3: Track Laying, Part 1

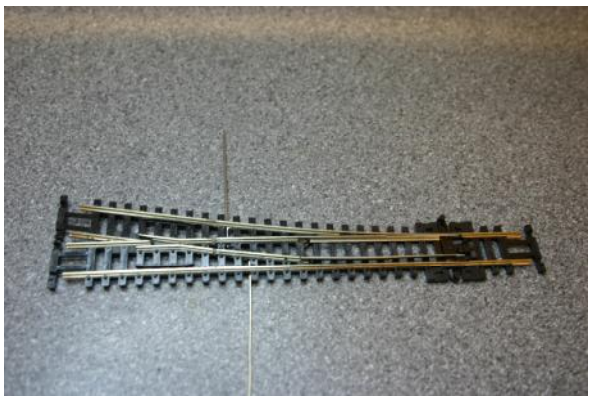
Track Bed

The track bed is 3mm cork sheet: this was purchased in 900x600mm sheets and disappeared very quickly; and that's after laying it only where needed. The cork is glued down (PVA) and joins sanded flat.

Tracklaying Principles

The track is normal Peco code 55. This has "electrofrog" points and a very realistic appearance. They can be used "as is"; however to promote reliability they have been modified to be "DCC friendly". Details are available on the website; this is entertaining for the first point or two, but straightforward thereafter.

Lesson 6: don't use "lead free" solder. I'm sure it has excellent environmental benefits; unfortunately it also leads to molten tiebars because it both melts at a higher temperature, and doesn't flow well. The soldering operation MUST be completed quickly – say 1 to 2 seconds max.



The track laying was stalled for a long time, due substantially to a lack of courage. I am indebted to Malcolm Alberry for visiting and showing me how it's done; progress has now picked up somewhat.

The track is glued down, using EvoStik. This is used "wet" rather than as an impact adhesive. The track is positioned using a mixture of rulers, straight edges, "Tracksetta" Templates and guesswork. Each piece is done separately: plan where the piece needs to go, cut to size, bend; then, only when ready, glue it down. The track is held in position with drawing pins until the glue has set.

Point motors will be driven by SEEP point motors. These are a small solenoid motor assembled onto a PCB, and with an integral switch. The switch will provide frog power. The motors are operated using DAC10 accessory decoders.

Dropper wires are soldered to each piece of track, and connected under the baseboard using crimp connectors. The layout has distributed power management, so rather than having one DCC track bus it has several each with a 3A current limit. This means that the track wiring doesn't need particularly high current capacity.

How long will this take?

I'm guessing that laying and wiring all the track will take around a year to complete. The railway has, according to simple calculations, track whose cost is comparable with a minor family holiday; three members of the family have noticed this detail!

Progress: April 2007

The first track laid is the two storage roads under the oil depot. This includes all the important constructs: straights, points, and curves. This track is hidden; any "cosmetic" issues won't matter and I was able to learn how to sort the cosmetics out before breaking out into the open.

Track now reaches around the (foreground) corner and into the hidden section under Portsmouth station. To do this, the baseboard for Portsmouth has been temporarily removed. Michael asked about disconnecting the wiring. The connectorised version of a "chocolate block" strip has already come into its own at this point – the entire station disconnects by pulling apart one connector. All of its block detectors, point control, signals etc are powered by modules up on the station itself. This is what DCC is supposed to be able to achieve!

Track laying stops here, until I've sorted out the wiring principles and made sure that it all works. I have been able to run trains, but with very temporary power connections!

In principle, the reverse loops under Portsmouth station can be added at this stage. Their wiring shouldn't cause any grief…. However start with the basics and work from there. All the electronics to power the reverse loops is in place, but I will take it one stage at a time.

Rolling Stock Update

By way of a quick update here is the rolling stock I have available for testing:

Locomotive	**Decoder**
Kato Eurostar	DN163K0B
Farish class 94xx 0-6-0 PT	DZ123
Farish class 08 shunter	Not yet!
Farish Class 47	Not yet!
Farish class 66	Not yet!
Farish class 159 DMU	Not yet!

It's clear that I need to invest some more time in decoder installation, to get the "test fleet" ready. The class 159 DMU was a late addition, but I wanted 75' coaches to test cut-in on tight corners… it turned out to be a red herring. It's a split frame chassis, though, and I don't yet know the best way to put a decoder into it!