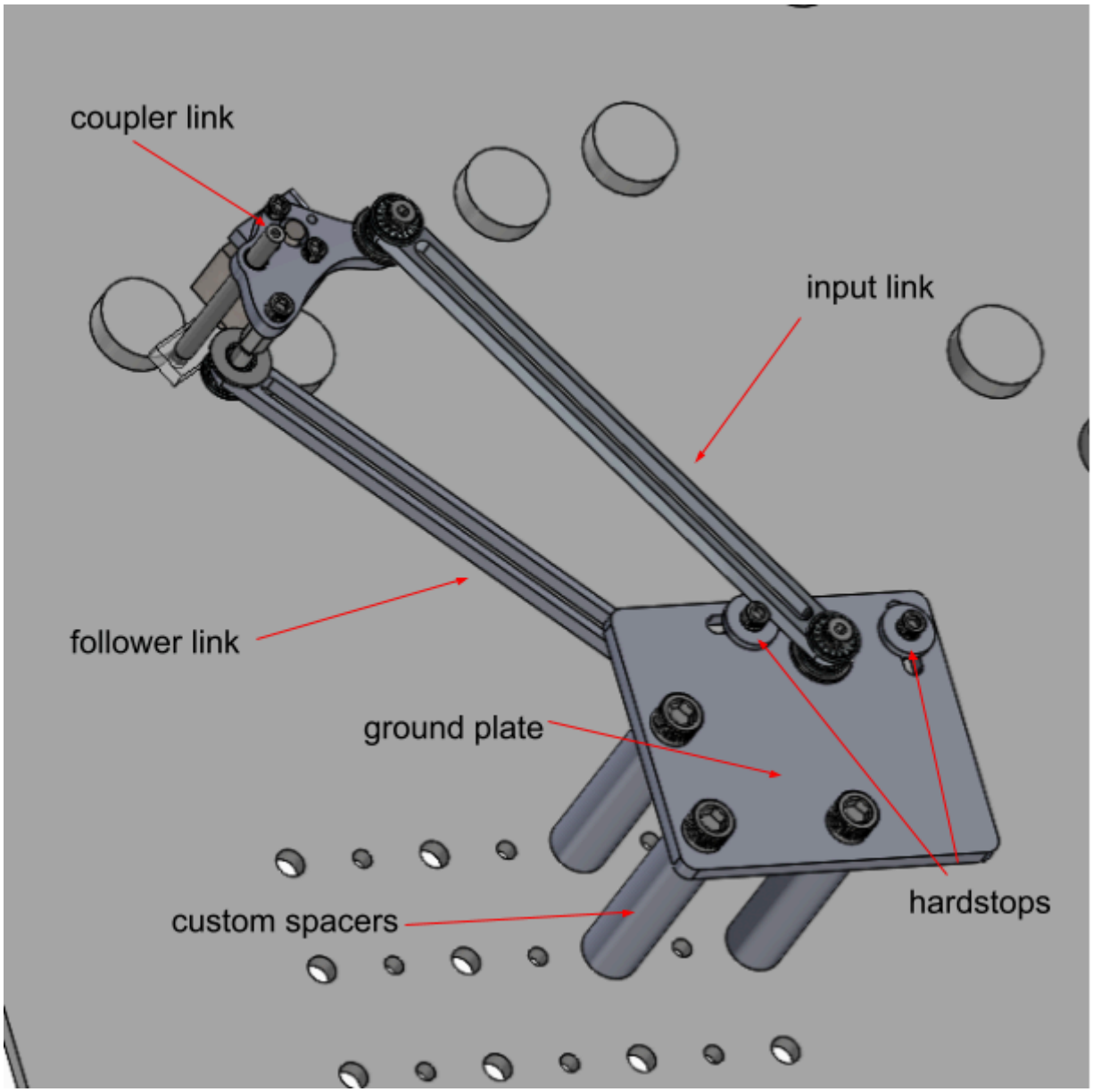
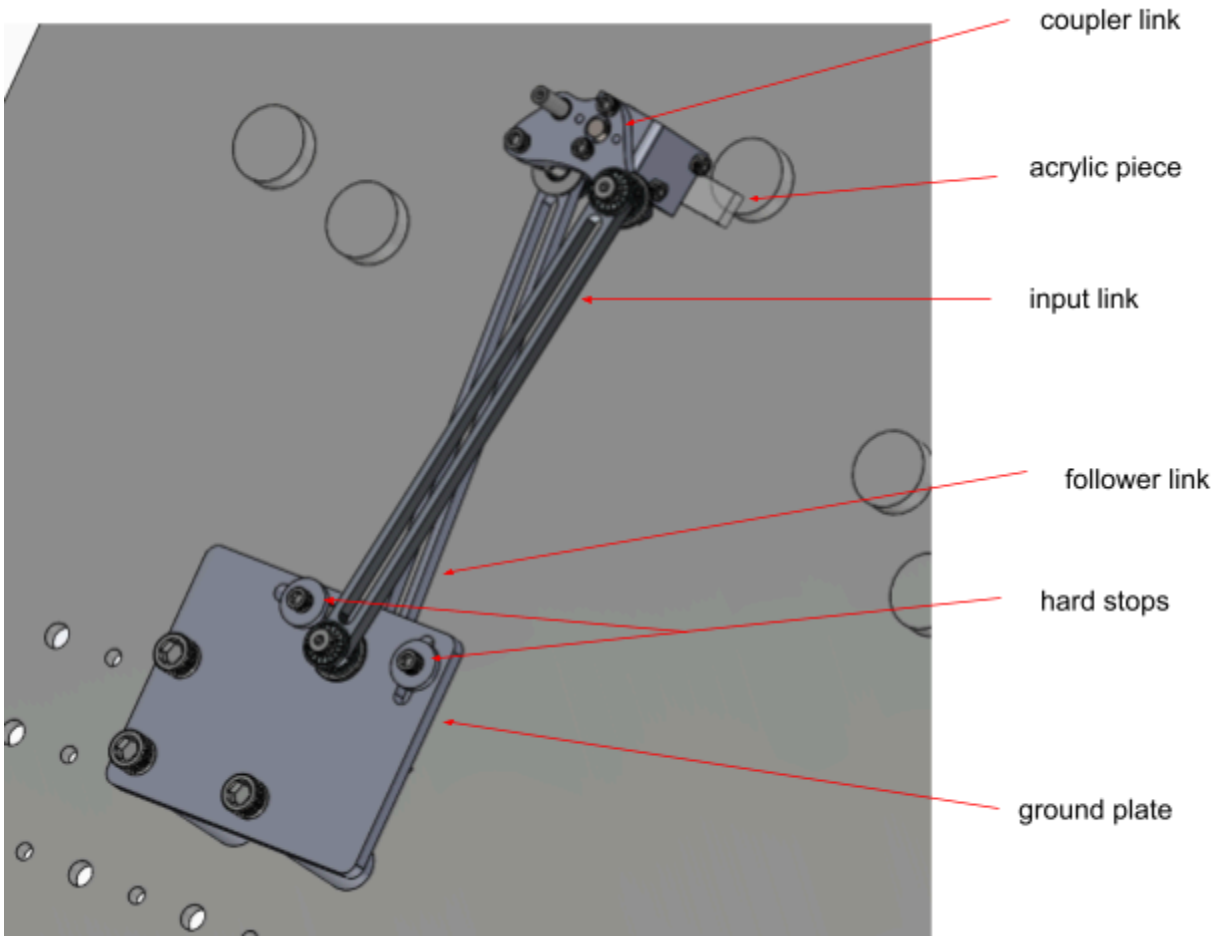
Solidworks Assembly

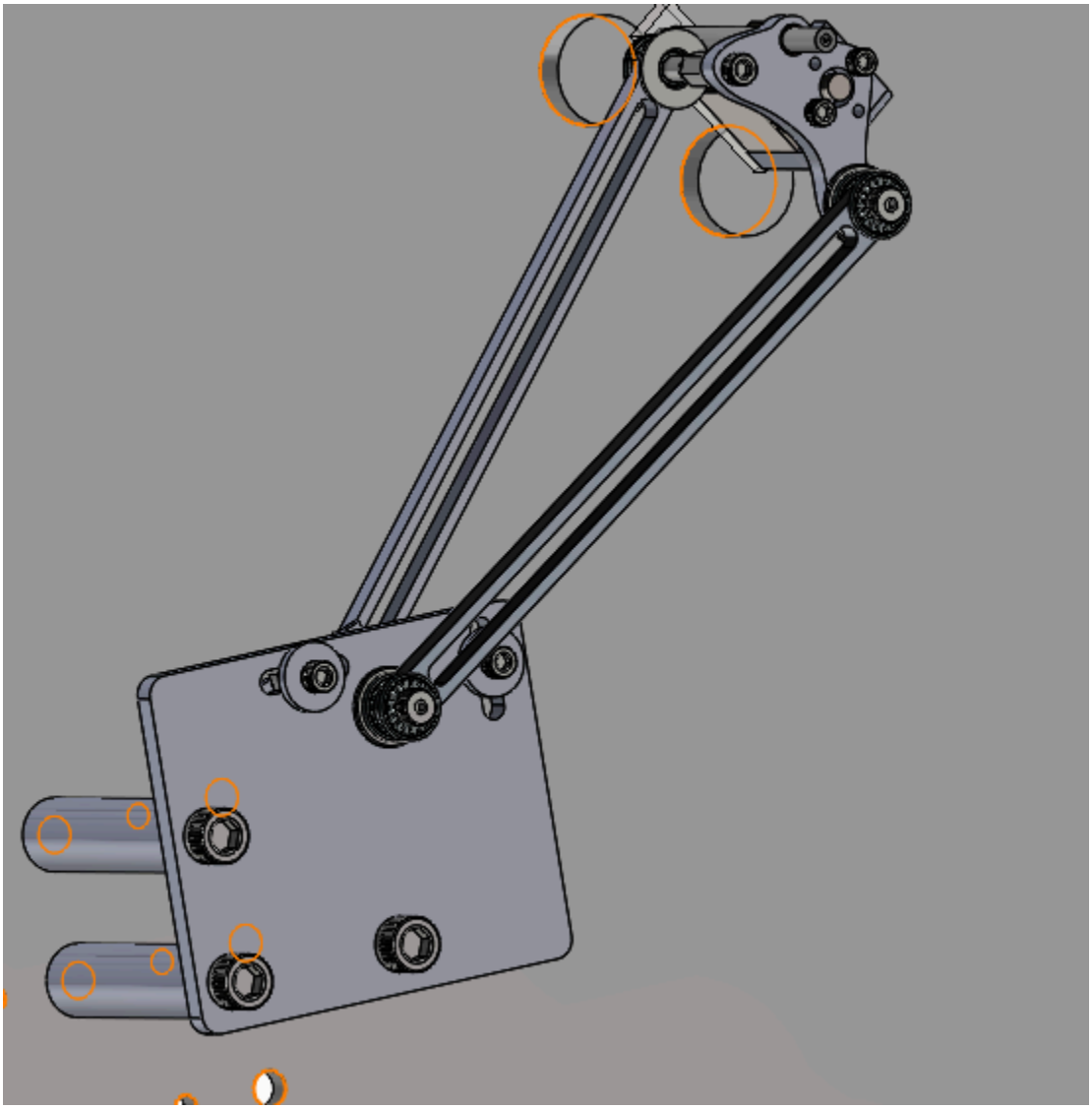
Full Assembly



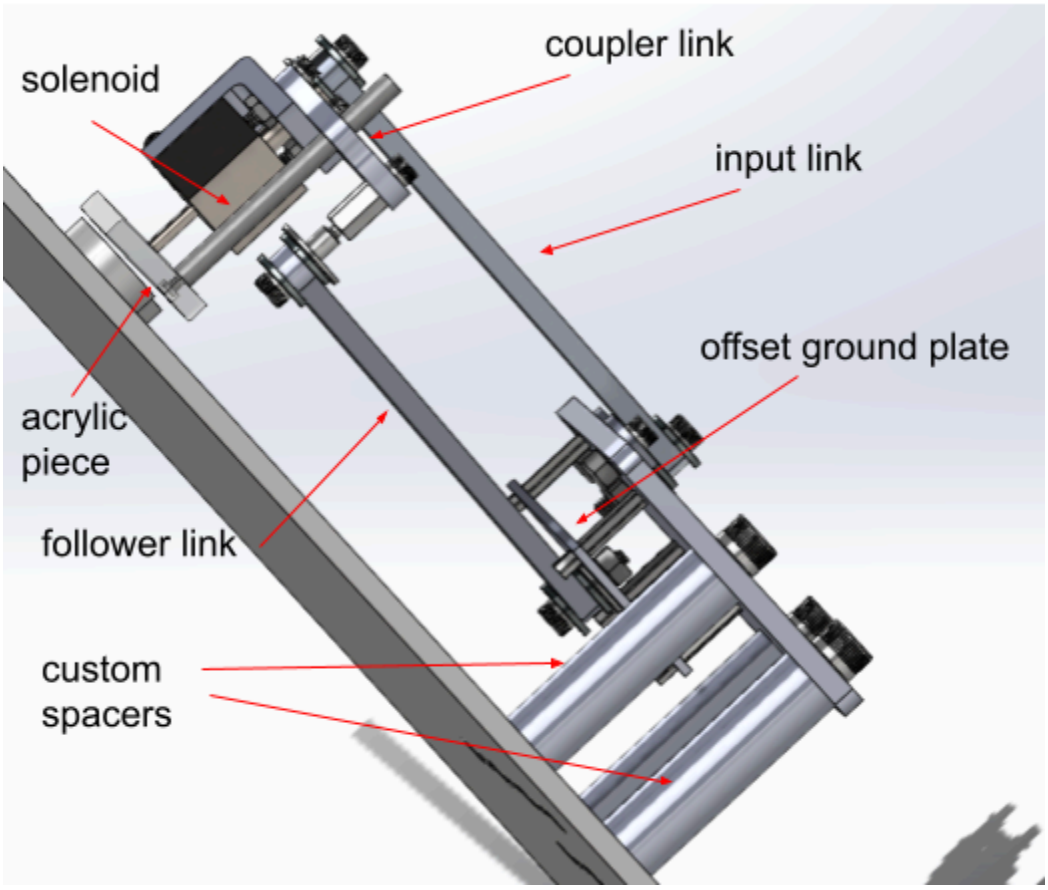
Full assembly view of the linkage in button position 1.



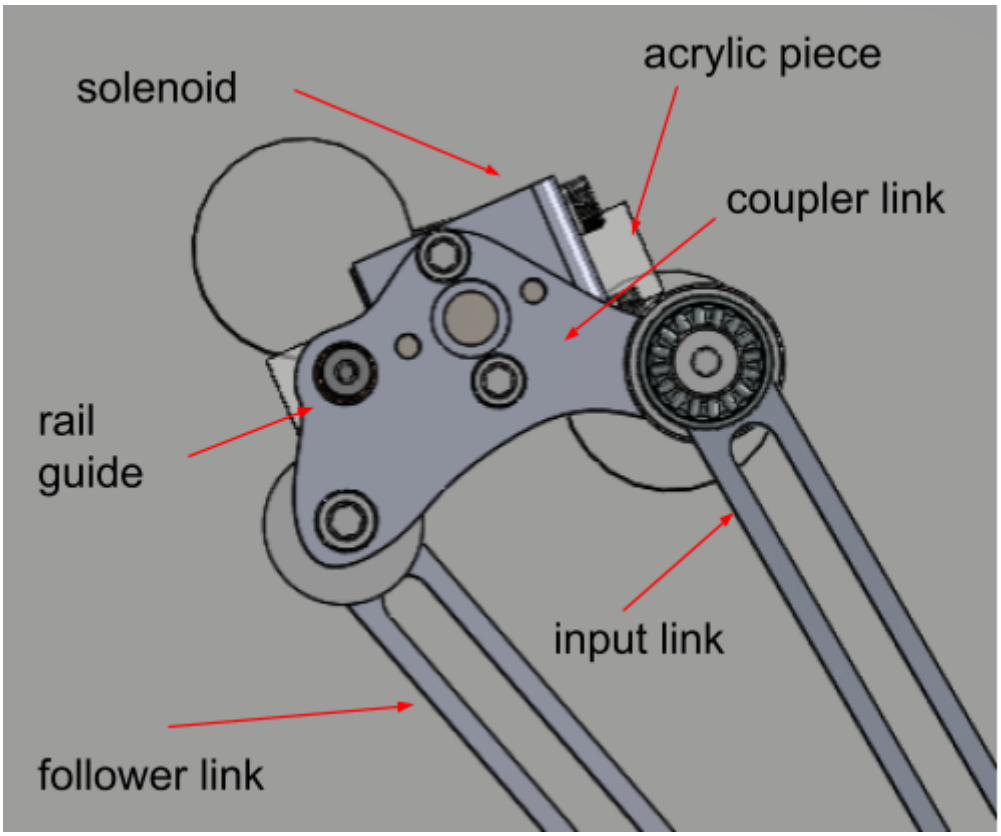
Full assembly view of the linkage in button position 2.



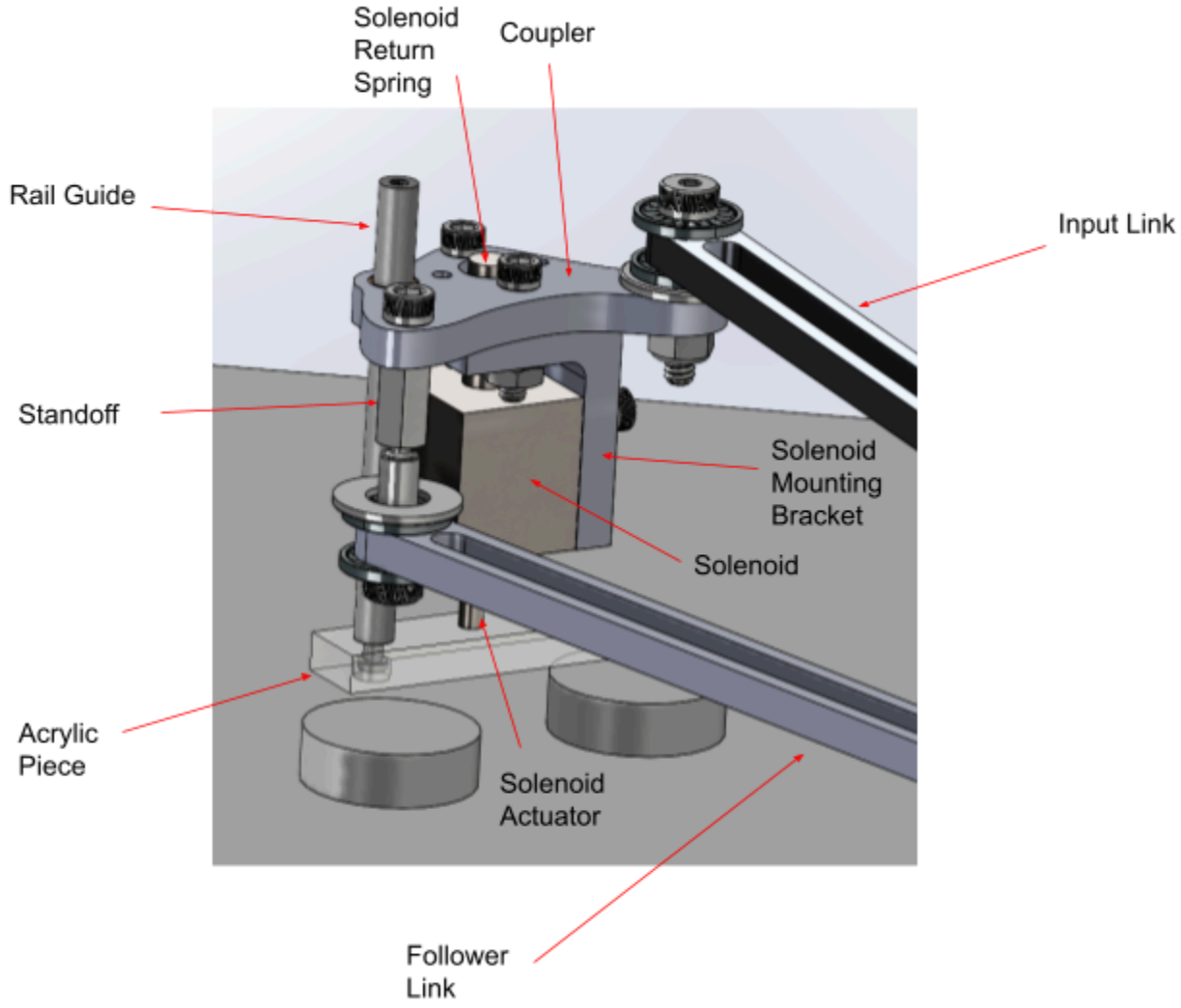
Full assembly view of the linkage in button position 3 (see labels from previous two positions).



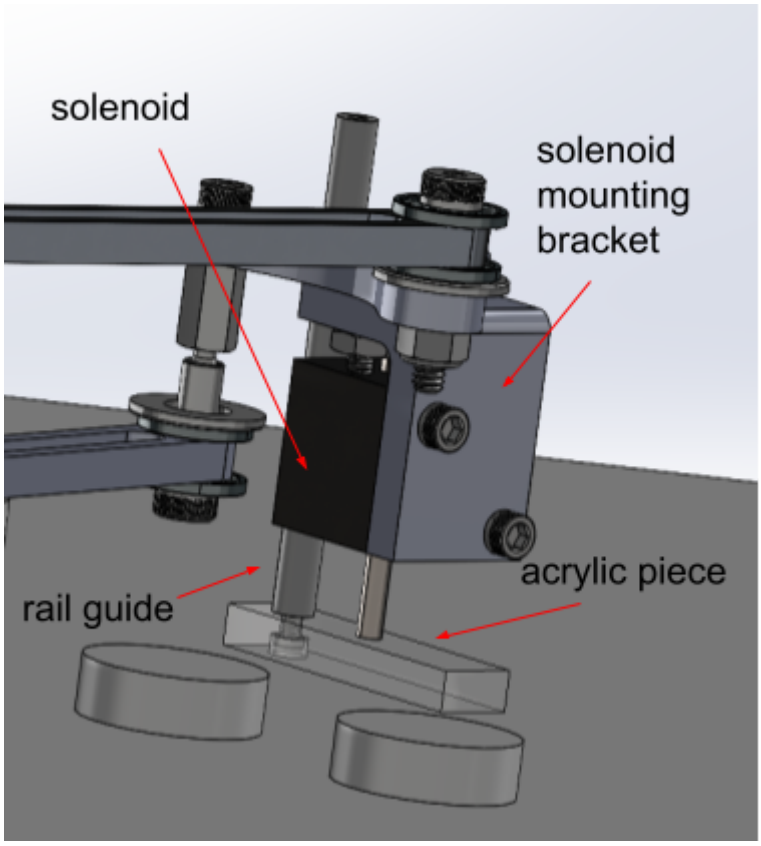
Side view of the linkage, highlighting the offset ground plate which is implemented in order to keep the input and coupler links from intercepting each other's hardware.



Front view of the coupler link and button pressing mechanism, over button position 1.



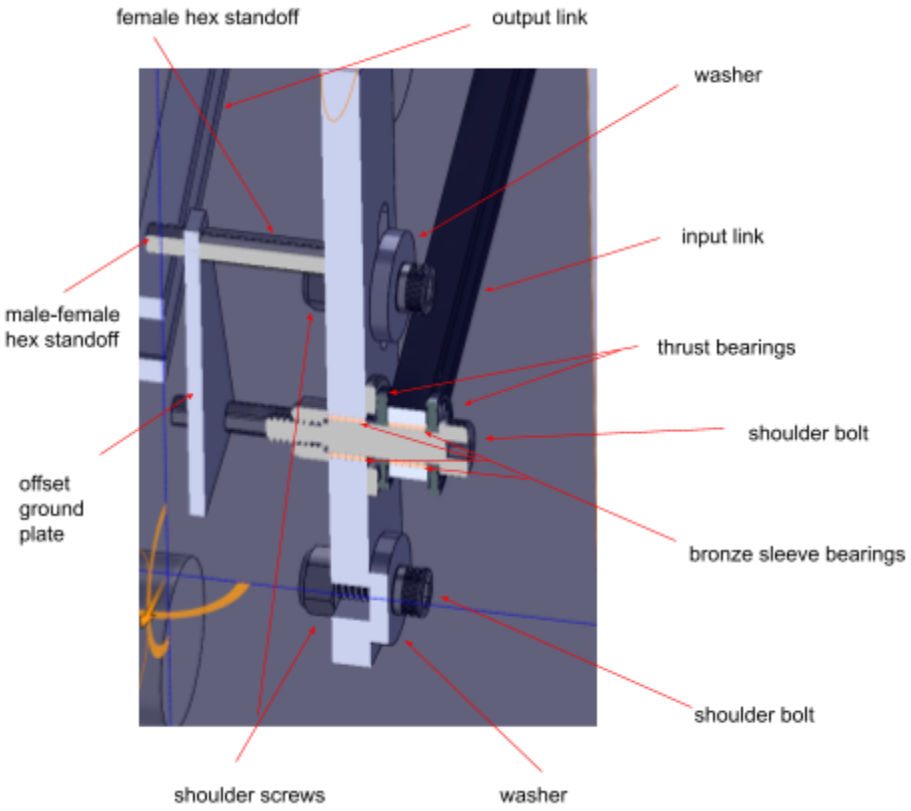
Since our links are in different planes, a spacer must be added from the coupler plate to attach it to the link as can be seen in the left of this picture.



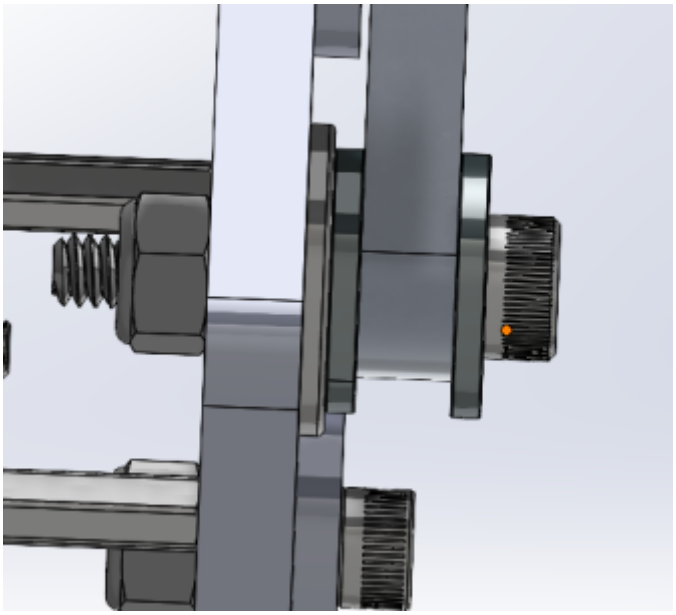
The acrylic piece is constrained from rotation through a rail guide that will move through a bearing in the coupler plate.

Joints

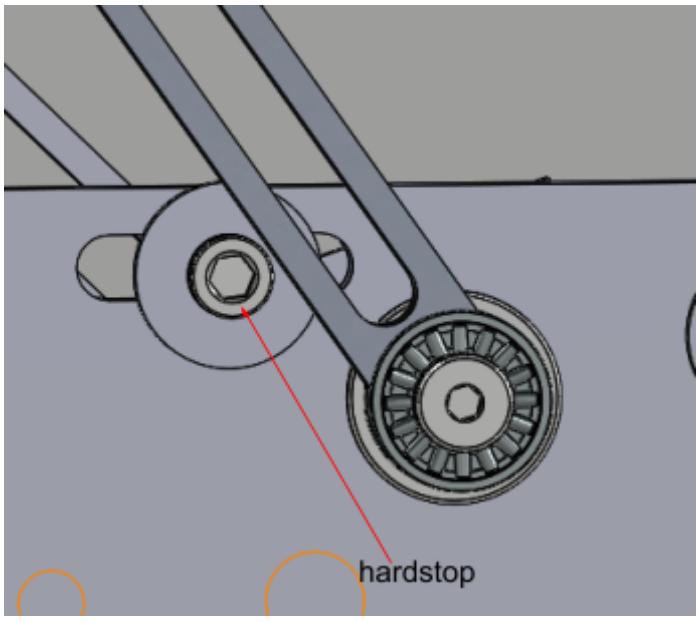
Input Link to Ground Plate



Section view of the input link, with two thrust bearings on each end of the link, and a washer between the link and the ground plate. When actual parts are assembled, a custom spacer will be added as necessary to ensure full thread engagement with the nut.

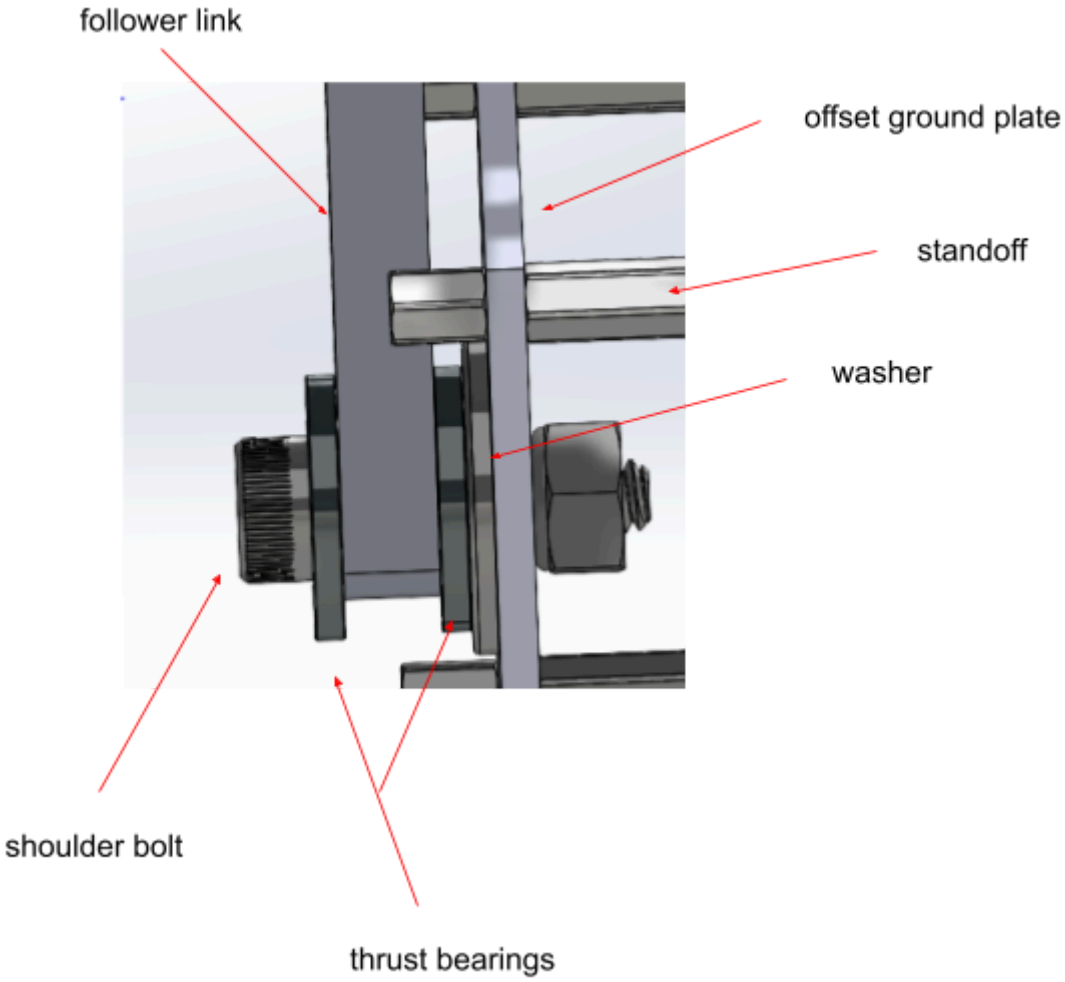


Full view of the input link (see above labels), showing the joint design.



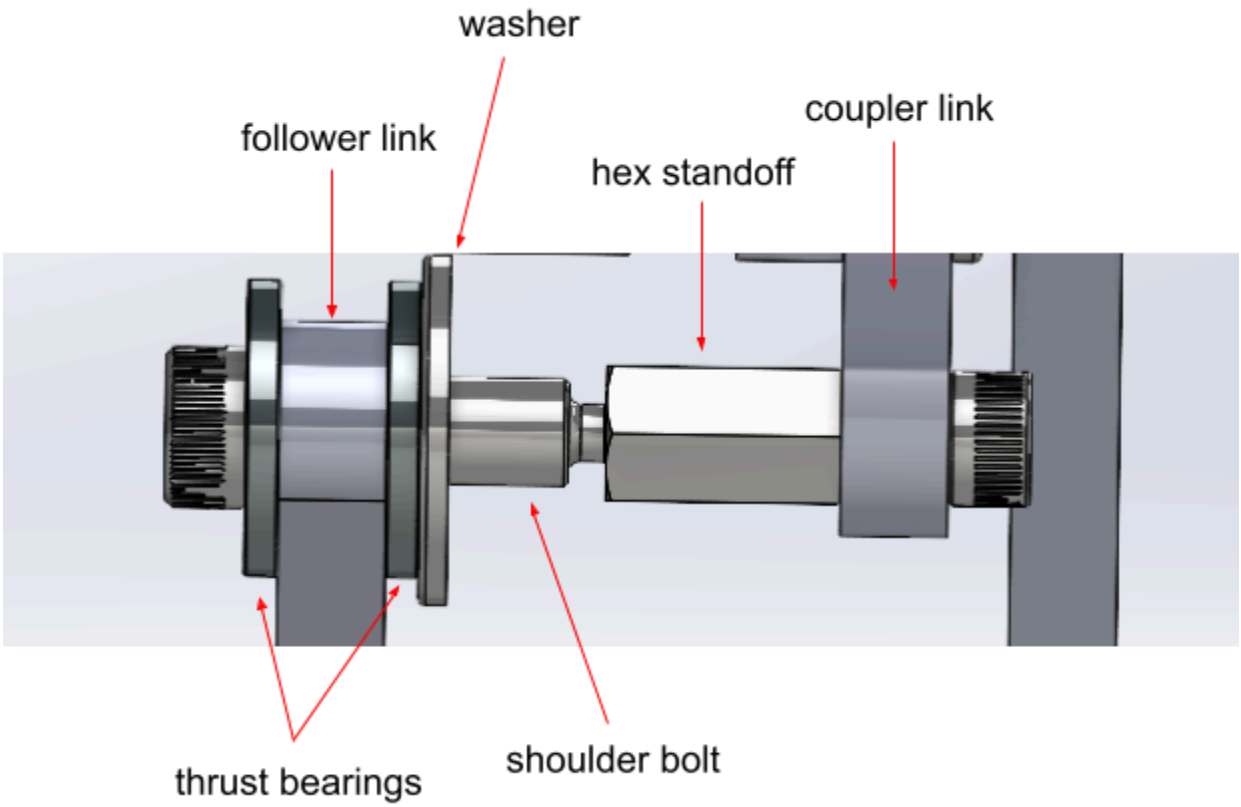
Front view of the input link joint, making contact with the hard stop as it reaches the position of button 1.

Follower Link to Ground Plate



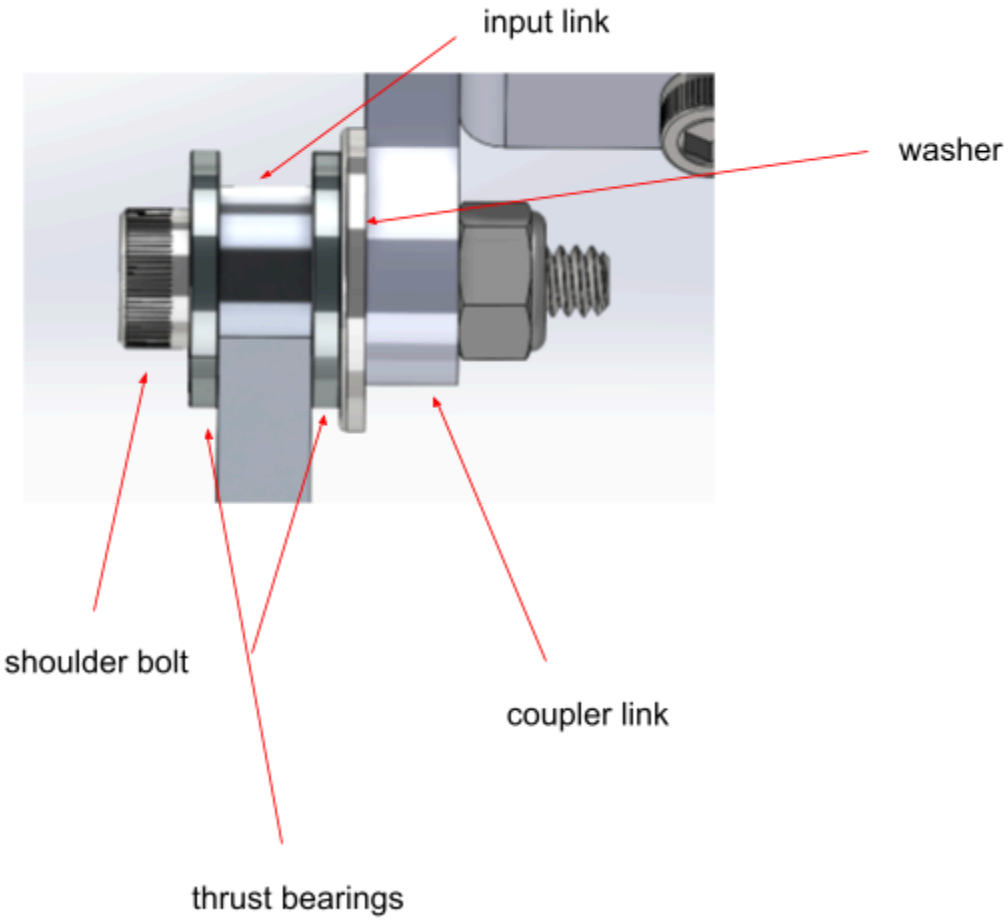
Full view of follower link attached to offset ground plate.

Follower Link to Coupler Link



Side view of the follower link joint, with a standoff spacer that is threaded into the shoulder bolt, to connect with the plane of the coupler link.

Input Link to Coupler Link



Side view of the input link's attachment to the coupler link.