

City Streets Trolley Stop Control

Operating an Automatic stop on Kline by Lionel City Streets with a longer control track.

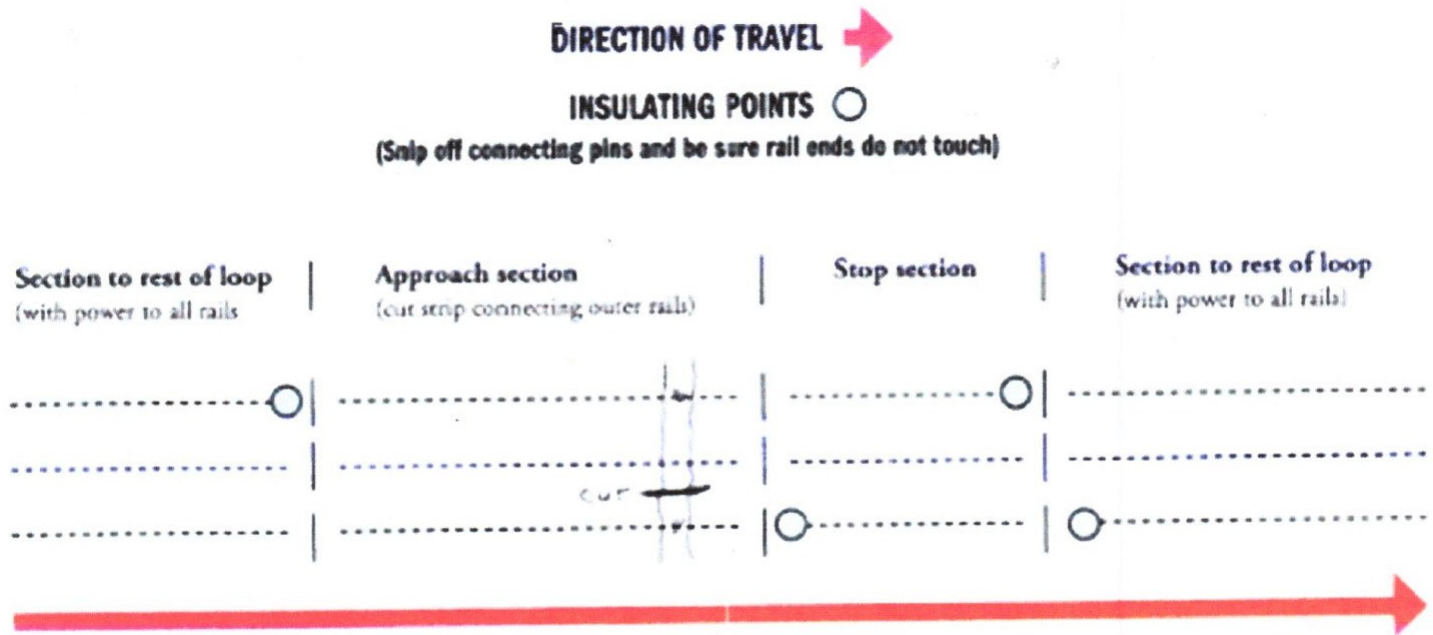
An article written by William Fuller and printed in O-gauge Railroad magazine in December 2015 was well written and the directions work very well.

I have a suggestion that makes the stop work a little better with vehicles that run at different speeds on the same setting of the transformer.

I have taken the stopping area and added 5 inches to stop the vehicles without running through the stopping track with a faster vehicle and to allow a slower vehicle to exit the stopping track in time that the other car does not crash into it.

Cut all sections to isolate the outer rails from each other in the approach and exit sections. This has to be done on all 6 sections of track.

The extra sections of track, 40 inches, gives plenty of area for the slower vehicle to exit the stopping section.



Typically, insulating a section of 3-rail track, we leave the two outside ground rails alone and insulate only the middle power rail. In this case, just the opposite applies. Do not do anything to the center power rail! We will modify only the two outer rails.

By interrupting electrical continuity in the two outer rails, we'll create what we call a "stop section" and an "approach section". A streetcar entering the stop section will automatically stop, and a second streetcar entering the approach section will send the first car on its way and will then take its place in the stop section. For this process to work the city streetcar line must have one car more than it has stops. For example, if the loop has one stop, it must have two cars running on it. If there are 2 stops there must be three cars.

To create a stop section, first snip off the metal pins projecting from the rail ends because both outside rails must be insulated at the end of the section from which the streetcar will exit, the pin coming from the next roadway section that would normally insert into the outer rail of the stop section must also be cut off. Be careful to leave a very slight gap between the end of the stop section and the continuing loop beyond it so that the rails do not touch. If necessary, insert a tiny bit of insulating tape or cardstock between the rail ends. We now have a stop section with no outer rail connection to the following roadway section that continues around the loop.

Now we need to prepare the approach section. Turn the track being used for the approach section upside down and cut through the metal strip that connects the two outer rails. Join the approach and stop sections together. One outer rail of the stop section is now electrically connected to one rail in the approach section, and the other stop section rail is completely isolated at both ends.

Finally, isolate the rail that is electrically continuous through the approach and stop sections from the roadway section that connects to the rest of the loop by snipping off the connecting pin that would normally insert into that rail. Again, be careful that the rail ends do not touch. What we have now created is illustrated by the above diagram.

Here are a few considerations for the most reliable operation.

- **Use DC motored, short base streetcars.**
- **Use short half sections for roadway trackage for the stop section.**
- **Use one or more full-length sections for approaches to give the stopped streetcar time to leave the stop section before the second streetcar arrives.**
- **Be sure that the rail ends do not touch where pins have been cut off.**

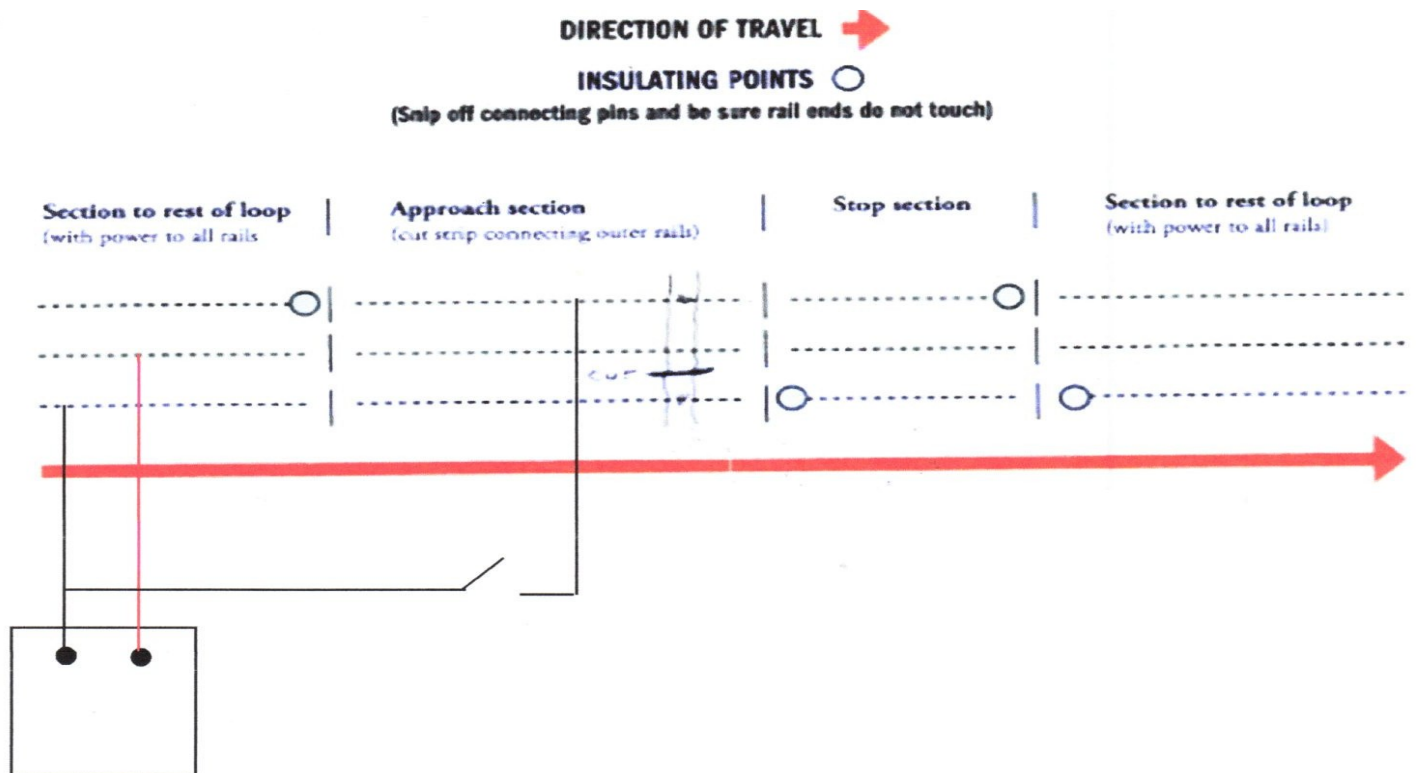
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- Because operation depends on completing the electrical circuit through wheels and the axles, keep streetcar wheels and the rails very clean. This means placing stops within reach of the edge of the lay-out.
- Consider removing traction tires from Lionel streetcar wheels and adding weight to the interior of these streetcars to increase wheel-trail electrical contact.
- If working with traditional tubular track insulae all of the outer "control" rail of the approach section from the metal ties used on most tubular track.

With only a few snips of the wire cutters and without having to purchase a single electronic control device, streetcars will stop automatically wherever we need them to and will resume their travel as soon as a second streetcar enters each approach section. Now those antsy kids will be able to disembark and enjoy the playground.



You can convert to make this track a normal run through by adding an on/off switch in line to the outer rail.



Notice that the hand drawing shows the connecting bar across the outer rails (Fastrack) is cut for the outer track (Negative/Common).

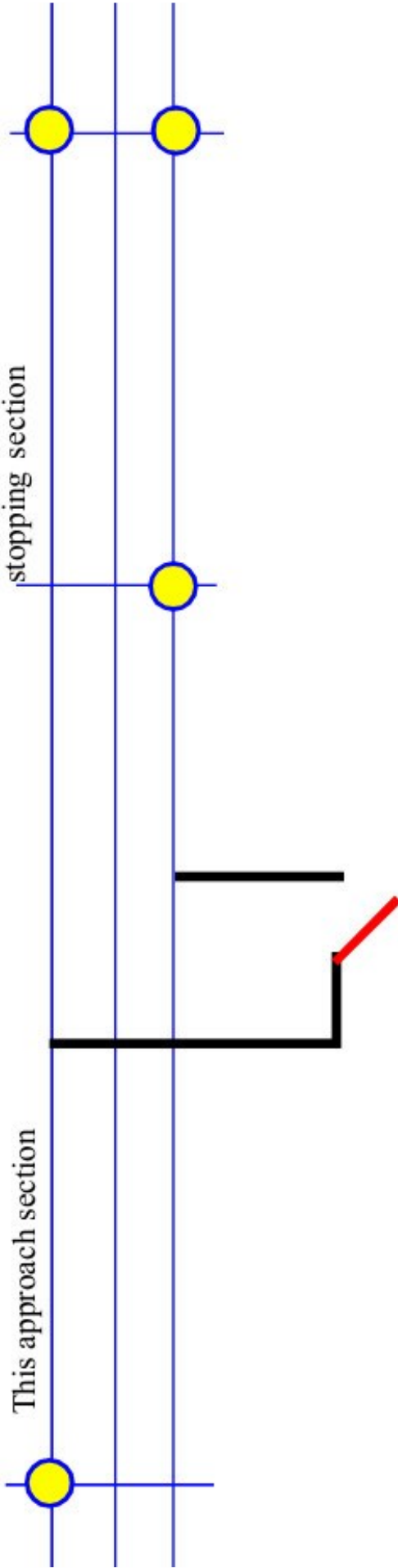
To make the run thru by adding an on/off switch simply attach a wire to the top half of the outer rail. and run the wire to a single pole single throw switch mounted in a convenient place to operate.

Then run a wire to the transformer ground (Negative/Common) post.

Turn the switch on and the car will keep running (one car in operation). Turn the switch off and the cars will stop and start, (two cars in operation).



This is plastic separations in the outer rails only. Power remains all the way through.



Above is the simple way to cause the vehicles to stop or to continue through the block

Attach a wire to the section of isolated outer rail within the approach or stopping sections and then attach the other end to a toggle switch.

Attach a second wire to the toggle switch and then the other end to the ground rail anywhere not isolated or directly to the common side of the transformer.

Keep the toggle switch in the open position and the vehicles will stop and start automatically.

Close the toggle switch and the vehicles will run through the stopping section.



Yellow truck is in the section causing the red vehicle to exit the stopping point.
The three vehicles at right angle to track are at the isolation points.



Tracks above are original

Photos and article by Frank Kammer



Track above has a section removed from the outer track connector to isolate the rails.



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We isolated the outer rails on 5 sections of track 10 inch and one 5 inch section of track.



This approach section is 4 tracks or 40 inches

stopping section is actually 15 inches



City Streets Trolley Stop Control—Orig from Loos

No-cost automatic stop-and-go streetcar operation



Remembering Charlie and the MTA

Article, Photos, and Diagram by William Fuller

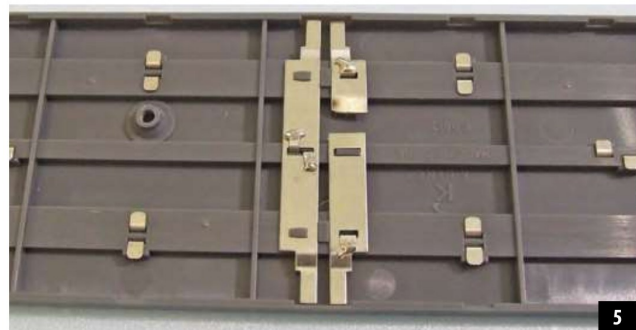
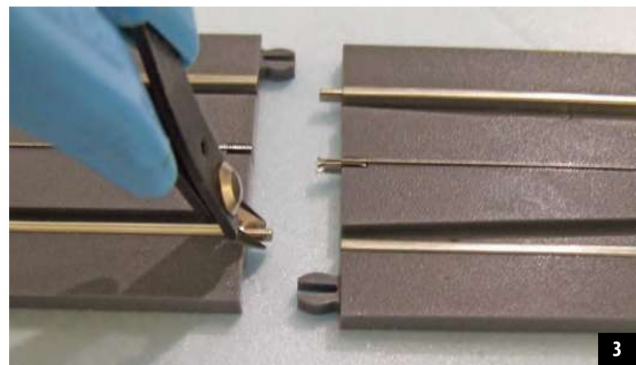
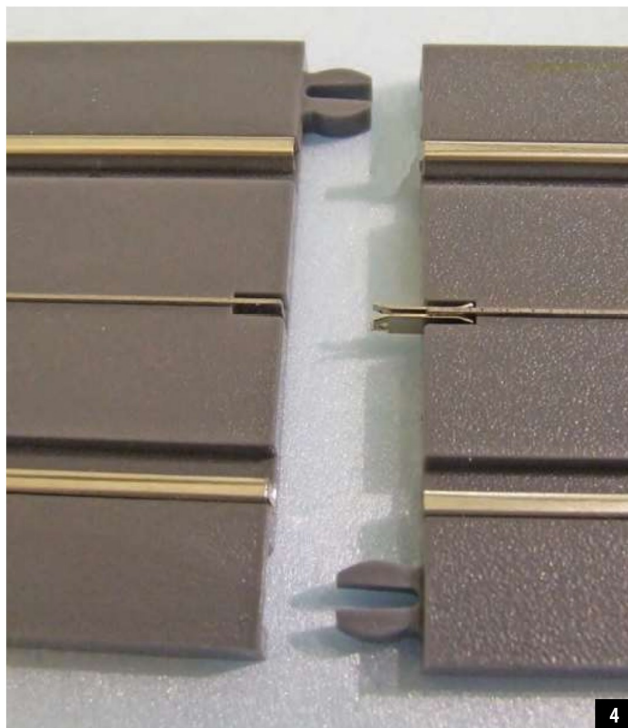
As youngsters trundle down Railroad Avenue aboard the Lionel streetcar, their anticipation and excitement over the swings, seesaws, and carousels awaiting them in the city park grows until the motorman can hardly wait until these boisterous kids hop off at the approaching stop. But what's this? The streetcar keeps right on going! The car completes its loop around the city and again approaches the park station, but it never stops. The youngsters' excitement turns to frustration, and now the motorman dreams of retirement.

Everyone starts singing "Get poor Charlie off the MTA"—a line in The Kingston Trio's popular "MTA" song from back in 1959.

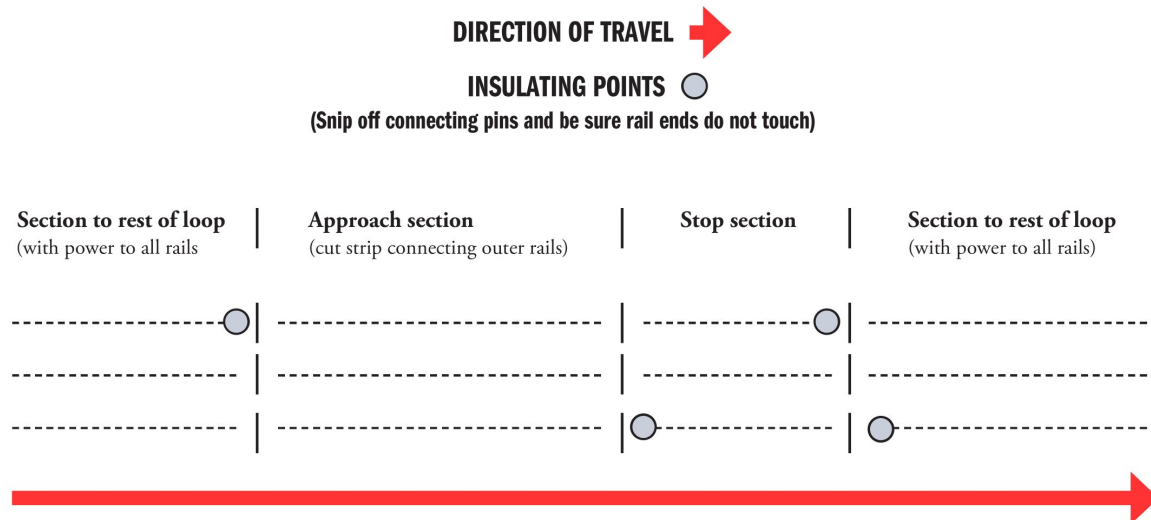
*"Now, all night long
Charlie rides through
the station crying, 'What
will become of me?'"*

What to do? We can contrive a way to automatically stop and start that streetcar at the park as well as at other convenient stops around town, and let's do it without spending a cent on fancy devices such as IR detectors. This simple technique works with regular 3-rail track, with K-Line SuperStreets, or with Bachmann E-Z Street roadway sections (Photo 1). We'll use the two brands of roadway sections, which are identical in design and differ only slightly in color, to illustrate the technique used here.

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To create a stop section, first snip off the metal pins projecting from the rail ends (Photo 3). Because both outside rails must be insulated at the end of the section from which the streetcar will exit, the pin coming from the next roadway section that would normally insert into the other outer rail of the stop section must also be cut off (Photo 4). Be careful to leave a very slight gap between this end of the stop section and the continuing loop beyond it so that the rails do not touch. If necessary, insert a tiny bit of insulating tape or cardstock between the rail ends. We now have a stop section with no outer rail connection to the following roadway section that continues around the loop.

Now we need to prepare the approach section. Turn the track being used for the approach section upside down and cut through the metal strip that connects the two outer rails (Photo 5). Join the approach and stop sections together. One outer rail of the stop section is now electrically connected to one rail in the approach section, and the other stop section rail is completely isolated at both ends.

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- Be sure that the rail ends do not touch where pins have been cut off.
- Because operation depends on completing the electrical circuit through wheels and axles, keep streetcar wheels and the rails very clean. This means placing stops within reach of the edge of the layout.
- Consider removing traction tires from Lionel streetcar wheels and adding weight to the interior of these streetcars to increase wheel-to-rail electrical contact.
- If working with traditional tubular track, insulate the outer "control" rail of the approach section from the metal ties used on most tubular track.

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