The black part is called the Spring Cup. The micro switches are normally open. To operate they must be held closed.



Use a jumper wire to bypass the micro switch for testing only.



Bishops' Control panel should be connected to the lift relays with a 24 AWG stranded 3-conductor wire.



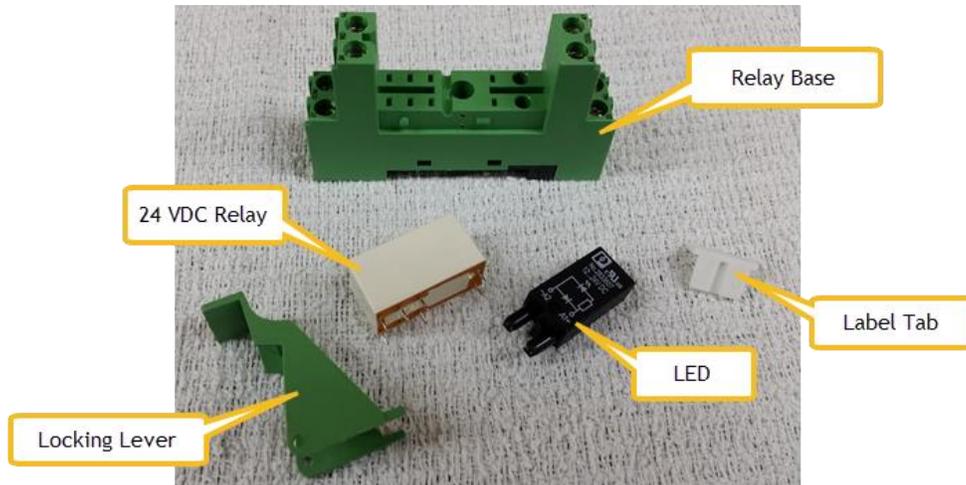
Any 24VDC power supply can be used to test the relays by touching the positive lead of the power supply to the UP or DOWN screw terminal and the negative lead of the power supply to the C screw terminal of the same relay.

DO NOT use CAT5 or similar wire for this purpose. The relays are not designed to support this type of wire unless you use crimp on wire ferrules.

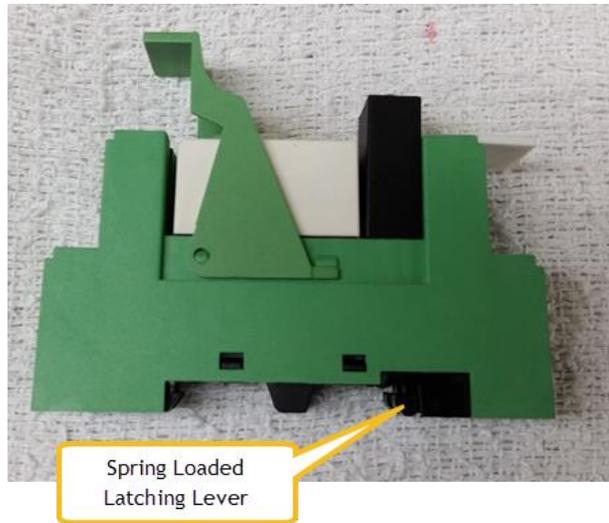
DO NOT use 2-conductor cable with a shield wire as the 3rd conductor. This is a fire and shock hazard.

Note: the LED light will operate with as little as 12V but the relay will not switch without the full 24V DC.

Here is a picture of the relay assembly components:



Here are the components assembled:



Specs for the Bishops' Control side (Coil Side):

Coil side

Nominal input voltage U_N	24 V DC
Typical input current at U_N	17 mA
Typical response time	7 ms
Typical release time	3 ms
Coil resistance	1440 Ω \pm 10 % (at 20 °C)
Power dissipation for nominal condition	0.41 W