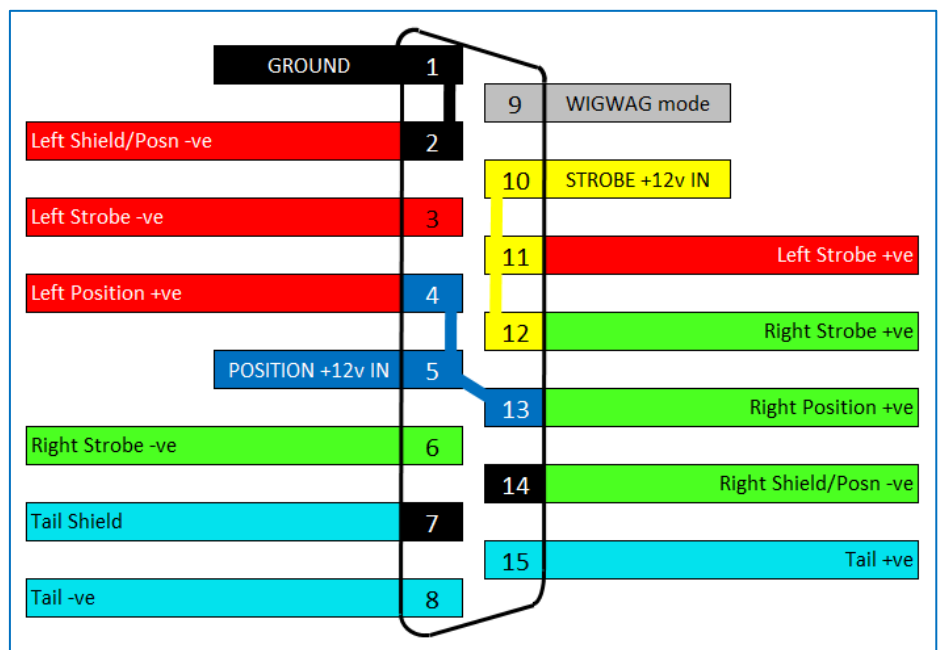


## SYSTEM INSTALLATION

The controller board can be mounted anywhere convenient inside your plane, such as under a seat, behind the instrument panel, or in place of a conventional strobe pack.

When wired correctly, radio or intercom noise will not be an issue.

The plastic standoffs supplied simply push and click into place, and can be squeezed to release the board. You need to drill 4.5mm or 3/16" holes in your plane.



### Power:

- 14 volt system only.

### Position LEDs:

- ~1 amp current draw per corner, 3 amps continuous system total.

### Strobe/WigWag LEDs:

- ~6 amps peak, 3 amps average strobe system current.

### Circuit Protection:

- Power for the **Strobe/Wigwag** circuit must be supplied via a **10 amp** fuse or circuit breaker, using normal un-shielded 18-20 AWG wire.
- Power for the **Position/Navigation** circuit must be supplied via a **5 amp** fuse or circuit breaker, using normal un-shielded 18-20 AWG wire.



Bench testing may only be performed with a 12 volt battery or a **regulated** power source of no greater than 14 volts. **DO NOT** use a battery charger as a power supply, as the output voltage will be significantly higher than this and will cause damage.

## STROBE LIGHTS:

The Strobe/WigWag circuit will only work when both the positive and negative connections from each wing and the tail come back to the FlyLEDs Control Board. The power MOSFETs on the Control Board switch the *negative* side of the LEDs to ground to turn them on.

When strobed, each wing draws approximately 6 amps of current for the duration of each flash. This is a very fast rise- and fall-time current, which has the potential to cause radio or intercom noise. To eliminate the possibility of noise, the **Strobe** circuit to the wings and the tail should be run using shielded wire. 18 or 22 AWG, 2 3 or 4 core shielded wire may be used.

## POSITION LIGHTS:

The Controller Board simply provides a convenient way to distribute +12v in from the panel switch out to each of the three position lights, by using the same shielded wires as the strobes.

If you have already run un-shielded power wires for the position lights out to each wing, you may continue to use them, as the position lights will not generate any radio or intercom noise. The control board will need to be connected to this circuit as well, so that it can operate the tail LED at reduced power in position mode.

The wing **Position** LEDs may be grounded either locally at the wing, or via the controller board using the **L shield** (pin 2) and **R shield** (pin 14) connections, such as when using shielded cable for the strobes. (Normally the shield should not be used to carry current, but in this application it works just fine.)

## TAIL LED:

The Kit version of the Tail Position/Strobe light **relies** on the resistors on the FlyLEDs Controller Board for current limiting and correct operation.

The Controller Board operates the tail LED at ~20% power when the Position Light switch is on, and sends it 100% power for each strobe flash.

- **This model Tail Position/Strobe light *must* have both + and – wires connected back to pins 15 and 8 of the Controller Board.**



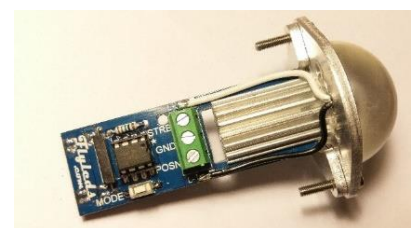
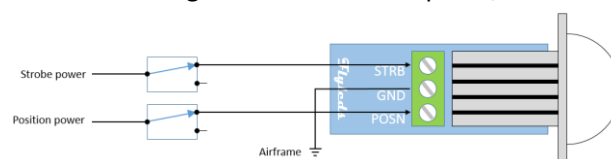
Black always signifies the negative wire. We leave the choice of connector (or not!) at the tail light up to you.

**Connecting this tail light to a local ground, or conducting a temporary “test” directly across 12 volts, will result in a few brief seconds of operation, followed by the total destruction of the device!**

## STAND-ALONE TAIL LED:

If you have purchased our Stand-Alone tail LED with the integrated circuit board, wire it directly to your Strobe and Position light switches on the panel, and ground it locally at the tail.

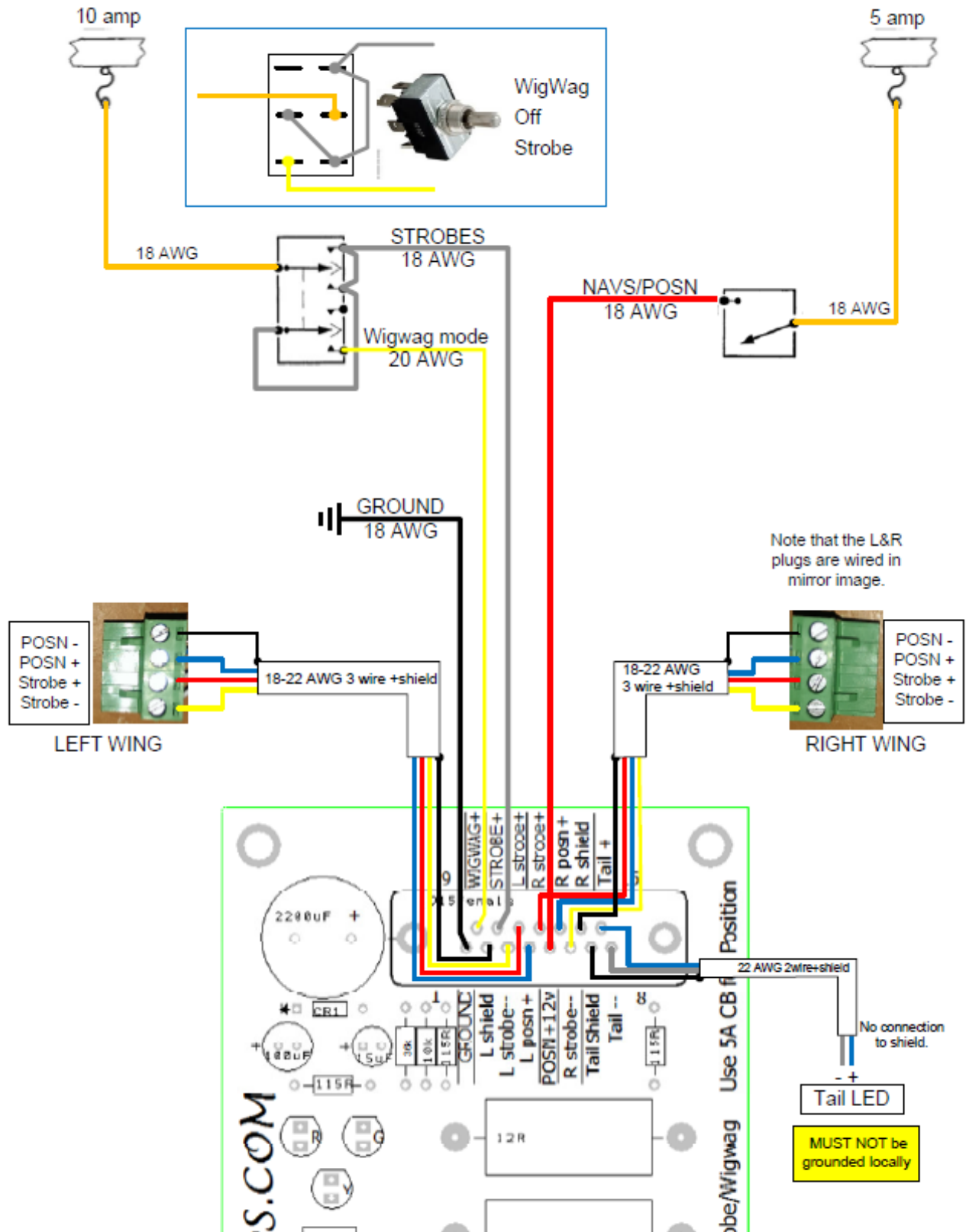
Do not connect it to the Controller Board.



## SYSTEM WIRING DIAGRAM- new wiring

This diagram shows the simplest method of connecting the wing boards to the controller, using a single three wire shielded cable. The tail LED should be connected using two wire shielded cable.

(The WigWag mode is optional. Simply use a SPST switch, as per the Position circuit, if not required.)



## SYSTEM WIRING DIAGRAM- existing wiring

This diagram shows that it is OK to use existing wiring to the wings, in particular unshielded position light wires. The Controller Board needs to be connected to the position light circuit to enable the tail strobe to act as a position light.

