

As part of the layout expansion, we would like to ensure that all track on the new modules has adequate power without relying on the relatively small contact surfaces of the points of turnouts to route power when the turnouts are thrown. Many of the original modules have occasional power issues when the point rail contact surfaces or the pivots get dirty. Connecting feeders to each rail section on both sides of the frog eliminates that problem. To that end, the harnesses that were supplied for each new module have what probably looks like many more feeder wires than you might expect.

The attached diagram shows an example of connecting feeder wires to a track plan with multiple turnouts. The feeder wires are connected so that every section of rail on both sides of the frog is powered from the power bus without relying on the turnout points and the point pivots to route power. There can still be an issue with getting power to the point rails (and sometimes the closure rails) of a turnout, that will be discussed in the writeup by Steve Jackobs. His instructions for soldering a short jumper underneath each closure rail to its adjacent stock rail will increase reliability. If, after while, power routing from both the points contact with the stock rails and the pivots become unreliable, we can solder a short jumper across the pivot from above.

The other issue we need to address is rail expansion and contraction with temperature changes. With the new rigidly mounted rails at each side of the modules, there is no way for the rails to move slightly as they expand and contract when they get hot or cold. As shown in the attached picture, we want to cut a 1/32" gap in the rails of the track that is continuous from once side of the module to the other. We do not need to cut a gap in rails that terminate on the module. Once the gap is cut, ensure there are feeders on both sides of the gap.

One other item to ensure good performance, is to solder all of the rail joiners connecting the rails. You shouldn't need to use much solder for that and always use the soldering iron and feed the solder into the rail joiner on the outside of the rail to avoid lumps of solder that could interfere with the wheel flanges. A drop of flux on the rail joiner before you solder will help ensure a good connection.

You should have received adequate feeder wires with your wiring kit. If you need more or need additional Scotchlok connectors for the power bus wires, let me know.

Any questions, feel free to contact Joel at [jrd@prismnet.com](mailto:jrd@prismnet.com)

Front (outside edge) of module

