

Tip: Cutting and Soldering Marklin K Track To Make Power Rails and Contact Tracks

Date: 06-12-2007

Hi All,

From time to time the topic of soldering wires to Marklin K track arises and I thought it was time I documented how I do this to make contact tracks and power rails. Please note I use mainly the 2205 flex track. I solder wires (1 red to centre studs and 2 brown, one to each rail) to each section of track and the wires are then soldered to a power bus system under the layout, this gives me very good reliability and power distribution.

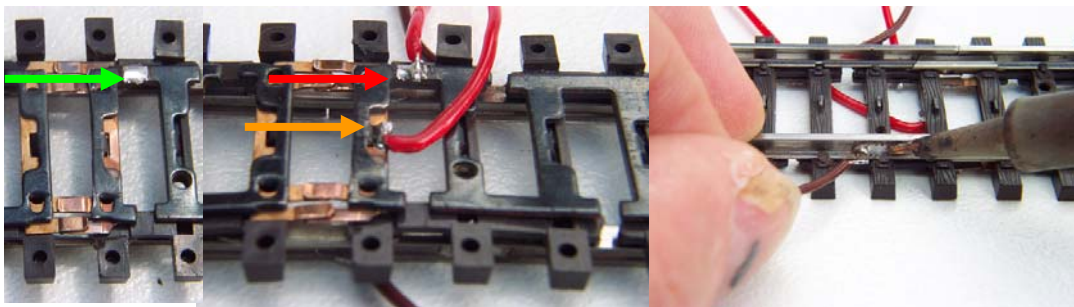
Tools and materials

Dremel motor tool with flexible shaft and accessories, safety glasses, 400-600 grit wet and dry sandpaper, wire stripper, side cutters, wire with 0.19sq mm cross section with various colours, Bakers Fluid (an acid flux), soldering station with adjustable temperature and various tips, 0.8mm solder 60/40% Tin/Lead, super glue, steel rule, scribe, small round file and Marklin K track.



Power supply tracks

For the centre studs I solder a red wire 400mm length at either one of two places.

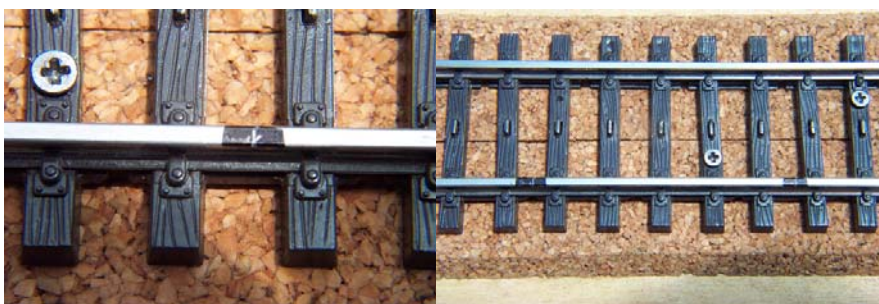


For the outside rails I solder a brown wire 400mm length at the middle of the track section on both rails. (See method under contact track section)

The green arrow shows where I have used a small round file to remove the black coating back to bare metal then I have tinned it with solder ready for the red wire (see red arrow), this is the preferred way and can be done anywhere along the track. The second option is to solder the red wire to the copper section at the end of the rail in the middle (see orange arrow).

Contact track

First decide where you want your contact section then using a black marker pen, mark where you want to cut the track. Scribe a line through the black mark as this makes it easier to see. In the second photo you



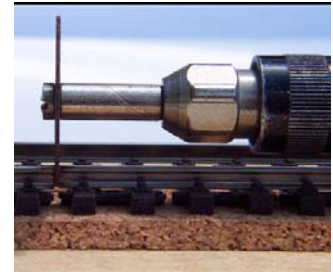
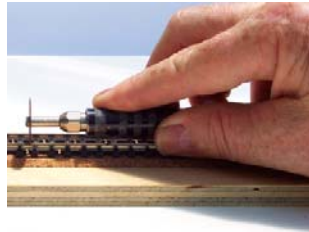
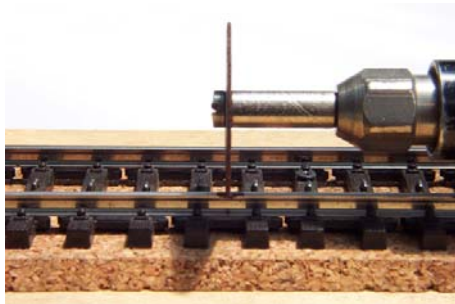
will notice there are 5 sleepers between the black marks, this is approximately 35mm for the contact track.

Note there should be a tie on each sleeper as super glue will hold the isolated rail contact in place at these points.

Tip: Cutting and Soldering Marklin K Track To Make Power Rails and Contact Tracks

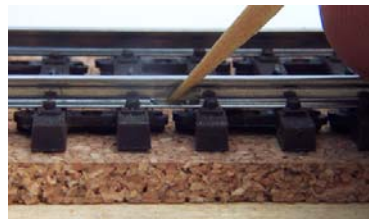
Date: 06-12-2007

We are now ready to cut the rail using a Dremel motor tool fitted with a flexible shaft and a 409 cutting disc mounted on the 402 mandrel inserted at the end of the flexible shaft.



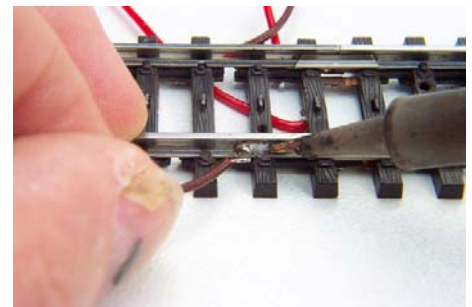
You will notice I have the cutting disc perpendicular to the rail surface and the handle of the flexible shaft is above and clear of the rail, this allows me to cut the rail very straight. The middle photo shows how I grip the handle of the tool, and the photo at right shows the completed cut with the handle still clear of the rail.

Next you have to rough up the place where you want to solder the wire using a Dremel motor tool with a small round tungsten carbide cutter e.g. 9905 or similar. The second option is to use 400-600 grit wet and dry sand paper which is more difficult.

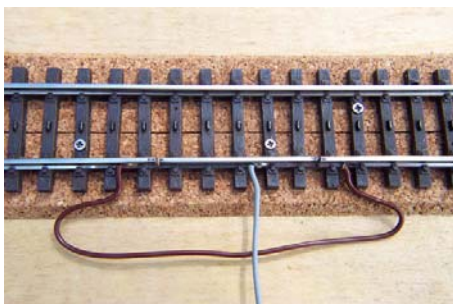


With a tooth pick add 1 drop of Bakers Fluid (this is an acid flux) to the spot you have just roughed up. With a soldering iron set at 350 Deg C using a round or chisel tip apply heat to the area and add a little solder, most of the flux will boil off and it's important not to use too much.

Take the pre tinned wire (3mm length) bend to an angle of 60-70 deg, hold in one hand and as you heat the small solder blob push the wire into the solder, remove the iron and hold wire until solder has set/cooled. Just make sure you don't heat the rail too long or you will melt the plastic ties. With practice it becomes very easy.



Note I have shown that I have soldered a brown wire on either side of the isolated contact track to improve the ground and this would go through holes and connect to the bus or just remain as a connecting loop underneath. The contact track wire would also go through a hole and connect to an s88 track detector.



The last thing to do is apply super glue to the ties to hold the contact rail in position. The rails on either side of the contact rail should also have approximately 2 ties glued to maintain the isolation gap.

For centre rail contacts see [Cheap s88 Contacts](#) .

Tip: Cutting and Soldering Marklin K Track To Make Power Rails and Contact Tracks

Date: 06-12-2007

Extra Tip on joining K track



When joining K track it's important to get the copper finger contacts to join correctly, this is easy when you can turn the track over to see the result (left photo).

Where I can't turn the track over to inspect the track joins I lift the track a little and insert a mirror which allows me trouble free inspection of my rail joins (photo at right)

As always enjoy your hobby.