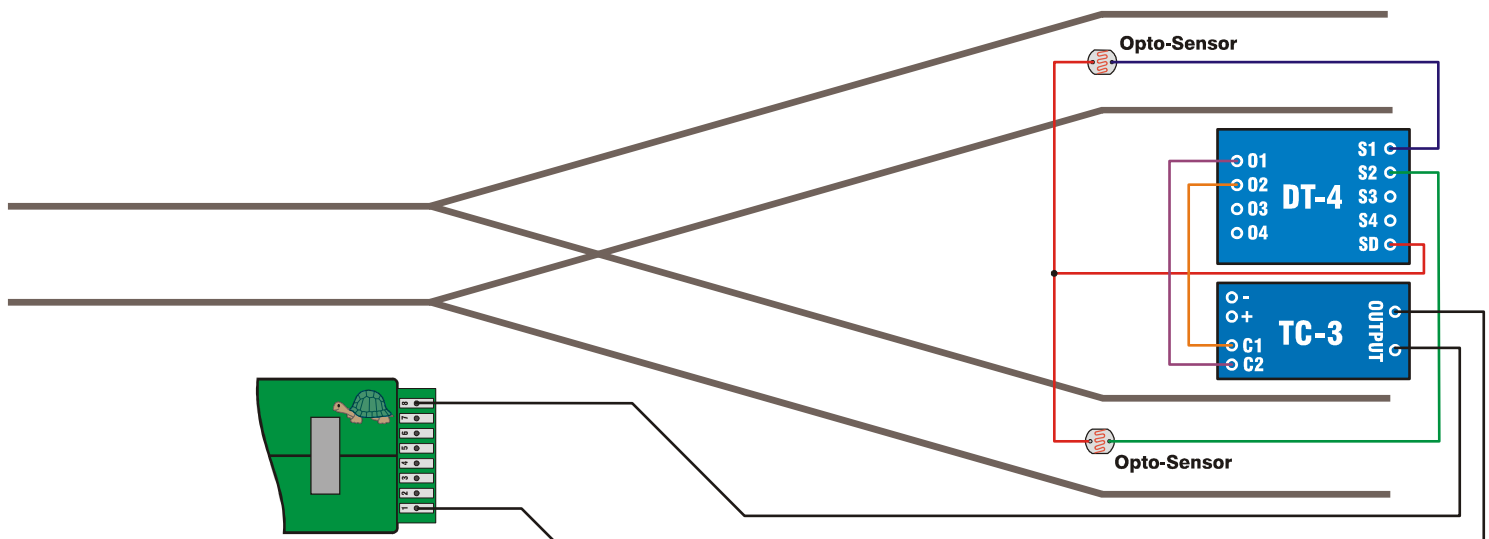


PROVIDING A NON-DERAILING FUNCTION WITH THE TORTOISE™

The TORTOISE™ Slow Motion Switch Machine can be controlled to provide a non-derailing function at turnouts using stock Circuitron products. The best way we know to do this uses 1/2 of our DT-4 Rolling Stock Detector (2 channels) to trigger our TC-3 Turnout control circuit. Note that once the TC-3 is used to power the TORTOISE™ you will no longer be able to control it with panel toggles. You will need to manually control the TC-3 using pushbuttons or momentary toggles as well as the DT-4 outputs. This is covered in the standard TC-3 instruction sheet. This application works with all forms of track power including DCC and AC. The Opto-Sensors can be quite close to the turnout. Note that DC power supply connections are not shown below, but must be supplied to both boards.



FOR DCC LAYOUTS: We recommend using one of NCE's Switch-it™ circuits to drive the TORTOISE™. The Switch-it™ can take its power directly from the track or DCC bus. And it has a built in Auto-throw function for non-derailing applications. To enable the Auto-Align™ function on the Mark 2 board, it will be necessary to remove the suppression capacitors off the inputs. Use a small pair of flush side cutting pliers and just clip the capacitor off the board. (*Note that this might void your NCE warranty*) Also note that you can no longer power the TORTOISE™ conventionally and will need to control the Switch-it with pushbuttons as well as the track connections.

