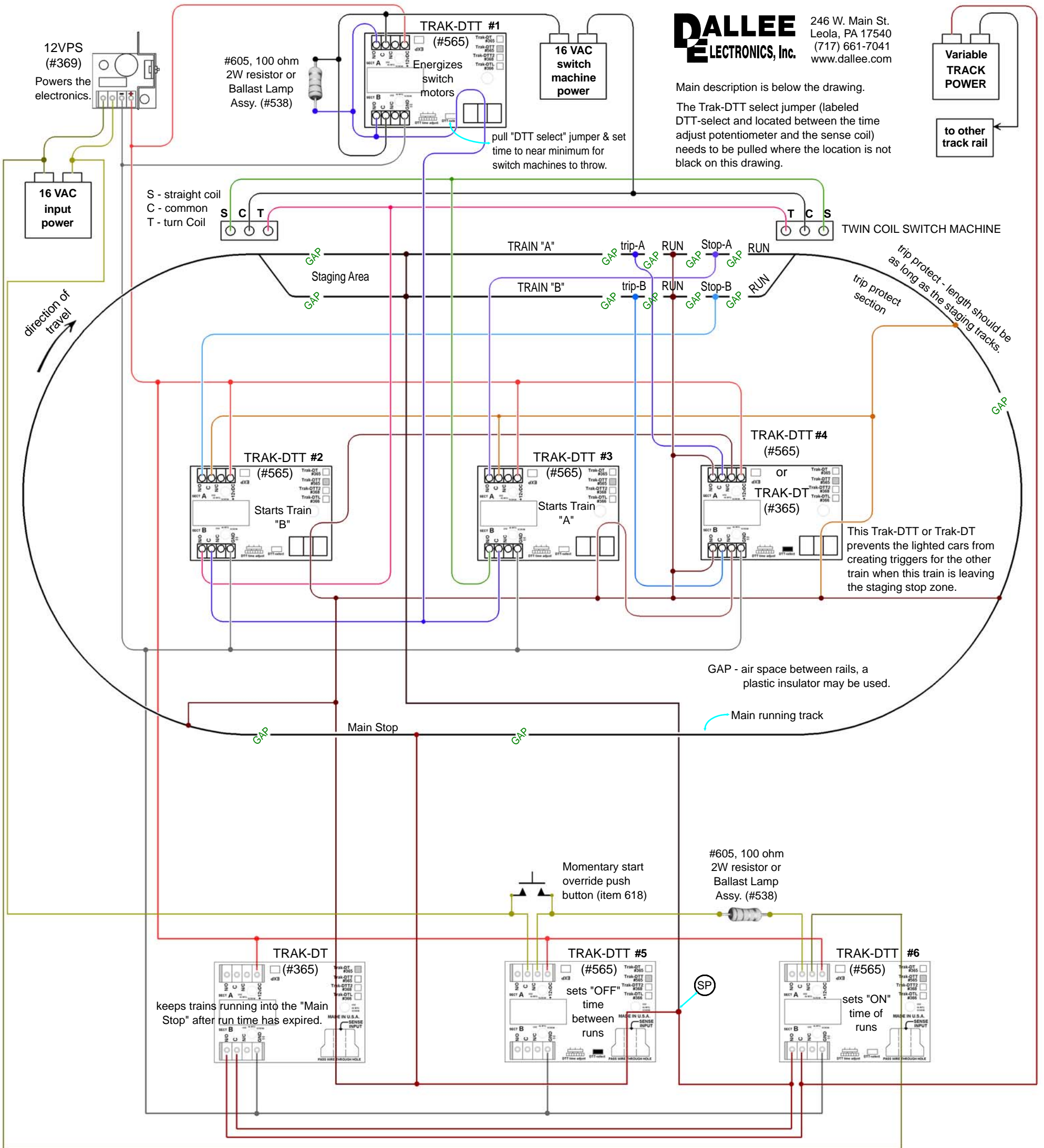


# Two Train Staging using twin coil switches & lighted cars with timed on/off periods for run/stop with push button override to start.



**DALLEE ELECTRONICS, Inc.**  
 246 W. Main St.  
 Leola, PA 17540  
 (717) 661-7041  
 www.dallee.com

Main description is below the drawing.  
 The Trak-DTT select jumper (labeled DTT-select and located between the time adjust potentiometer and the sense coil) needs to be pulled where the location is not black on this drawing.

**Abstract:**  
 The main function is to operate two trains or trollies on one track with a passing siding that is also an automated timed operation with manual viewer override via a user push button. Although twin coil type switches are shown for use in this diagram, LGB type rotary switches can also be used. A drawing for connecting them to the "S", "T", "C" is shown in the bottom right corner. Trak-DTT #1 would have to be set for a long enough time to allow for the switch machines to properly throw.

**Explanation of operation:**  
 When power is applied to the electronics and to the track, the train sitting at the "Main Stop" section begins to run for the length of time set on the Trak-DTT #6, for "ON" time runs. At this time, the "ON" time Trak-DTT, "OFF" time Trak-DTT #5, and Trak-DT illuminate their RED LED indicating current being sensed in their sense coils. The Trak-DT will turn off its RED LED whenever the train traverses the "Main Stop" section. This Trak-DT is used to make sure that the train completes its sequence of staging with the other train in the event that operating "ON" time has been completed. When the "ON" time cycle has been completed, the train will stop at the "Main Stop" section (the other train has already been stopped during the staging). At this time, the RED LED, on the Trak-DTT #5, will still be illuminated since it is now timing out how long the display will be off. When the "OFF" time has been completed, this Trak-DTT #5 will momentarily turn off its RED LED and then back on after the "ON" time Trak-DTT #6 has turned the track power back on. At any time during the "OFF" time, the momentary push button switch can be pushed to start the train sitting in the "Main Stop" section and thus start the entire operation all over. Depending on how long the track line is and how long the run time is set the trains can alternate multiple times before one is stopped at the "Main Stop" section. Power in the "Staging Area" is set to be "ON" when the train is sitting and the layout is still "ON" (set to run). If you want the lights in the passenger cars always on then you need to move the wire labeled "SP" to the main power feed before the Trak-DTT #6 ("C" terminal). Trak-DTT's can be special ordered with longer times (several minutes). Standard Trak-DTT's time up to 40 seconds!

**Details for setup:**  
 "Main Stop" location for the train when "ON" time is completed. This needs to be a much longer than section for the train since a few seconds are required for the Trak-DT to de-energize to enable the stop. It has to stop within this area. If it continues, it will enter the main track and staging area, release the other train, and continue until one of them stops in this area.

The "Main Stop" location can be placed anywhere in the main loop ("Main running track") as long as it's a train length beyond the "trip protection section" and before the switch entering the staging section.

**Staging setup:**  
 Set Trak-DTT's #2 & #3 long enough so that the engine leaves the STOP section. Generally a setting of 10 o'clock is good. Trak-DTT #4 is to prevent lighted cars from triggering the other train to inadvertently leave the STOP area. This can be set to any time that insures the entire train has left before re-entering the staging area or a long enough section of detected track can be used with a Trak-DT instead. Set Trak-DTT #1 to a short time setting. This Trak-DTT apply's momentary power to the switch machines when the next train is set to leave.

The TRIP sections need to be only long enough for one power truck/track pickup truck to be in the "TRIP" zone at a time. NO power pickup should be in this zone when the train is stopped!

For passenger trains, use an unlit baggage car between the engine and other passenger cars. For best startup you should leave one train in the "STOP" zone with the switches set for the open staging track. The other train needs to be placed in the "Main Stop" location. Train length is limited to the distance between switch point clearance and trip zone.

Staging can be expanded to 4 or more sidings by repeating the the existing staging. More than one staging can be done on one loop of track as well.

