
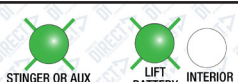
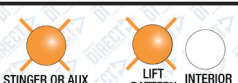
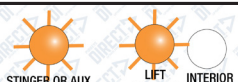
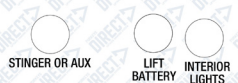

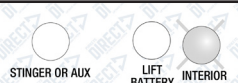


LED Status		Logic
	<p><b>Solid Green on Lift Battery and Source</b></p>	<p>Charging State – Source voltage is greater than 13.8 volts. DC/DC converter is on. Tractor must be running and alternator good to achieve 13.8 volts. A battery’s surface charge cannot reach this value. Applies to all charging sources.</p> <p><b>Note:</b> The turn-on voltage is 13.2 volts after 5 minutes or 13.8 volts immediately. This is because, in Dual Pole in Parallel state, the DIRECT input is now connected to liftgate batteries via the dual pole cables. If the liftgate batteries had been charging using the DC/DC converter, that voltage would be above 13.2 volts, so the DIRECT would turn on and continue to charge even if the tractor was shut off.</p>
	<p><b>Solid Green on Source Slow Flashing Orange on Lift Battery</b></p>	<p>Charging State – Tractor connected and running. DC/DC converter is operating, but the liftgate batteries are defective or below 12.8 volts.</p> <p>Applies to all charging sources.</p>
	<p><b>Solid Green on Lift Battery and Source</b></p>	<p>Extend State – Source voltage drops below 13.8 volts. DC/DC converter is on for 1 hour. Every two minutes the controller turns off the DC/DC converter, so there is no current flow (no voltage drop) and measures the battery voltage on the tractor batteries. If over 12.4 volts, the controller turns on for another two minutes. This will repeat until 60 minutes has expired, or the voltage drops below 12.4 volts for 30 seconds. The DIRECT will then look for next available source.</p>
	<p><b>No Source LED Lift Battery LED Slow Flashing Green</b></p>	<p>Static State – No tractor connected to the trailer and the liftgate batteries are more than 12.4 volts.</p>

LED Status	Logic
	<p><b>No Source LED Lift Battery LED Slow Flashing Orange</b></p> <p>Static State – No tractor connected to the trailer and the liftgate batteries are less than 12.4 volts.</p>
	<p><b>Slow Flashing Green on Lift Battery and Source</b></p> <p>Off State – Source voltage below 13.8 volts and extend period is over. Voltage at the lift batteries and the source is above 12.4 volts. Voltage at source must achieve 13.8 volts to go into Charging State.</p> <p>Applies to all charging sources.</p>
	<p><b>Slow Flashing Orange on Lift Battery and Source</b></p> <p>Off State (Low Voltage) – Lift battery and source voltage below 12.4 volts. DC/DC converter is off. Voltage at source must achieve 13.8 volts to go into Charging State.</p> <p>Applies to all charging sources.</p>
	<p><b>Rapid Flashing Orange on Lift Battery and/or Source</b></p> <p>Off State (Fault) – Voltage between 2 and 9 volts. Check fuses and wiring.</p>
	<p><b>No LED</b></p> <p>Off State (Fault) – Open circuit in lift battery or source circuit. This could also be caused by the liftgate battery voltage being below 6 volts.</p>
	<p><b>Excessive Voltage Drop</b> – Tractor is running and the voltage is above 13.8 volts. The controller turns on the DC/DC converter and current starts to flow. If the voltage drops below 9 volts, the controller will tell the DC/DC converter to turn off. What the operator will see is the Source and Lift Battery go Solid Green. Both LEDs will toggle orange for a few seconds. The cycle then repeats.</p> <p>NOTE: Low voltage shut off in the first 5 minutes is 9.5 volts.</p>
	<p><b>Solid White on Interior Lights</b></p> <p>The interior lights in the trailer will turn off either via a timer (which can be set to 30, 60, or 90 minutes) or if the liftgate batteries drop to a low state of charge.</p>