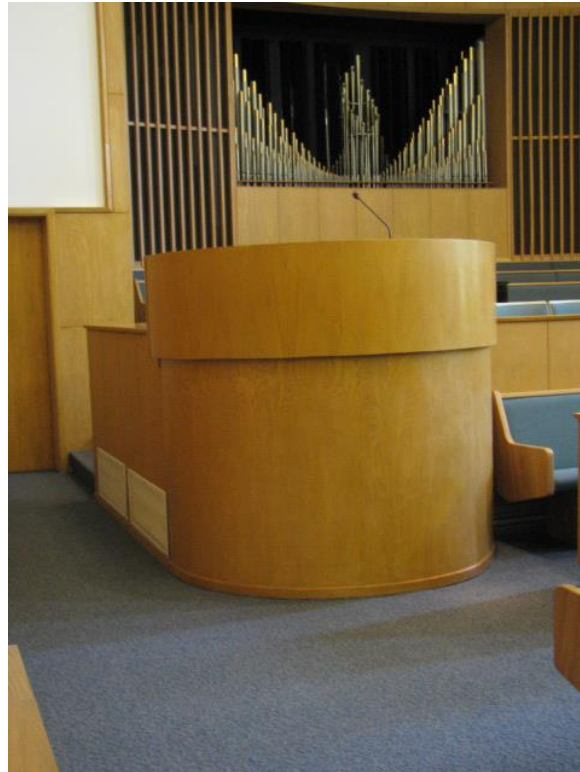


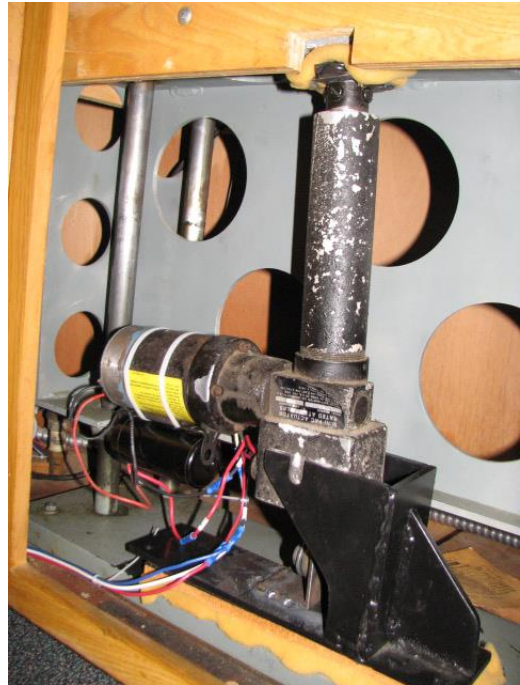
# Pasadena Pulpit Lift Project

The existing Pasadena Chapel pulpit is unique and requires a custom pulpit lift design.

Here are some pictures prior to upgrading the lift:

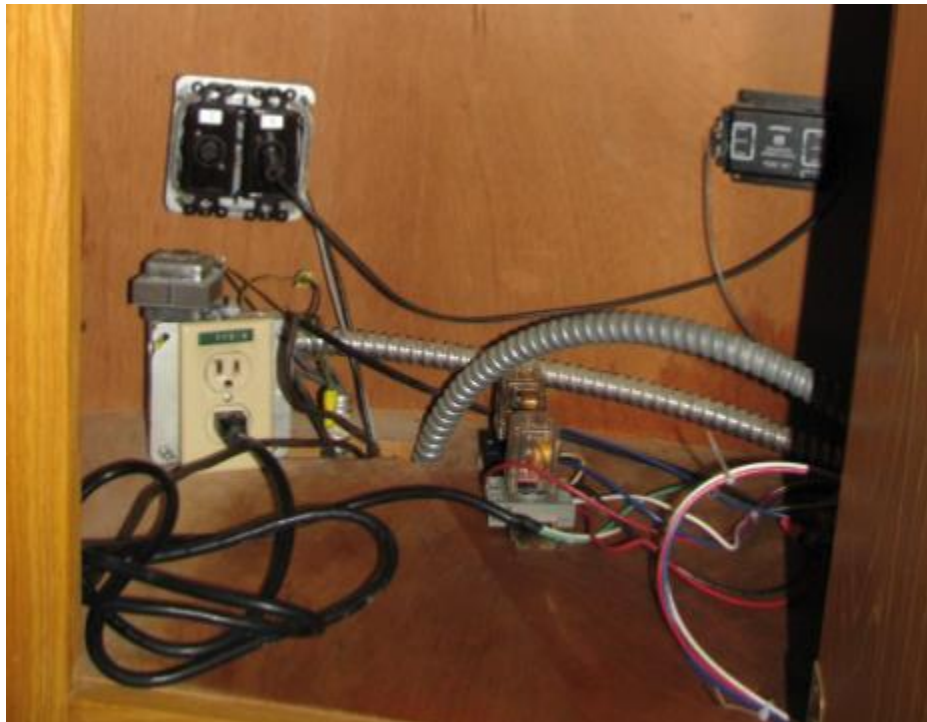


The original lift was hydraulic. After it failed, it was replaced with an electric trailer/satellite actuator shown here:

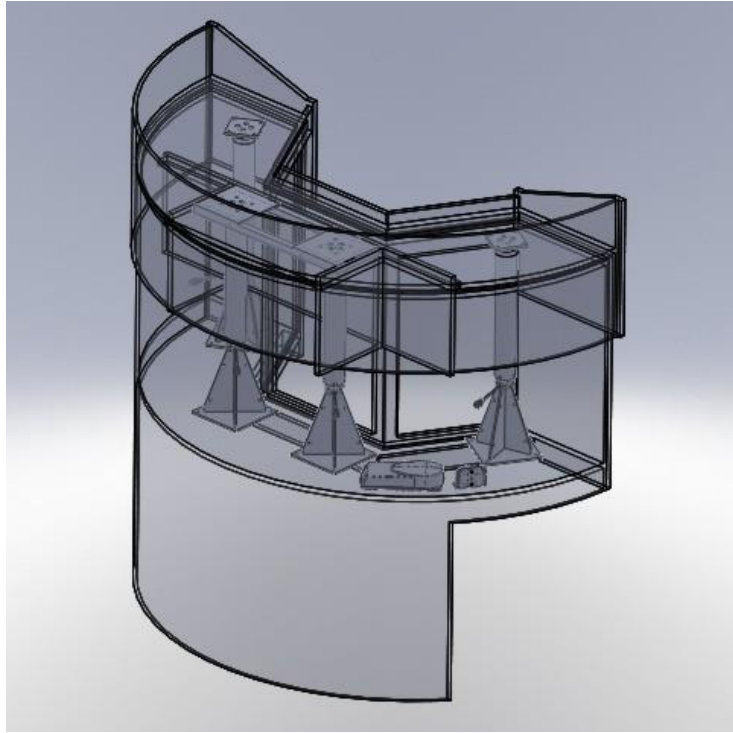


The frame work, shown in gray, was made of ¼" plate steel and steel tube.

Two "ice cube" relays were used to connect the Bishop's Control Panel to the lift.



Measurements were taken on site from the original cabinet and 3D drawings were created using SolidWorks. This illustration shows a transparent cabinet with the new lift concept drawn in place.



The new lift system was built around four individual actuators connected to a single control box. The control box runs all lifts in unison. This system incorporates a collision detection system. While the lift is moving downward, if the lectern contacts an object, such as a book, it will stop and rise up automatically. The same will happen if the lift is rising and contacts an obstruction, it will automatically lower.

Custom mounting parts were fabricated from steel and then powder coated:





The complete lift system is shown here:



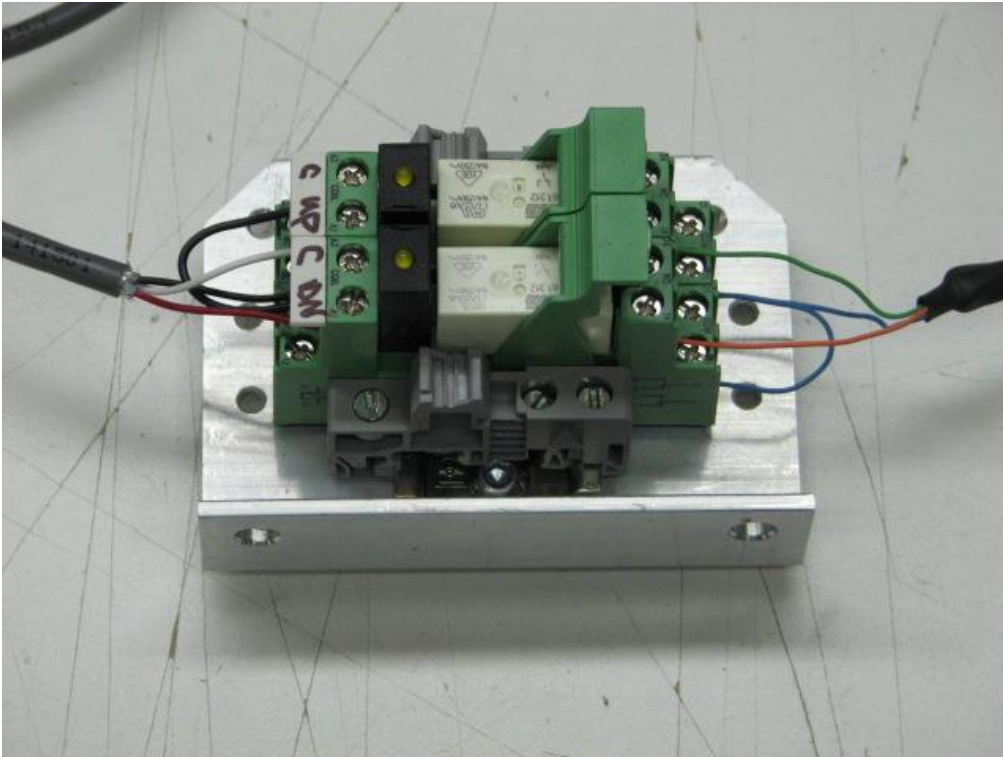
Each lifting leg of the system is connected to the Control Box with a motor cable as show here:



The Bishop's Control Panel shown on the left is connected to the Control Box in the upper right via a relay interface panel and patch cable, lower center:



## Relay Interface Module Details:



A 3-conductor 24 AWG cable connects the Bishop's Control panel to the relay interface module on the left side. Show here the Black connects to screw terminal A2 on the lower relay (C) and loops up to screw terminal A2 on the upper relay (C). C=Common.

The Red wire connects to screw terminal A1 on the lower relay (DN). DN = Down.

The White wire connects to screw terminal A1 on the upper relay (UP).

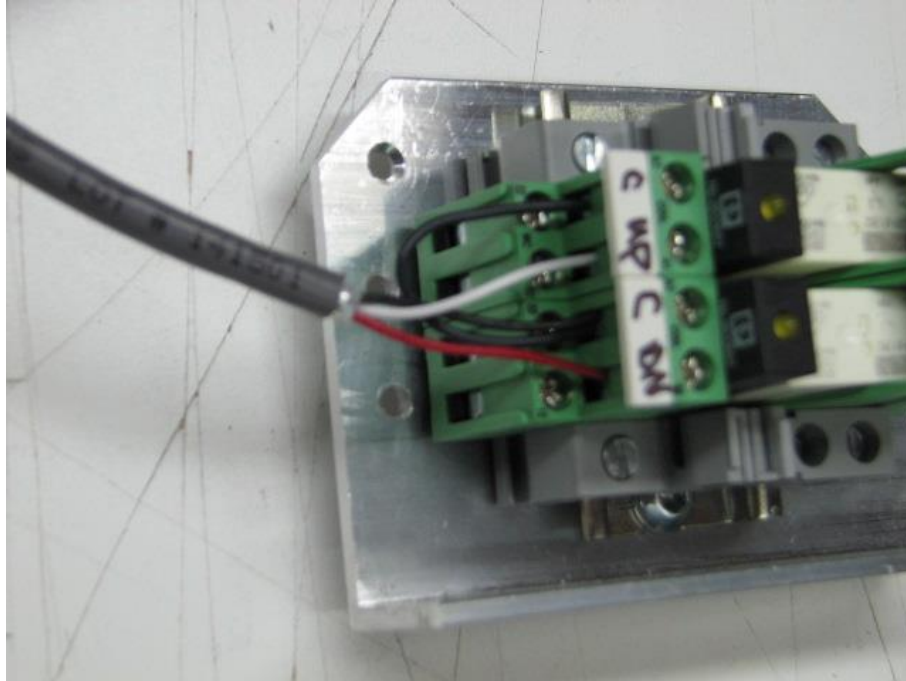
The CAT5 patch cable connected to the pulpit lift control box (CBD4) connects to the relay interface module on the right side. The Blue (Common) wire connects to screw terminal 11 on the upper relay and loops down to screw terminal 11 on the lower relay.

The Green (Up) wire from the patch cable connects to screw terminal 14 on the upper relay.

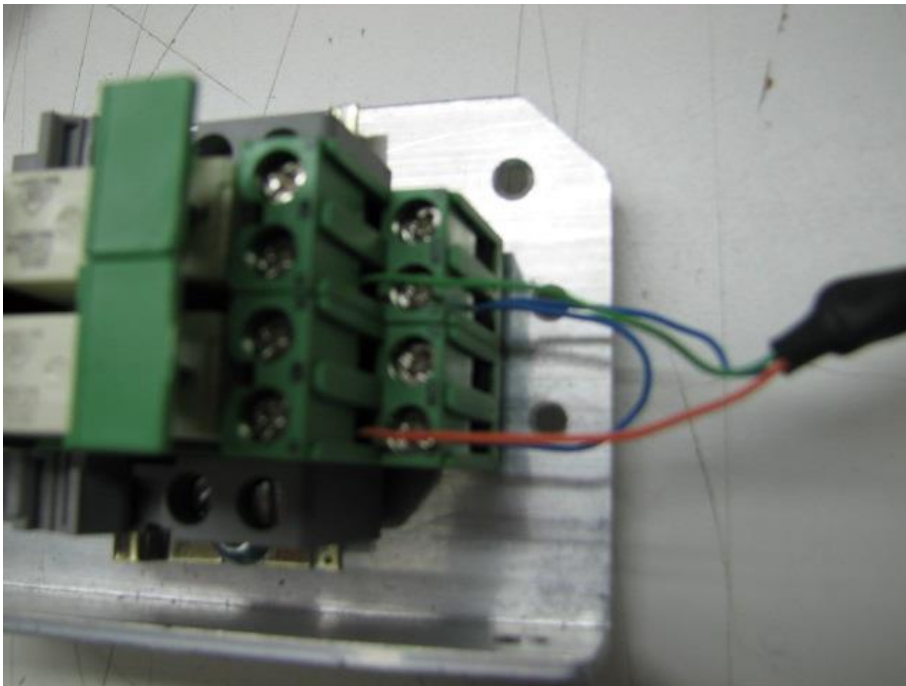
The Orange (Down) wire from the patch cable connects to screw terminal 14 on the lower relay.

See the following photos for clarification of the electrical connections described above:

Bishop's Control Panel Connections:

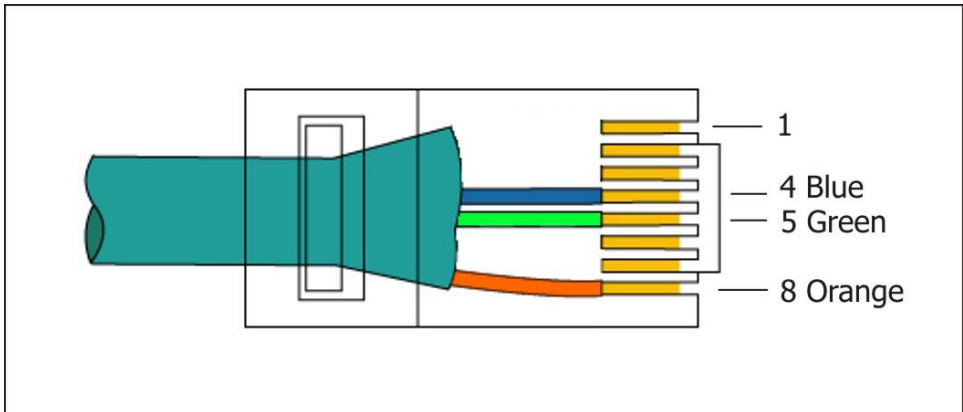
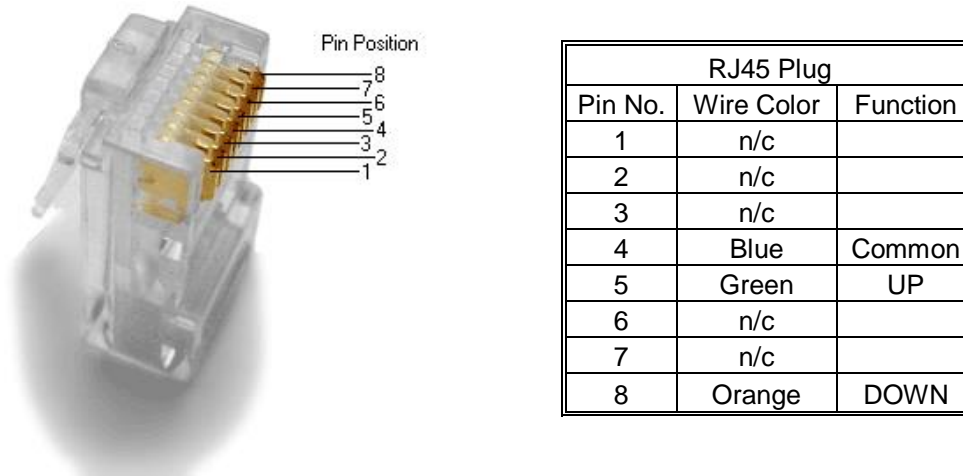


Control Box Connections:



The control box connects via a patch cable to the relay interface. The patch cable is fabricated with CAT5 wire and an RJ45 modular connector.

Patch Cable / Control Box connection diagram:



The following pictures show the lift installed. A video posted on YouTube and linked to <http://www.markeatonllc.com> show the final product.



The following picture shows the center pair of lifts install in the same location as the old lift:



The picture on the left show the left lift, relay interface, and microphone connection, while the picture on the right shows the right lift and the control box.



Visit our website to view the video of the lift in operation.