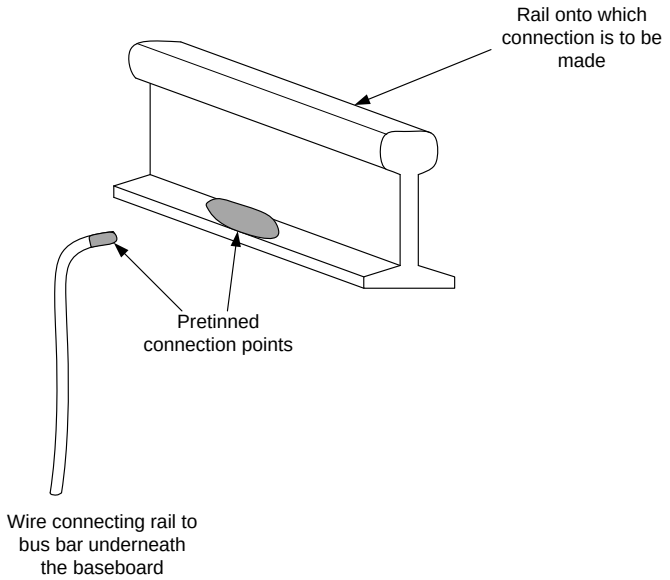
How to connect power feeds to the track,

By Colin Tanner-Tremaine

I have been asked this question many times and have given two demonstrations to my local model railway club of my preferred method which I describe here in. It is simple and neat and when done properly is difficult to find when touched up and ballasting completed. The photo below shows one of my connections on my home layout, not the best of my work but it was convenient and accessible to photograph. When I get round to touching it up with a bit of paint it will be hard to find.

The track shown is code 100 PECO Streamline flex track and the wire soldered to it is old telephone wire, single stranded copper of approx 0.6mm diameter. I have also made connections to track from Hornby, Atlas and Roco. This size of wire will conduct 5 amps continuously so in this application will be more than enough, as the largest loco only draws about 500mA. Under fault conditions, i.e. short circuit across the rails the DCC command station will, or should trip at 5 amp or a lower current.



Apart from the track you will need the following items;

Power feed wire, solid copper telephone type wire of about 0.6-0.8mm diameter, insulated or not

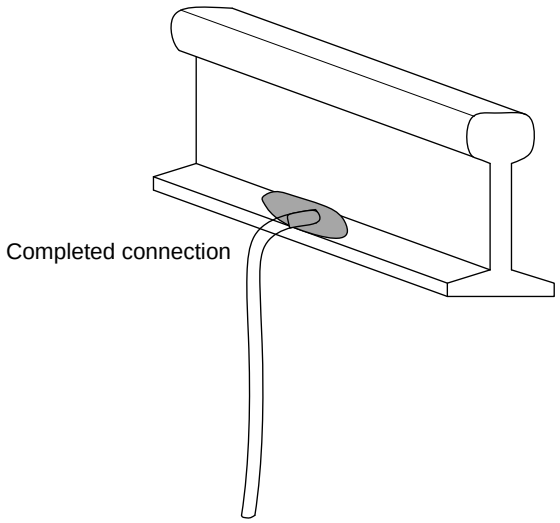
A good soldering iron 60 watt power with flat or round bit narrower than the spacing between the ties/sleepers

Solder with resin core flux

Drill and 1 mm bit suitable to drill through the baseboard material.

Then proceed as follows.

1. Clean the track where you want to make the connection.
2. Drill a hole next to this area so that the wire dropper will come up close to the rail.
3. Prepare the wire dropper, make it long enough to reach to the bus bar underneath the layout, remove any insulation leaving bare copper for 10-15mm.
4. Bend over about 3mm at 90º and ensure that it will fit where you want to connect it to the track.
5. With the hot soldering iron tin the track at the connection point and tin the end of the wire
6. Apply a little solder the track and when it runs place the wire on it and when the solder has run and made a nice silvery blob remove the iron. This should be quick and only take 2-3 seconds.



It is important to have a suitable clean place to make the connection and to have a resin cored solder as this will enable the solder to quickly melt and run. Most important is to have a soldering iron with sufficient power to rapidly heat up the track to solder melting point before the adjacent sleepers start to melt!

Obviously the bit in the soldering iron should be clean and good for rapid heat transfer and not too wide for the sleeper spacing.

Do NOT try and solder the joint without pre-tinning the two areas and always heat the track first as it has the higher thermal capacity before applying the wire.

Have fun, if you do not enjoy what you are doing either learn how to enjoy it or go and do something else.

Any queries or comments you are welcome to contact me at +27 82 828 0665 or cttremaine@mweb.co.za