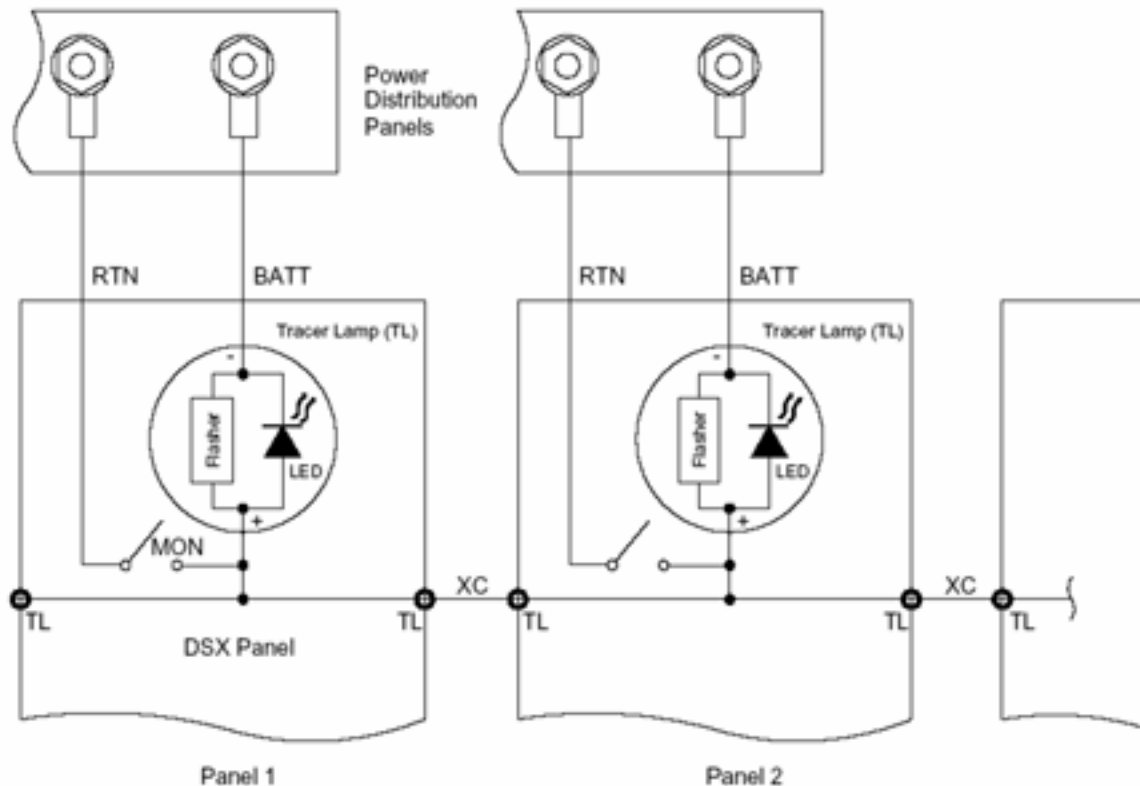


Power Feedback through Tracer Lamp Circuits on DSX-1 Panels

DSX panels share tracer lamp circuit continuity with other CO equipment for the purpose of tracing circuit faults across the central office.

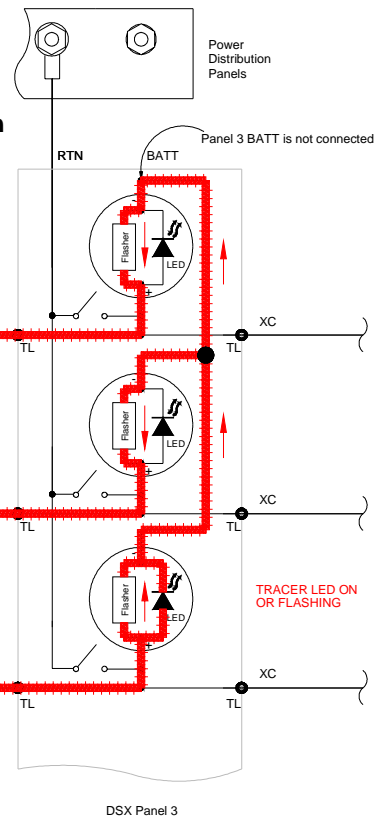
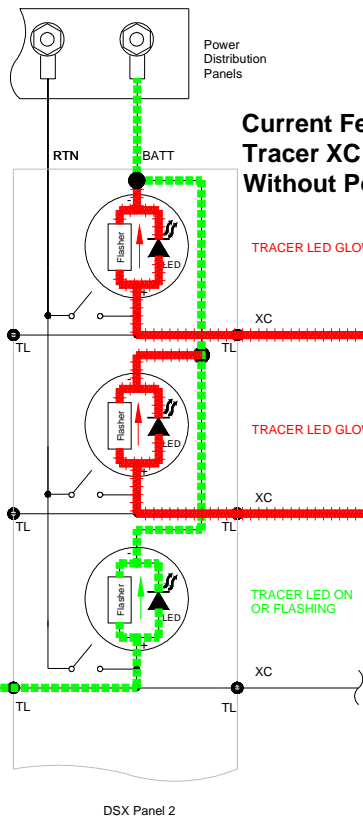
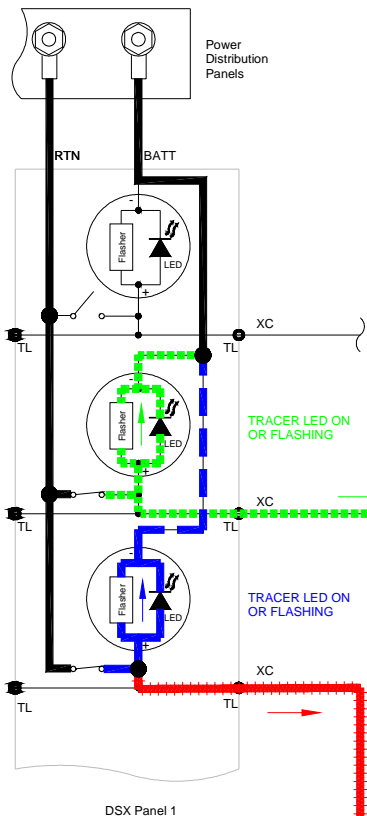


Telect DSX panels, as well as those by most other manufacturers, use a simple tracer lamp LED circuit powered by BATT supplied by a Power Distribution Panel (PDP). The DSX tracer LED flashes if the RTN input to the tracer lamp LED is enabled during monitoring or another defined tracer condition. Tracer lamps on “daisy-chained,” cross-connected (XC) panels would also flash on and off.

The illustration on the following page shows three tracer lamps on each of three panels along with various tracer XCs. The BATT power input to one of the panels — Panel 3 — has been disconnected. One of the tracer circuits on Panel 1 is cross connected to one on Panel 3, and two of the tracer circuits on Panel 3 are cross connected to Panel 2.

In this scenario, if a tracer is initiated on one panel — Panel 1 in this case — and if Panel 1 is cross-connected to a tracer circuit on Panel 3, the corresponding tracer lamp on Panel 3 will turn on because a small amount of tracer current will feed back through the flashers of other tracer circuits on Panel 3 to Panel 2. This happens only if Panel 3, the unpowered panel, contains some tracer circuitry cross connected to Panel 2, the powered panel.

The cross-connected tracer LEDs on Panel 2 will glow faintly. In this scenario, note too that the disconnected BATT terminal on Panel 3 — although disconnected from its PDP — will have a voltage potential in respect to RTN due to the voltage drop across the tracer LED on Panel 3.



Current Feeds Back Through Tracer XC From a DSX Panel Without Power

TRACER LED GLOWS FAINTLY

TRACER LED GLOWS FAINTLY

TRACER LED ON OR FLASHING

- Normal Trace Current Flow on Any Panel Initiating a Trace
- Normal Trace Current Flow on Initiating Panel & XConnection
- Abnormal Current Flow When BATT is Disconnected From a X-connected Panel