**Landing Brake Safety Interlock:**

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| I've created this wiring diagram for a Safety Interlock between the Landing Brake Actuator Switch (if you have an electrical Landing Brake Actuator, NOT a mechanical one) and the Throttle.  This interlock prevents takeoffs and go-rounds with the Landing Brake in the "Down" position - it will automatically retract the Landing Brake when the throttle is advanced to whatever position the builder would like - 1/2, 3/4, or full.Here's how it works:* The standard actuator either moves the Landing Brake up or down based on the polarity of the power into the two wires.  A DPDT switch with center off (not necessary, but a good safety measure) is generally used swap polarity of the power going to the actuator.  The actuator has limit switches which turn it off when it reaches the ends of it's actuation range.
* The Safety addition is to add another DPDT switch, actuated by Throttle position, that will automatically switch power to the LB actuator in the "UP" direction when the throttle is opened.  In this case, the standard DPDT reversing switch will have no effect.
* When the Throttle DPDT switch is NOT in the "open" position, it shunts the power to the reversing switch in the normal manner, so that the LB can be lowered or raised manually
* I've ordered some 15A DPDT heavy duty switches from Digikey.  I should be able to mount P/N CH326-ND near the throttle handle to perform the necessary task.
* See:
	+ [**Bob Bittner's web page**](http://www.maddyhome.com/canardpages/pages/bittner/index.html)

to get info on the actuator and mounting scheme. | Diagram, schematic  Description automatically generated |
| **Frank Johanson** created a additional safety feature for the Interlock, involving using slightly different switches and a relay, with a few diodes.  This ensures that even if the throttle is retarded with the LB switch in the down position, the LB will **NOT** extend due to the throttle retardation without a reset of the LB switch to the up position before being put back into the down position.This is revision 4 - the last two versions of the drawing had errors.  I had the top connection between the relay and the switch going from the common position on the switch to the wrong connection on the relay - it should have gone to the "Normally Closed" position, not the "Normally Open" position. I also had the diodes reversed, and I have clarified the nomenclature on the relay contacts and the motor wires, as well as inserted the "center off" position on the 4PDT switch.  Thanks to **Paul Stowitts** and **Bill Theeringer**for helping me out with my drawing errors. | Diagram, schematic  Description automatically generated |

Sent from Doug's iPad Pro.  You can see my photos here.

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