

WigWag II Installation and Wiring

Location

The WigWag controller should be mounted in a dry location away from heat sources. Do not mount it on the engine side of the firewall.

Mounting Use 6-32 hardware for mounting.

Switch Selection

The WigWag controller has been designed to work with any single-pole double-throw (SPDT) 3-position switch that uses an ON-OFF-ON sequence, which is the most common and least expensive configuration. The more expensive OFF-ON-ON sequence switch is not required. Electrical current for the lamps does not pass through the switch so a heavy duty switch is not required. A full size toggle, miniature toggle or rocker switch can be used. The switch supplies signals to the internal logic of the controller which then drives the appropriate electronic switches located inside the box.

Connections

All connections to the WigWag controller are through a 12-inch wiring pigtail. The wires are color coded as follows:

Red (12AWG) - Power
Yellow (14AWG) - Light 1
White (14AWG) - Light 2
Black (20AWG) - Ground
Orange (20AWG) - Switch top contact
Blue (20AWG) - Switch bottom contact

Wiring

Installing WigWag II requires the following:

- Connect the red 12AWG wire to the aircraft main bus through a fuse or breaker. The breaker should be sized depending on the total power draw of the lights and the bus voltage. While WigWag II can operate from 10V to 23V input please note that it does not convert voltage. If you are using 14V lights you must connect to a 14V bus. If you are using 28V lights you must use a WigWag II (Custom Ordered for 28v) and connect to a 28V bus. See below for fuse/breaker recommendations.
- Connect the yellow 14AWG wire and the white 14AWG wire to the lights, one to each light. If HIDs are being used it is strongly recommended to use 14AWG wire all the way out to the lights due to the large initial current surges required by HIDs. Ground the lights using the same gauge wire to either the airframe or a common ground point in the electrical system.
- Connect the black 20AWG wire to the electrical system ground. Note that this wire does not carry any of the current to or from the lights and so does not require a high current connection.
- Connect the orange 20AWG wire to the top contact of the SPDT switch.
- Connect the blue 20AWG wire to the bottom contact of the SPDT switch.
- Connect the center contact of the SPDT switch to the electrical system ground.

Fuse/Breaker Considerations

On a 14V bus the maximum light wattage that can be used is 150W per side (300W total) which requires a 30A fuse/breaker between the WigWag and the main bus. If total wattage is 150W or less a 15A fuse/breaker can be used. In most installations, a 20A fuse/breaker is fine.

On a 28V bus the maximum light wattage that can be used is 300W per side (600W total) which requires a 30A fuse/breaker between the WigWag and the main bus. If total wattage is 400W or less a 15A fuse/breaker can be used.

Alternate method of connection

(extends power capability by eliminating power through WigWag3a/b when 'ON')

TBD