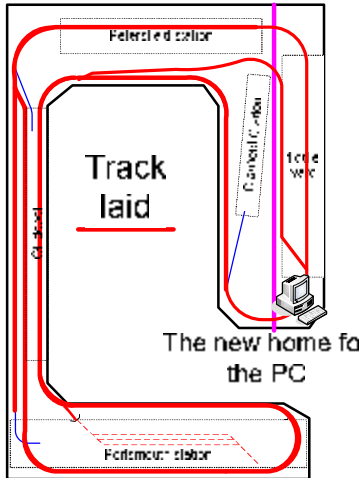


11: Preparing for Computer Control



Again, no new track this month: the plan is to consolidate with what's there already, and establish that it can be operated reliably.

There are several reasons for this:

1. If I've made mistakes, why repeat them everywhere else?
2. I haven't yet settled on a choice of couplings, and hence uncouplers; all the remaining track will need them.
3. I don't know if the "stop" detection zones are big enough. (I hope they are, because train lengths will have to shrink if not).
4. I'd like to do something different for a while!

A Home For the PC

The South Downs Railway will, in the not distant future, be computer controlled. A good starting point is to have somewhere to put the computer!

After long deliberation, I concluded that a laptop would be needed. Many users of automatic train control software use 2 screens; a laptop already has one of those. It can be kept for safety in the house, and the computer design (which will take time) can be worked on in the house.

I also concluded I'd like to be able to see the railway while using the computer. That meant the laptop had to sit over the fiddle yard (see above). A TV wall bracket would hold the laptop but woodwork was needed to support the bracket.

I've ended up with a very rigid panel for the laptop, and with space for a second monitor next to it. Along the way I've also put in uprights to

support a backscene along the back of the fiddle yard.



Also added is a pull-out shelf for the keyboard and mouse, and a shelf behind the fiddle yard for laptop power supply, cordless keyboard/mouse adaptor, USB hub etc (marked in red below).

Michael assembled a 2 drawer chest of drawers that sits underneath with a printer, and its consumables. We've at last all ready to go!



I've added a new LocoBuffer under the fiddle yard, to which the PC connects. PCs don't have serial ports any more, but a USB serial adaptor works fine with all of the software needed.

Loconet-Checker

Stefan Traschler's excellent "Loconet-Checker" application was written to debug nearly-working LocoNet installations. For details, visit

<http://homepage.hispeed.ch/trachsler/>. This application was instrumental in establishing once and for all that early BDL16 block detectors didn't always report messages, for example.

LocoNet-Checker isn't used to control a layout. But it can be used to diagnose a layout, and to configure some of the modules used on it. It provides a "user friendly" way to configure several common modules including Digitrax command stations, BDL168, PM42 and DS64. Never again is it necessary to set the option switches for these units by hand. Simply get them on the screen and make changes.

JMRI

I mentioned in the last newsletter about DecoderPro. This is a part of the JMRI suite and is an excellent way to maintain a locomotive roster.

JMRI also has other modules: for example it has a way to script automatic operations, and it has a control panel module called "PanelPro". I'd wondered about using PanelPro to create a control panel for the railway but I've decided a more conventional DTM30 panel should be the next stage.

Automatic Control

It was always the intention that the railway would be controlled automatically. There are a few PC programs that do this, but the program of choice used by a number of railways I know is "Railroad & Co". See www.freiwald.com for details.

"Railroad & Co" is a complete computer control application. It enables the railway to be drawn, displayed and controlled graphically. Then it adds a way to control train operations to automatic schedules, so that trains run automatically from source to destination. The train are automatically deconflicted from each other using block control.

What does the human then do? My rather limited experience from other peoples' railways tells me there will still be plenty of things to do. There are several choices:

1. Act as the dispatcher on the PC;

2. Drive a train manually on a schedule. The computer selects the points, but the driver needs to obey signals;
3. Get trains turned round at destinations;
4. Sort out problems (e.g. stalled trains) as they occur;
5. Watch the trains go by!

Unfortunately, Railroad & Co is about to undergo a major update to version 7. The documentation seems to show a new way to enter information for blocks, and I don't want to start now only to have to re-enter it all. So I'm waiting for the official release, probably before Christmas. The PC to run it on is ready; the railway is ready!

Stuttering Thomas

(a.k.a PM42 Configuration)

Thomas the Tank Engine has been "stuttering" on simple trackwork, with the PM42 tripping out constantly. The class 08 shunter seems to have the same problem; other locos don't suffer in the same way. But Thomas runs fine on a track not power managed by a PM42; so is the PM42 configuration at fault?

The PM42 has 4 power management channels. The trip current can be set for the whole board, but the reaction time of the detector can be individually programmed. I'd had them set for 3A trip, standard reaction time. The PM42 trips first – never the booster – as is expected.

Changing the detection speed didn't make a difference. However changing the trip current to 4.5A seemed to cure the problem - at least on that PM42. The PM42 still always trips before the booster.

I will need to change the others and re-do the "coin" test to make sure they robustly trip before the booster. Before that I'll research what "recommended" settings there are for these units. The ones controlling reverse loops may have less flexibility in their settings.