

MEMRC SWITCH DIRECTION INDICATOR LIGHTS DESCRIPTION

Turnout (switch) direction indicator lights are used throughout the layout (except for most of the new 'Madison Yard'), to give an unmistakable indication as to which way a turnout is thrown. A 'Green Light' indicates that the way is clear for travel. A 'Red Light' indicates that the way is NOT clear (i.e.; the turnout(s) are thrown against that route of travel.)

Red/green LEDs are implanted in the road bed, or in a panel board depicting the turnouts, at the "Y" of each switch in the layout (except in the 'Madison Yard', as noted above.) These LEDs will light 'Red' when DC current flows through them in one direction; and 'Green' when DC current flows through them in the opposite direction. An SP/DT switch within each turnout's respective 'Tortoise' machine controls which way DC current flows through the LEDs.

The LEDs draw their power from a pair of (120Vac in - 12Vdc out) power packs, wired to three terminal blocks, as shown in the lower left corner of Diagram 1, below. Purple, Gray and Brown wires extend from these terminal blocks, throughout the layout. The Purple wires carry +12Vdc, in relation to the Gray (neutral) wires; and the Brown wires carry -12Vdc, in relation to the Gray (neutral) wires.

The wiring depicted in the upper middle of diagram 1 shows the (under layout) wiring for a single turnout, where only two lights are needed. A 1K ohm resistor is wired in series with the LEDs to adjust the current through the LEDs.

The wiring depicted in the upper right corner of diagram 1 shows the (under layout) wiring when two turnouts provide a 'crossover' from one 'thru' track to another (parallel) 'thru' track. In this case, three LEDs are required; one for each of the 'thru' tracks, and one for the 'crossover' section. If the 'crossover' section is clear for travel, then both 'thru' tracks must not be clear for travel. Conversely, if one 'thru' track is clear, then the 'crossover' section must not be clear; and consequently, then the other 'thru' track must also be clear for travel.

Metro East Model Railroad Club

Switch Direction Indicator Lights

Wiring Diagram

