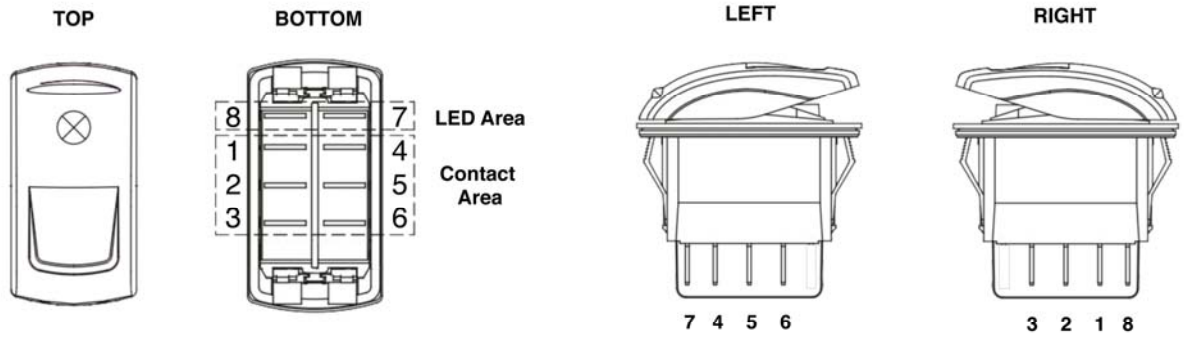
AeroRockers™

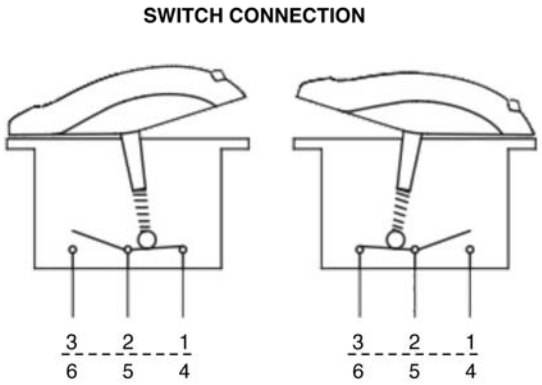
Lighted Aviation Rocker Switches

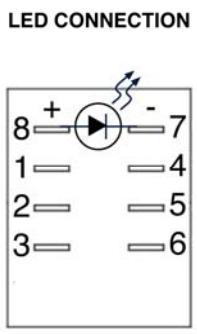
from 21st Century Aviation

417-877-6167

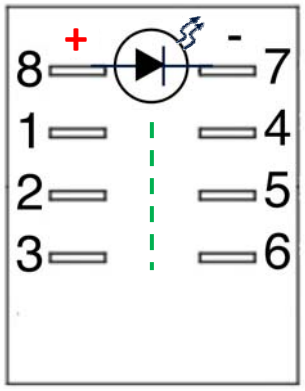
info@21stcentury-usa.com



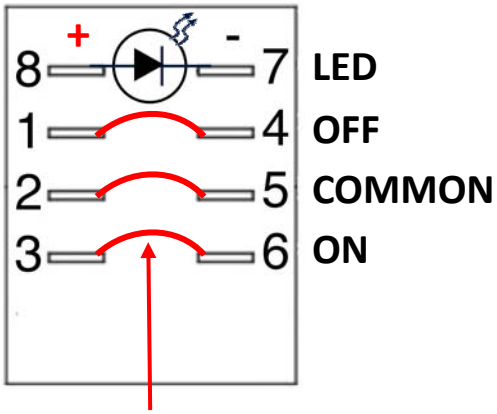




BASIC AeroRocker™ DPST SWITCH PIN SCHEMATICS - 1 LED



EACH SIDE OF AeroRocker SWITCHES ARE INTERNALLY ISOLATED FROM THE OTHER. EACH SIDE RATED AT 20 AMPS AT 12 VDC.



JUMPERS ARE ADDED TO DOUBLE AMPERAGE CAPACITY

It should be noted that since AeroRocker switches are DPST switches that are, in effect, two separate switches internally, one side of the switch is normally used to switch the device connected to the switch and the other side used for controlling the LED. Only when switching a high-amperage device (over, say, 15 Amps) is it necessary to wire both sides of the switch in parallel. (The total amp-rating of each wired in parallel is a maximum of 40 Amps at 12 VDC.)

VOLTAGE NOTE - AeroRocker switches are manufactured for use on 12-14 VDC electrical systems; they can be used on 24-28 VDC electrical systems with the addition of an additional 600 ohm resistor on each switch between Pin 7 and Ground.

When in doubt as to any wiring in any aircraft or other application, it is always wise to consult an expert, such as an avionics expert or A & P / IA mechanic. Be SAFE, not sorry!

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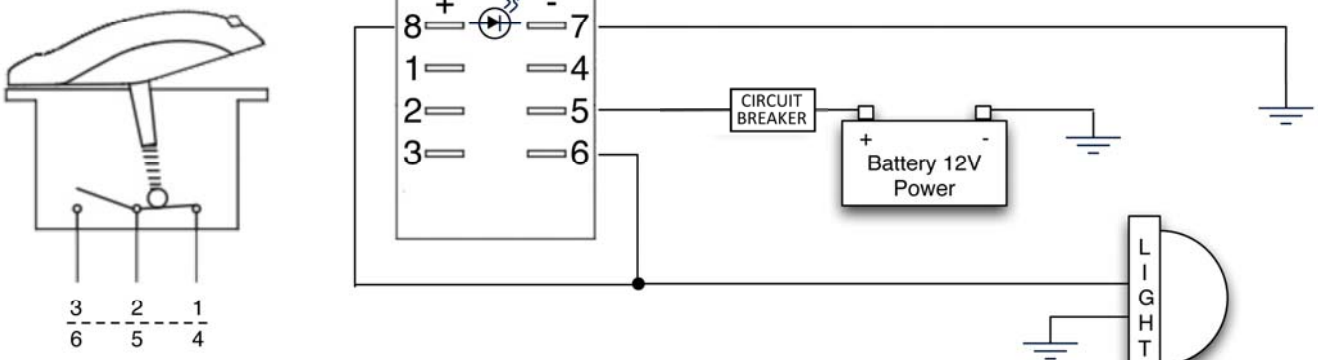
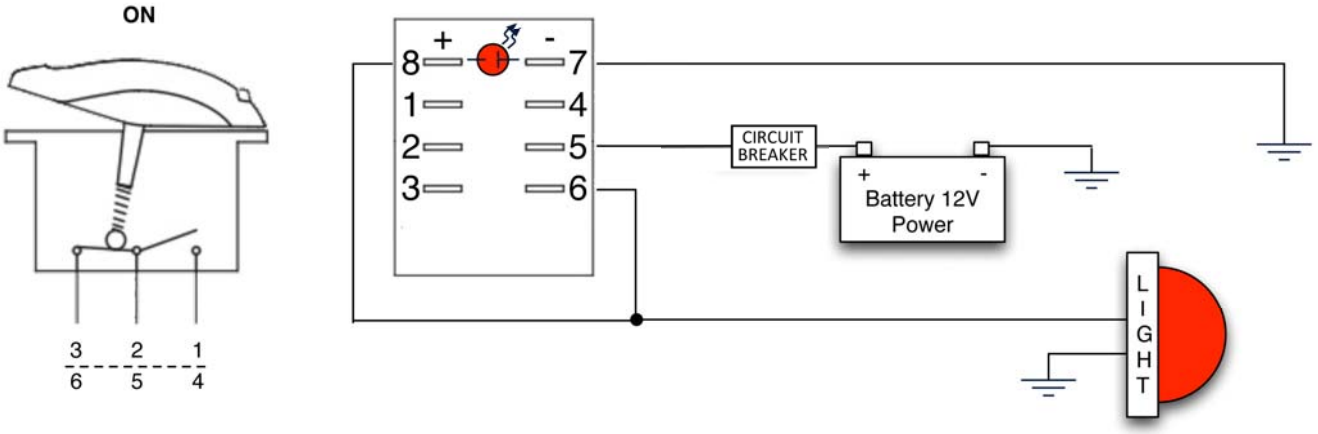
BASIC ON-OFF DPST SWITCH CONNECTIONS

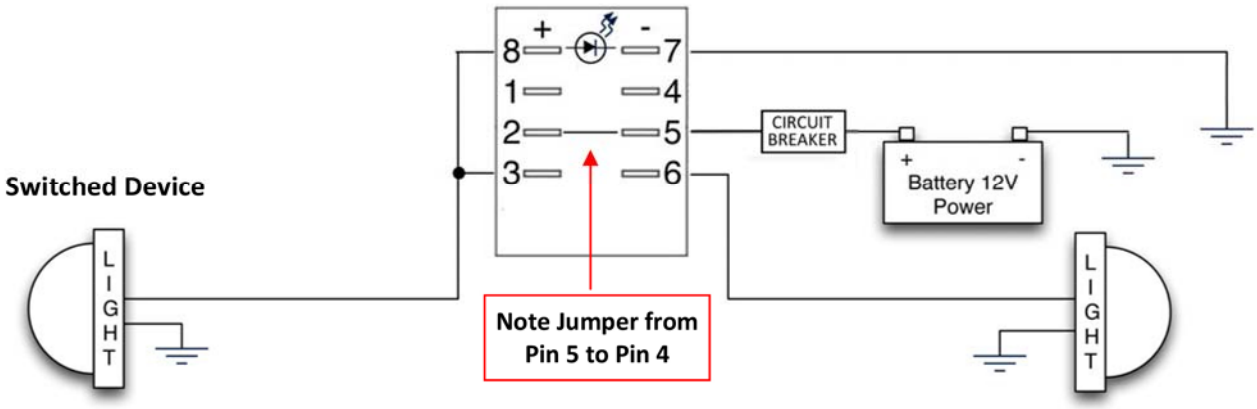
OFF



ON



CONNECTION OF MULTIPLE DEVICES TO BASIC ON-OFF DPST SWITCHES



Alternatively, one device can be ON when the switch is in the ON position and another device can be ON when the switch is in the OFF position by moving the Pin 6 wire to Pin 4.

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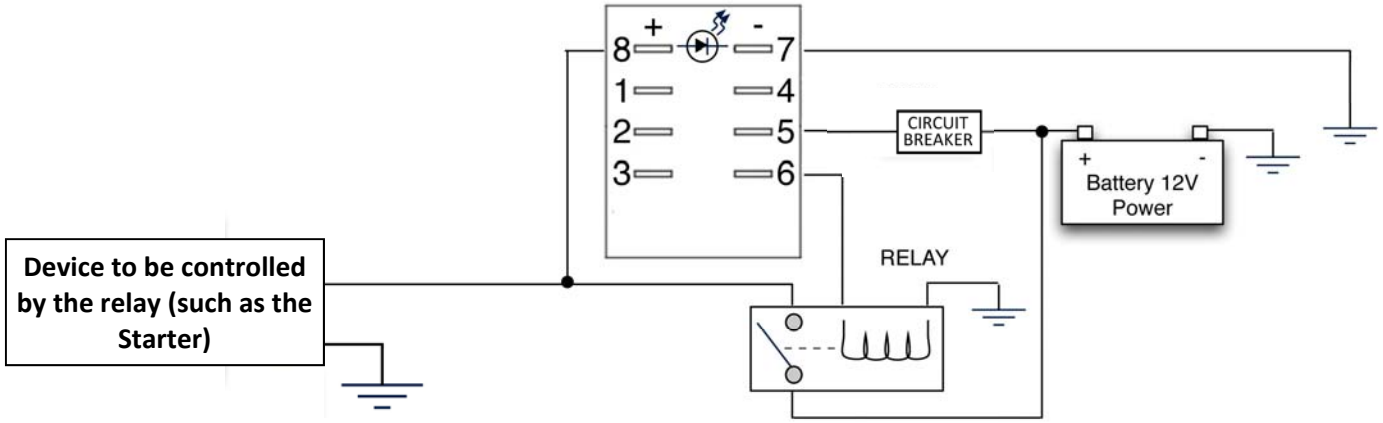
RELAY ACTIVATION WITH A DPST ON-OFF OR ON-OFF MOMENTARY SWITCH

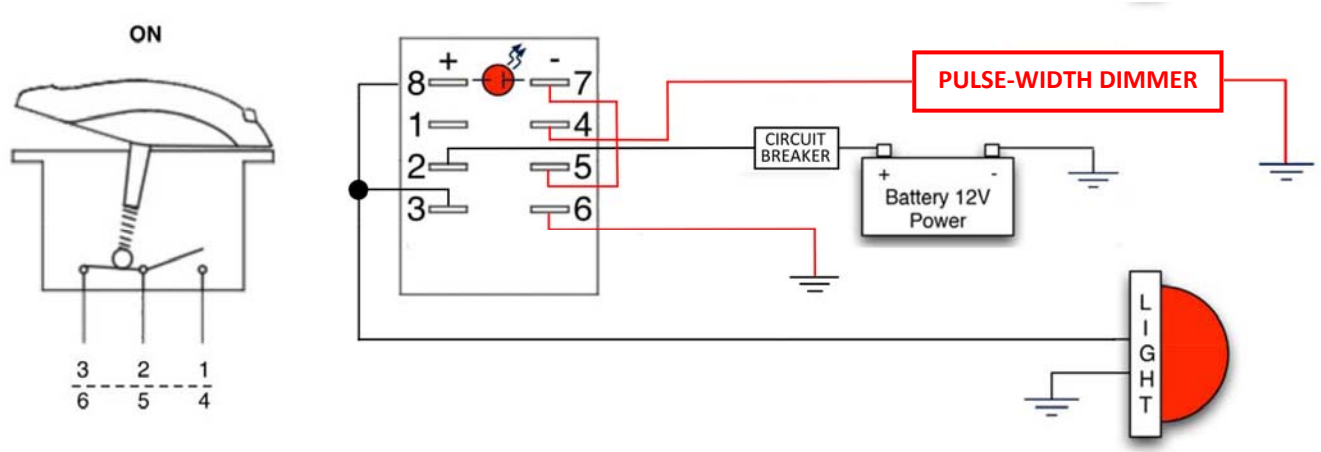


Each side of an AeroRocker™ DPST switch is electrically isolated from the other side. Each side is rated at 20 Amps. If your electrical load on the switch is higher than 20 Amps, both sides of the switch MUST be jumpered in parallel to increase the load-capacity to 40 Amps!!! Jumper Pin 1 to Pin 4, Pin 2 to Pin 5, and Pin 3 to Pin 6. (See parallel switch connection diagram for details)

In any application using an AeroRocker™ switch where the Amperage load of the switched device, even an intermittent or momentary device, exceeds 40 Amps total*, a higher-capacity external relay MUST be used!

IMPORTANT NOTE - When switching any momentary device, such as a relay controlling a starter, a DPST MOMENTARY switch, such as an AR-S-11M-A, MUST be used for safety reasons!!

ON-OFF DPST SWITCH CONNECTIONS FOR DIMMER CONTROL OF LED WHEN SWITCH IS OFF AND HIGH LED OUTPUT WHEN SWITCH IS ON



The above diagram is for wiring switch LEDs to be dimmable when the switch is in the OFF position and the LED to go to full-brightness when the switch is in the ON position.

Per above diagram, connect Pin 7 to Pin 5 with a jumper. Then connect together all the Pin 4 wires of the switch LEDs to be dimmable and then run a wire from that connection through a Pulse-Width Dimmer to Ground. For each dimmered switch on which you want to LED to go to Full Brightness when ON, connect Pin 6 to Ground. When each thusly-connected switch is OFF, the LED will be dimmable by the Pulse-Width Dimmer when the switch is in the OFF position and full-brightness when in the ON position.

For LEDs on and dimmable only when the switch is in the ON position (and LEDs off when the switch is in the OFF position), connect all Pin7s directly to the Pulse Width Dimmer. For LEDs to be dimmable in both the ON and OFF switch positions, connect a jumper from Pin 6 to Pin 4 of each switch. (Use of Terminal Strips and Jumpers will make this complex wiring job much easier!)

All diagrams and descriptions herein are to be considered as suggestions and not expert technical advice relative to a specific application.

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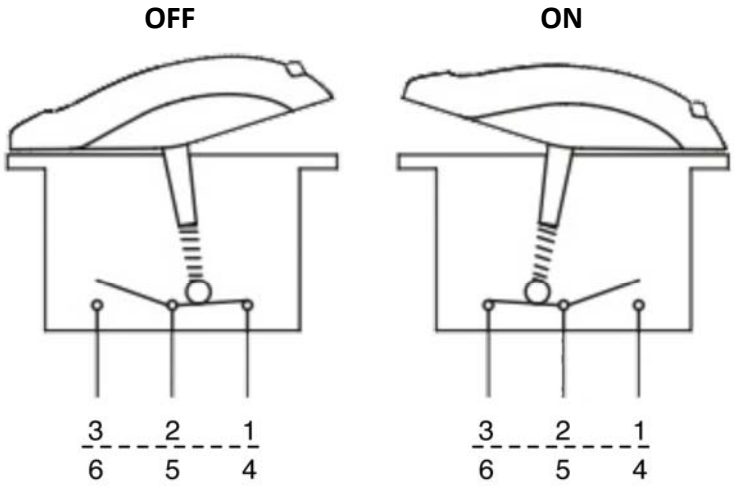
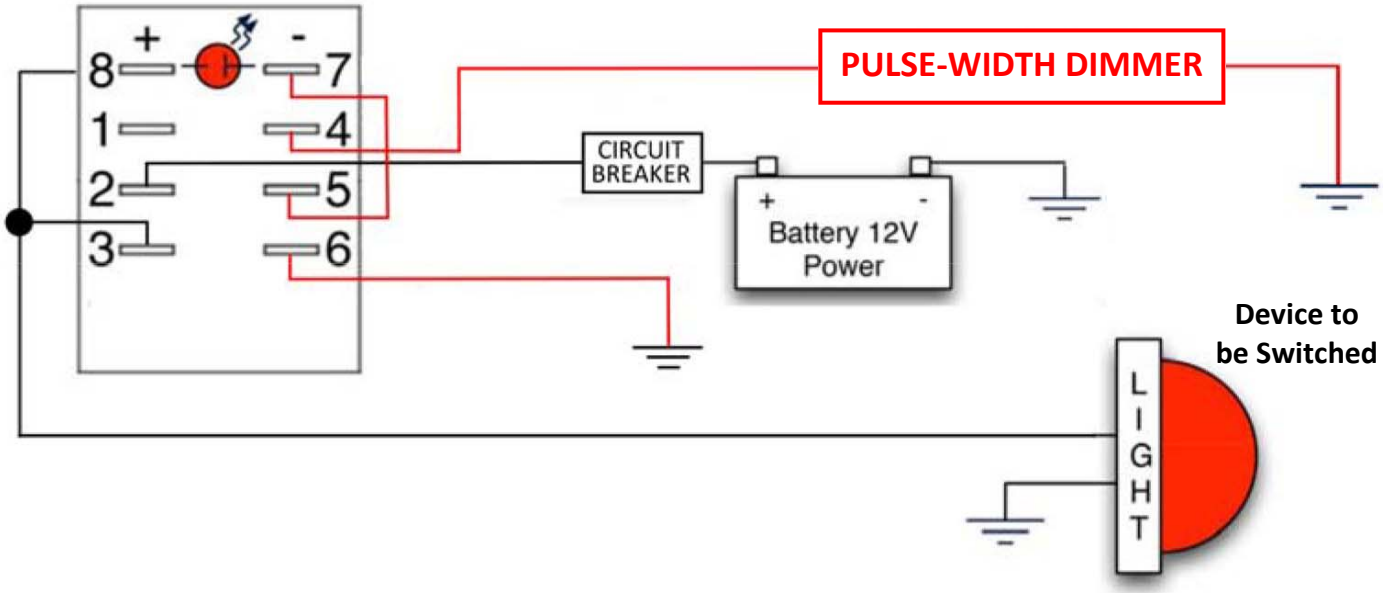
ON-OFF DPST SWITCH CONNECTIONS FOR DIMMER CONTROL OF LED WHEN SWITCH IS OFF AND HIGH LED OUTPUT WHEN SWITCH IS ON





Per above diagram, connect Pin 7 to Pin 5 with a jumper. Then, connect together all the Pin 4 wires of the switch LEDs to be dimmable and then a wire run from that connection through a Pulse-Width Dimmer to Ground. When each thusly-connected switch is OFF, the LED will be dimmable by the Dimmer. (Use of Terminal Strips and Jumpers will make this complex wiring job much easier!)

For each dimmered switch on which you want to LED to go to Full Brightness when ON, connect Pin 6 to Ground.

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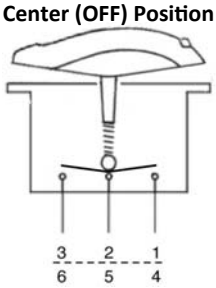
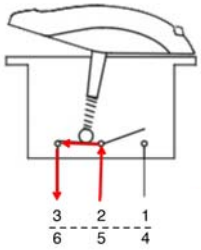
WIRING OF 3-POSITION (ON-OFF-ON) 2-LED DPDT SWITCH CONNECTIONS FOR SWITCHING OF MULTIPLE DEVICES SUCH AS TAXI & LANDING LIGHTS, STROBES & BEACONS, OR HIGH-LOW DEVICES SUCH AS FANS

3-Position Switch Center (OFF) Position

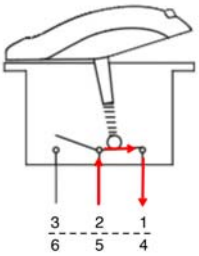


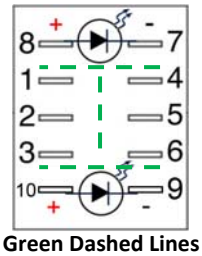
ON-OFF-ON

Rocker Up Position

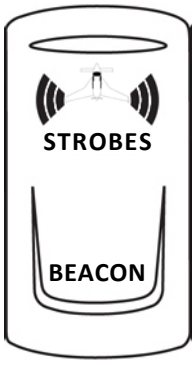


Rocker Down Position



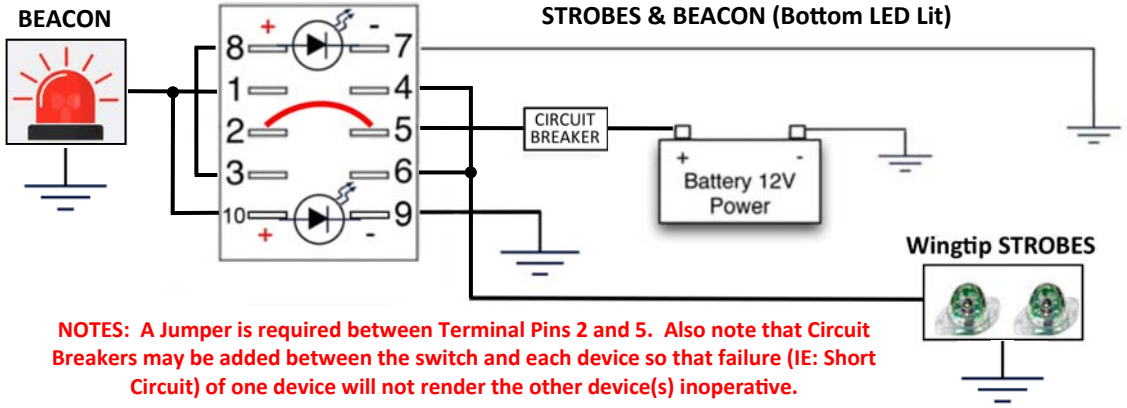


Green Dashed Lines Show Electrically Isolated Areas



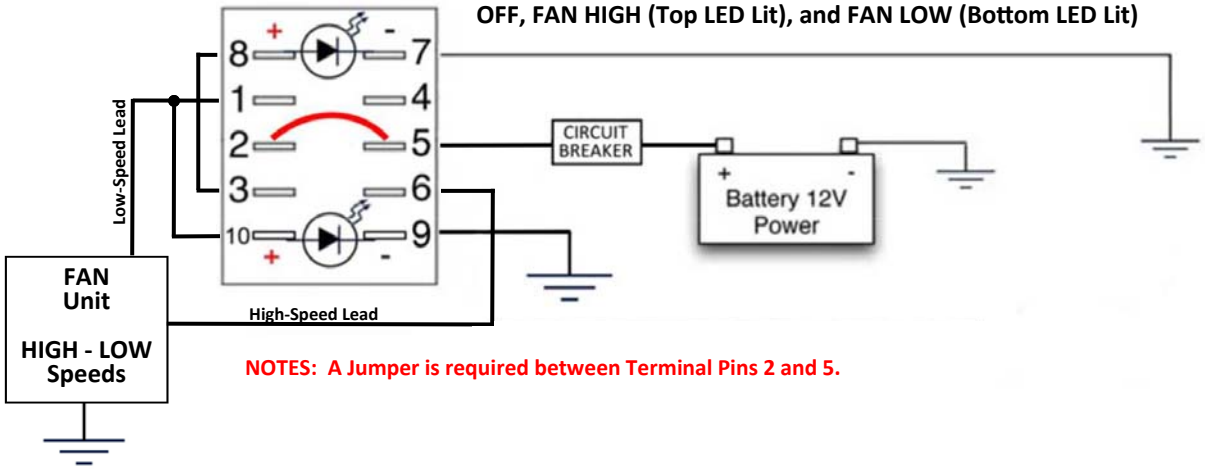
Custom 3-Position Rocker

OFF, STROBES Only (Top LED Lit), and STROBES & BEACON (Bottom LED Lit)



NOTES: A Jumper is required between Terminal Pins 2 and 5. Also note that Circuit Breakers may be added between the switch and each device so that failure (IE: Short Circuit) of one device will not render the other device(s) inoperative.

OFF, FAN HIGH (Top LED Lit), and FAN LOW (Bottom LED Lit)



NOTES: A Jumper is required between Terminal Pins 2 and 5.

NOTES:

Depending on the Amp draw of the device, an external relay may be required.

Also note that Circuit Breakers may be added between the switch and each device so that failure (IE: Short Circuit) of one device will not render the other device(s) inoperative.

VOLTAGE NOTE - AeroRocker switches are manufactured for use on 12-14 VDC electrical systems; they can be used on 24-28 VDC electrical systems with the addition of an additional 600 ohm resistor on each switch between Pin 7 and Ground.

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