

Sundry Snippets 15... Reliable Electrics - Part 2

Now, using the self-explanatory 'tool' in *Figure 4*, let us wire a crossing formation to our wafer switch. *Figure 5* represents a typical crossing from the days when tracks were laid 'as required'. There *were* some cast crossings in the very early days, but pre-fabricating a formation on the factory floor was some years away. Anyway, keeping away from historical arguments, this one will serve to illustrate the system.

You will see that there is a code, which shows sections created by rail breaks. The first task is to identify all the sections which are always positive or negative, and wire them to their respective busbars. This leaves 5 switched sections, S1 to S5, which can be positive or negative and will be controlled by our (in this case) two wafer switches, as was shown in *Figure 3* last time. These will need four selections for four possible routes. So, we would purchase two of type 3/4, - 3 pole, 4 position, i.e. three inputs to be divided between positive and negative as required, and 12 outputs – four to each input.

Now, solder one wire to each of the switched rail sections and bring all five back to the switch – usually mounted on the panel diagram. Check that you have nothing switched on that should not be and that there are no tools, solder, and so on across the track. Put on enough power to light the test bulb *Figure 4*.

Select the first route, A – B, and slide the wheels along till the light goes out. This will be on section S5, which, on this selection, will be negative. Touch your wire from S5 around the outputs on the switch until the light comes on, solder the wire, and push the wheels further until the light goes out again – on S2. This is also negative, so find another negative output around the switch and solder wire S2. Press on further and the light will go out on S4, which will be negative, but also on S5, which this time will be positive.

Solder S4 wire, take a short bridging wire and solder to tag S5, which is now an 'open' contact (we have moved the input away from it). Touch round the positive contacts until the light comes on, and solder. Carry on bridging S2 the same way and make the next selection D – C, which will make S4 and S3 positive, and so on. As long as you are systematic and are not interrupted by phone calls or calls of nature, it works, and cannot cause you odd feedbacks, because everything you have *not* selected is 'open circuit'.

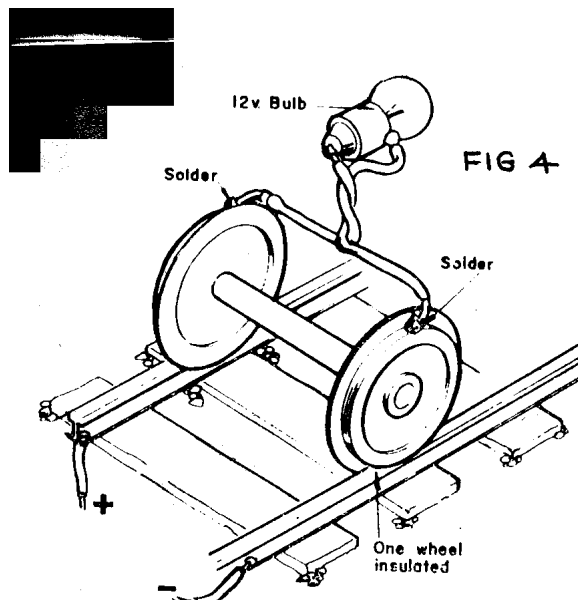
Well, there we are. It *was* fun, wasn't it?

Turntable

One of the few downsides to Scalefour modelling is that it is not very forgiving of butt joints, i.e. baseboard joints and turntables. We can stabilise baseboard joints by various means, but a turntable *moves*! I have tried all sorts: discs with notches, adjustable notches, micro-switch cut-outs, and so on, and they all work at home, after a good fiddle. But give it a ride on a Belgian motorway! I have evolved a system based around an idea pinched from the *Pulborough* S4 lads. Their turntable worked and lined up absolutely every time. But it did not lead to a selection of sidings, and it did not rotate all the way round. It went through 180° and back again and the stops were solid and fixed.

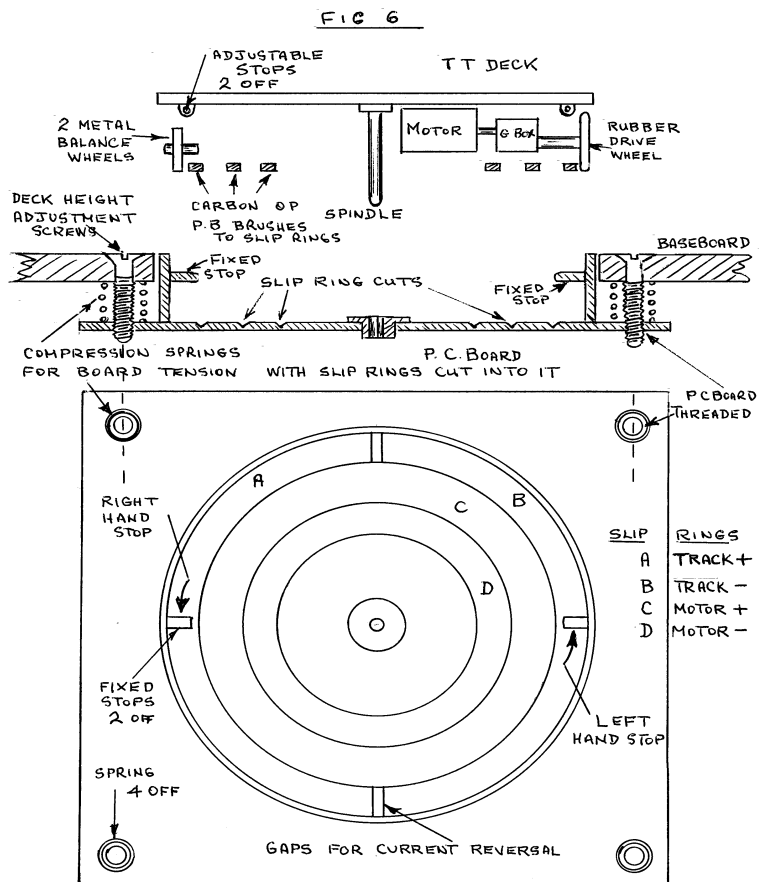
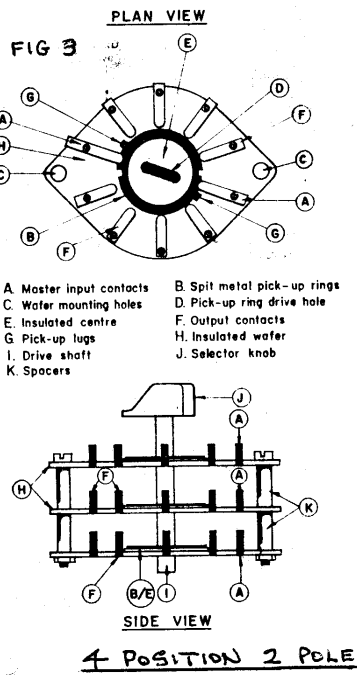
So now I have a specification:

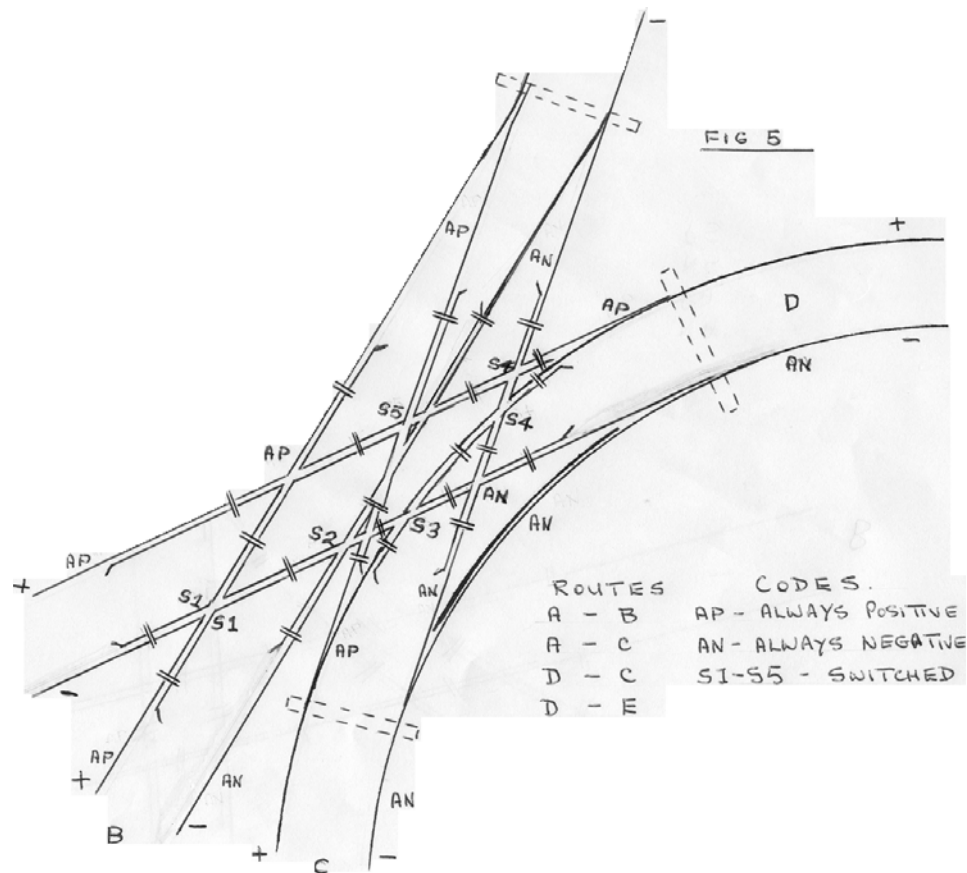
- 1 - there are no fancy locking devices;
- 2 - there is 180° operation;
- 3 - the table is the first part of the layout to be designed *and* installed;
- 4 - the rails are laid to the table *after* the stops have been established;
- 5 - the whole assembly is removable and adjustable for height *Figure 6*;
- 6 - the drive is by a rubber wheel at the side of the table, with the motor under the decking. This allows it to 'slip' against the stops and to be lifted out of the pit for easy maintenance.



Conclusion

Despite all the above, our old friend Murphy is always lurking somewhere. He is at his worst on the first session of a show – the post-travel session – but seems to subside after that. I claim nothing as a cure-all, but hope these suggestions might minimise some of the problems.





Above, repeated for convenience from last time. Figure 3.

Opposite, Figure 6.

Below, Figure 5, the wiring for the picture of *Castlebrook* on Page 22 of *Scalefour News* 122

and that baseboard join mentioned last time?

It runs across the picture, right through the centre of the diamond crossing.

Ah, well...