

Converting Lionel FasTrack Switches to DC Rail Power, AC Switch Power

by Jack Hess

Track Search

I returned to O standard gauge after being in HO for several years. I really wanted to work in 2-rail but I wanted track with built-in roadbed. I first thought about Atlas, and while it is a good looking track, I was not going to lay down cork, track, and then ballast. And forget about hand laid track.

This left me with a choice of either MTH or Lionel 3-rail track. The reviews I read about MTH track were not favorable. Lionel track was the other option and what I liked about it was the wide variety of pieces and that it was available from a lot of sources.

Snags

I planned my layout, bought Lionel FasTrack, and built my trackplan. I bought several locos, some used, some new. The RailKing Genesis loco was used and ran well but fast. A new Atlas RSD 4/5 ran fast also and it would just stop. I did some tests on the track and found that there were dead sections. How could sections be dead with so many connections to them? I had to disassemble the track and hammer each piece to get the rail joiners to make better contact. While I had it apart, I ran bus wires and jumpers. That ended the dead spot issue.

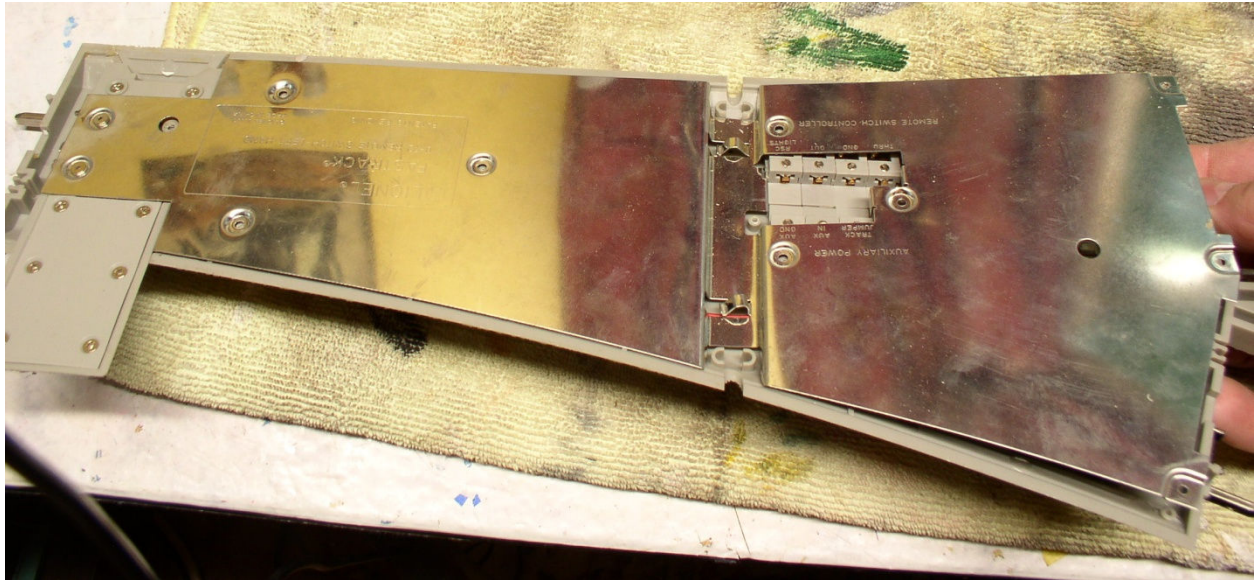
I became discouraged at the whole effort and was wondering how I could proceed. I had a forty-year old HO Mantua tank loco that I cleaned up with the intention of selling on eBay. When I gave it a test run, I found it ran better than my O scale locos. This was really discouraging as my \$1000 investment was feeling like a waste.

After thinking about this a while, I realized that the O locos all had good DC motors. So why use AC power and then attempt to convert it to DC? I concluded that the locos would run better without the electronics and with a DC powerpack. I installed DC power to the rails and converted the Atlas RSD 4/5 to run on DC.

The final issue was that the DC power to the rails and the AC power to the switch throw mechanism were causing a power overload. I went over all the wiring and couldn't find a problem. As far as I could tell, it all should have worked perfectly.

After several months of puzzlement, I realized I had an electric uncoupler installed on a siding. I tore it out and found I had it set to run on track power and from the AC terminals. This was causing the DC and AC to attempt to flow over the same wires and therefore caused an overload. The uncoupler was removed and replaced with a plain piece of track. I didn't like it anyway, as the tiny little magnetic peg was such a small target I never could spot a coupler over it.

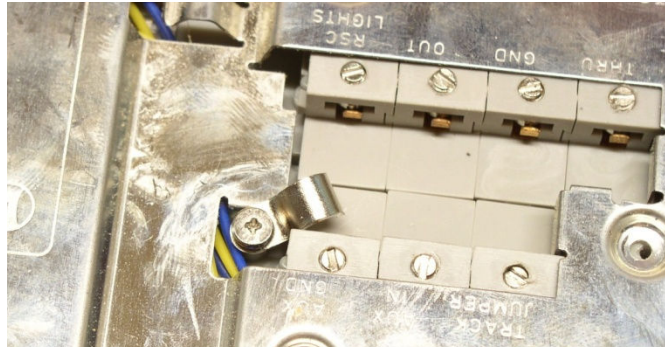
Converting the Switch



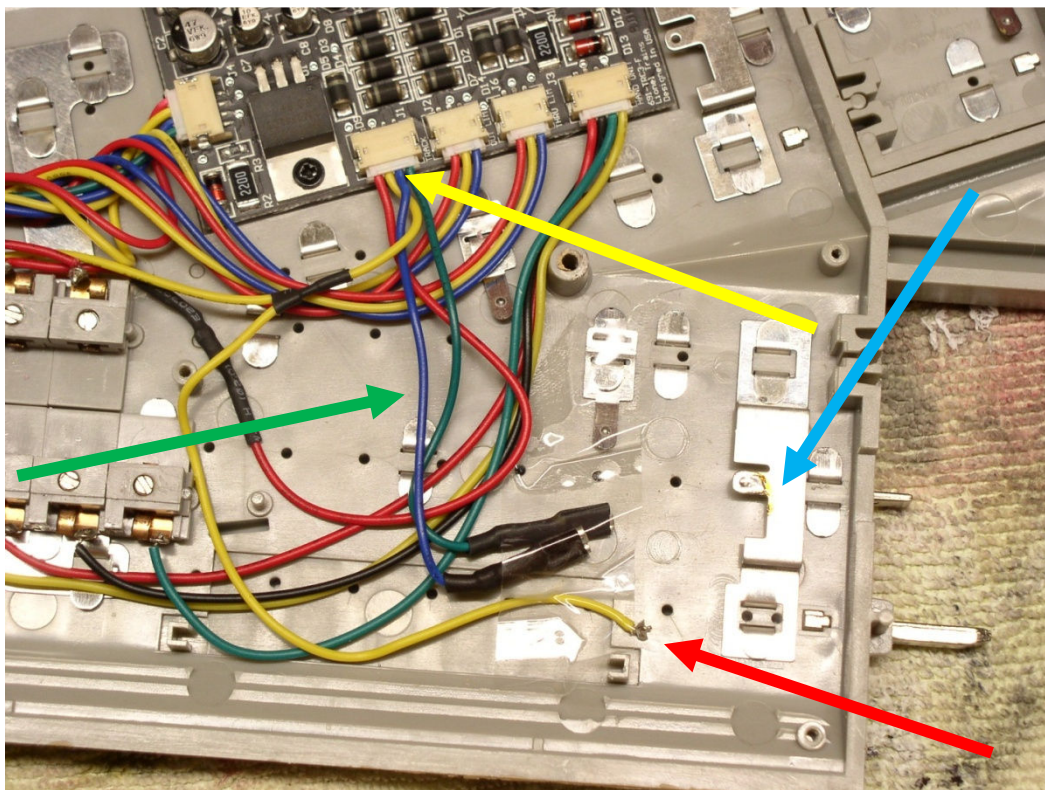
1. Turn the switch over and remove the screws on the metal plate.



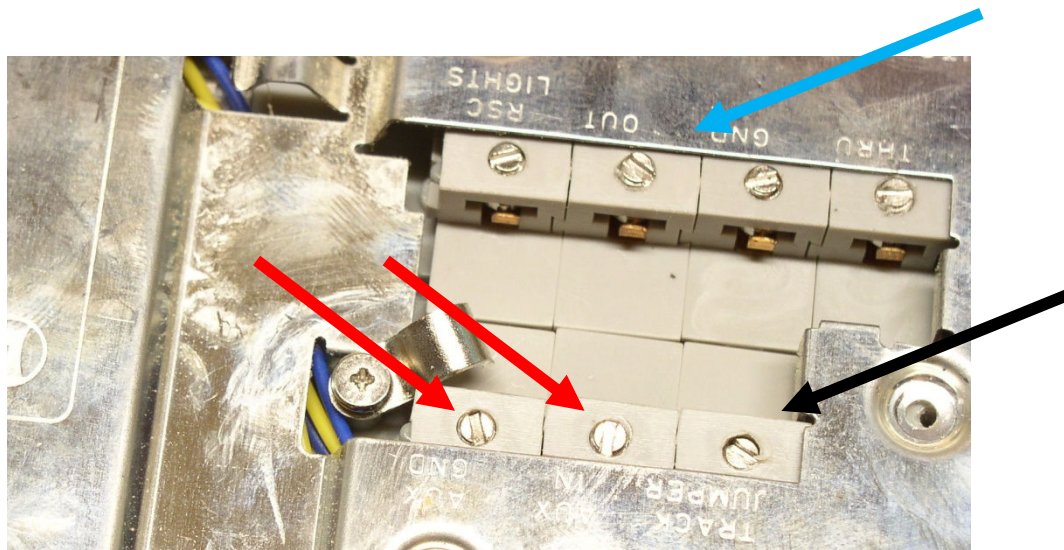
As each screw is removed be sure and retain it with a magnet, plastic bag, etc.



Also remove the metal clip which holds the switch-throw cable.



2. Remove the metal plate.
 - a. Locate the track plug (yellow arrow).
 - b. Unsolder the yellow wire from the outer rail jumper (blue arrow). If you cut the wire instead, it will have to be spliced together if you ever decide to return the switch to its original state.
 - c. Disconnect the blue and green wires from the track lugs (green arrow).
 - d. Tape all three of these to the plastic with transparent tape. Make sure they don't touch each other or anything metal (red arrow). Reinstall the metal plate. Track power will now be picked up from the track connecting on either end.



3. Wire Terminals

- a. The Track Jumper lug will not be used. If the jumper piece is installed, remove it (black arrow).
- b. Use two wires from the AC terminal of the power pack and hook into the GRD and TRH terminals (red arrows).
- c. The other four lugs (blue arrow) are where the Lionel switch controller attaches.

JH