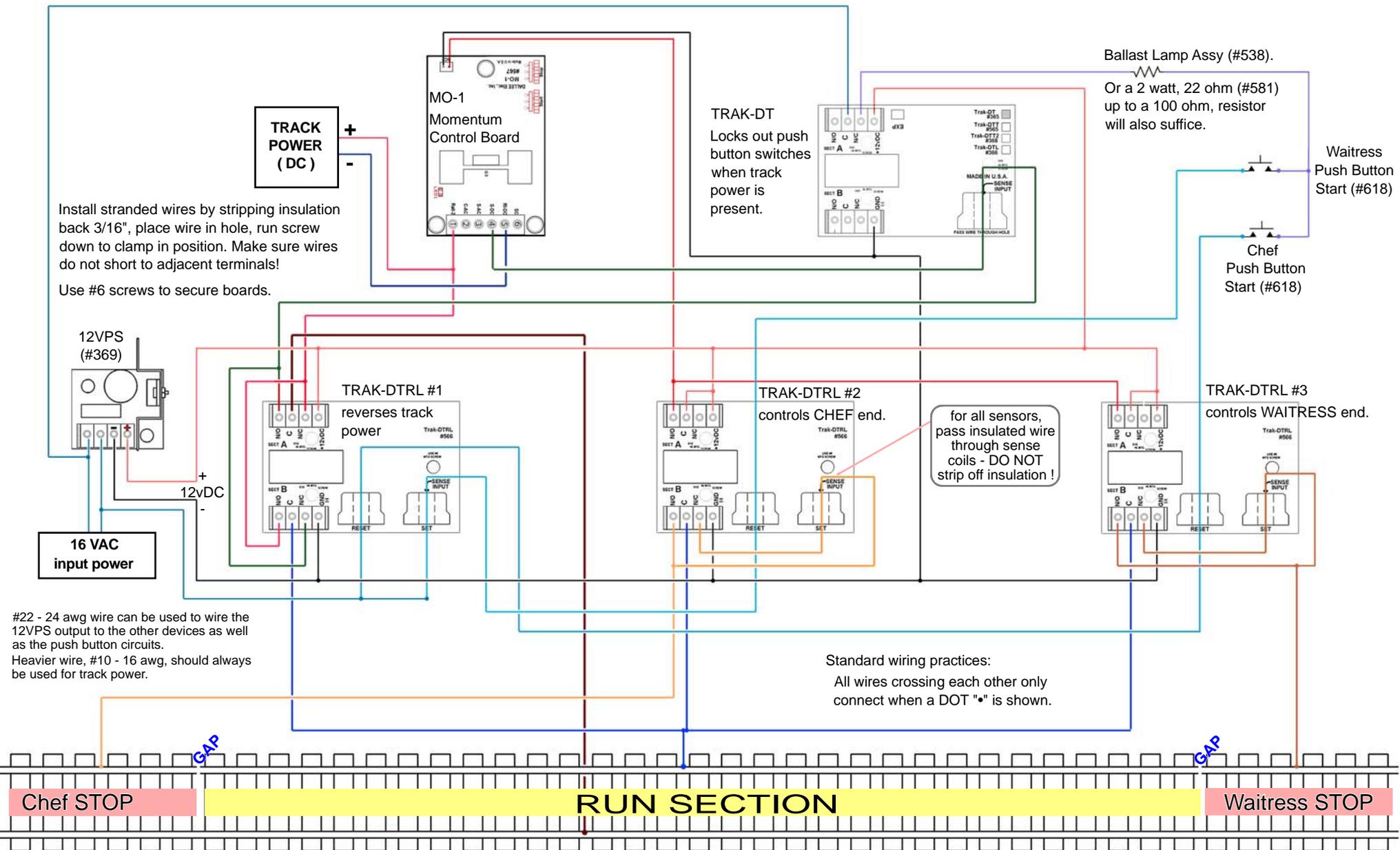


Push Button REVERSE with Momentum Start and Stop @ each end.



Push Button REVERSE with Momentum Start and Stop @ each end continued

This Back-N-Forth operation:

requires DC (polarity reverse) track operation.

require a few seconds (5 or better) of time from leaving one stop location and arriving at the next stop location!

long lengths of track between locations does not affect the operation, very short lengths that transverse in a short time are not recommended.

This setup traverses from one end to another. It awaits for the appropriate push button to proceed to the other end. It also applies a momentum Start and Stop to the track power.

Wire colors are shown for convenience. The wire color also changes to signify the passing of it through a sense coil even though it is still the same wire. This helps in troubleshooting the wiring as well as the initial wiring.

This system has memory so that whenever it is turned off and back on, it will still remember the set direction. It is not important where the trolley/engine is when powering up but it is important that the track power throttle remains in the correct direction. Otherwise the unit will travel off of the end!

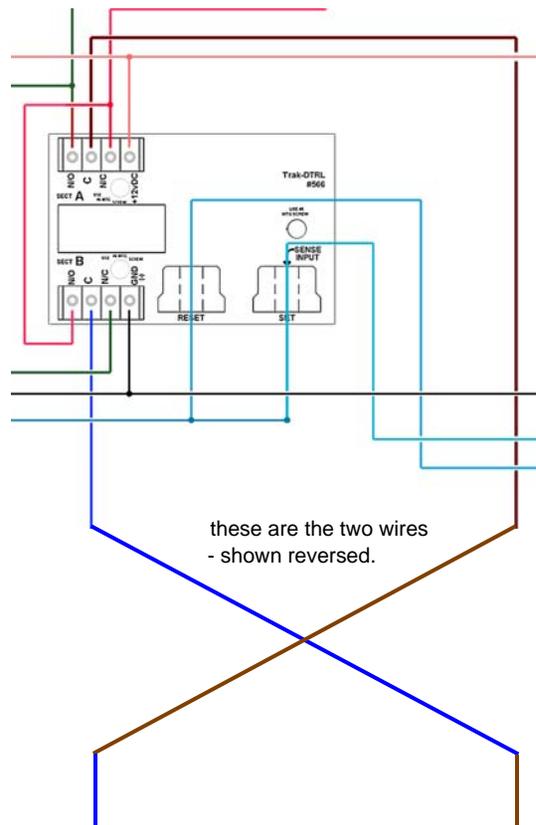
GAP: a "GAP" (cut rail to provide an air "GAP" or use insulated plastic rail joiners, wood is not recommended) is placed on one rail as shown to form the "SIGNALLED SECTION". In this case the "SIGNALLED SECTION" is the section labeled "STOP & REVERSE" and also "STOP".

If "G" gauge, reverse the wires going to the TRACK (Not that of the 12VPS).

If you don't know the track power polarity and run off the end, reverse these two wires.

The two wires to be switched are the Blue and Brown wires coming from the "C" terminals of the Trak-DTRL #1, as shown to the right.

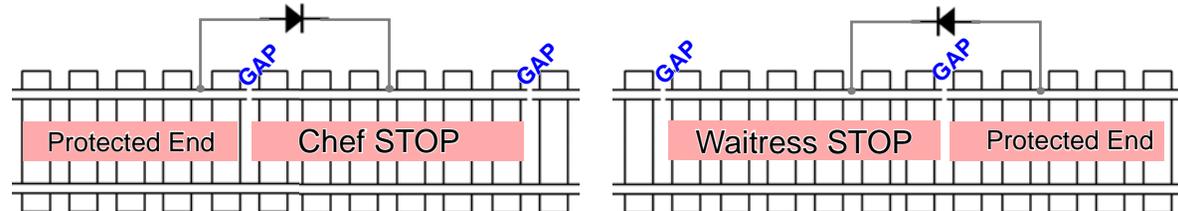
3-Rail DC operators running on DC track power (which is needed for this operation) should do this reversing as well so that the center rail is made "+" for the engine to run forward. Otherwise the engine needs to be wired opposite of that since the center rail is normally the rail to be cut to make the sense sections (just easier to cut and looks nicer than cutting both outside rails. Outside rails should be connected together as well for better operation).



Operation:

This unit will sense the current drawn from the track at each end to stop the train. If cars are used, an illuminated car has to be on the end or the end section has to be long enough for the engine to trigger the operation.

The end sections also need to be long enough for the train to come to a complete stop without running off of the track. Since the MO-1 settings and the speed of the train determine how long it takes to stop, it's hard to state what that distance needs to be. A diode protection section can be added as shown below if desired. G operators and others requiring a high track current should use item 375 diodes (6 ampere). Low current operators can use item 374 (1 ampere) diodes.



All Trak-DTRL's have to be in the "RESET" position to start. It's impossible to know what state they were in when used elsewhere or after testing. So, to set things up for proper operation, first keep the track power turned off but the 12VPS power turned "ON". Wait a few seconds after first powering up, then momentarily press the "CHEF" push button. Then turn on the track power to send the train to the "WAITRESS". The MO-1 board will always delay the track power for a smooth start and stop. These can be adjusted to your liking. The MO-1 has a RED LED on it. This LED will glow brightly during a stop but gradually turn off as the track power turns on. The Trak-DT will energize and illuminate it's RED LED to indicate sufficient track current is flowing which will lock out the push buttons until the engine / train proceeds to the opposite end and the MO-1 then turns off the track power. When the RED LED on the Trak-DT turns off, then the push buttons can be operated. Pressing the wrong push button (as in the one where the train just left) may move the engine a bit since it is not locked out at this point. No harm is done in doing so but the correct push button needs to be momentarily pressed to reverse the track power, and thus the engine, and send it to the other end.

This unit has memory, so whenever the power is turned off it will remember the state it was in. If track power to the engine is interrupted due to dirt or other things, the MO-1 may trigger a slow down and start-up. There is nothing wrong with it. Also, if the power supply delivering the track power changes a bit during operation, the MO-1 will also trigger. Just sit tight since it will restart again.