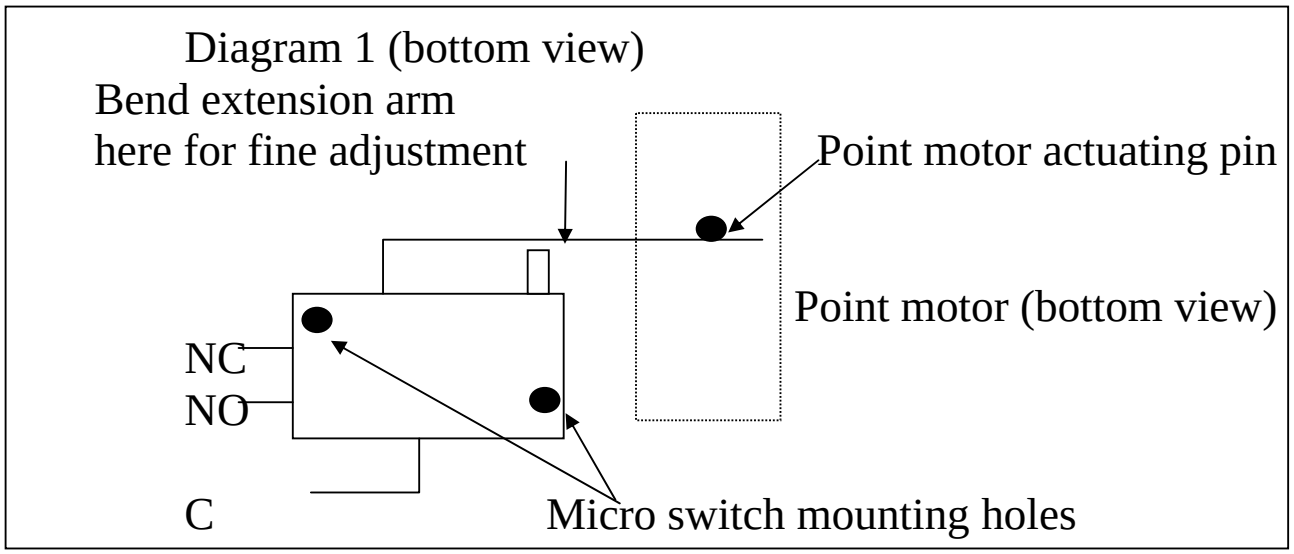
IRREGULAR FEATURE

Where are you going?

If you have points that are hard to see, or worse still completely out of sight it can be difficult to tell which way they are set, or if they did move at all. There are ways around this problem. One is to buy the small single pole double throw (SPDT) switches that clip to the bottom of the solenoids (PECO SL13) to switch an indicator light on your control panel. These for my liking while robust are a little “agricultural” and not always reliable. But what if you want to switch the frog polarity as well? Then a double pole double throw (DPDT) is required, these are also available (PECO SL15) they do work much better but with the quality comes the price.

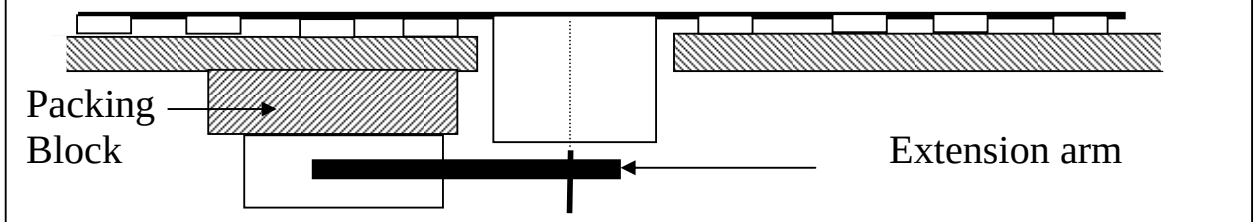
There is a better and cheaper method, fit a micro switch to the bottom of the baseboard in a position such that it will be activated by the shaft of the point solenoid then use that to operate a relay(s) with as many outputs as required. I found some 6PDT that’s six independent switches, enough to switch both rails to the proper line plus signaling plus outputs for isolating sections (protection against a wrongly set point) a 4PDT would do adequately, but spares never hurt and can be wired in parallel for extra current capability.

You can buy these parts new from your local electronics store but unless you have an overflowing bank account, lets face it, how many of us do? I would recommend that you visit a salvage / secondhand store dealing in electronics It should cost about $1 each for the micro switches and around $1 each for the relays. These parts are removed from all types of machinery like photocopiers, plotters, printers, food dispensers etc. How soon technology can make a perfectly good thing obsolete! They are checked and usually in very good condition. Being that they are from this type of equipment they are quality items designed and built to operate millions of times and should have plenty of life left. They will probably outperform and outlive the standard railway type switches anyway!



The best types of micro switch are the ones with an extension arm as these are the easiest to adjust. (See diagram 1) Click them a few times to make sure they move easily (they must not interfere with the operation of the point) and make a click, those that don't click may be set up as a hall effect trigger, put them back and reselect. If possible get the ones with three connections NC/C/NO (normally closed, common, normally open) If they are mounted on any brackets take these too as sometimes it makes for an easier installation.
Mounting the micro switches shouldn't prove too difficult, as with the extension arms there is a range of adjustment. Try to mount them so that they are in the resting or off state when the point is in its most used position (or use the NC terminals) this will reduce power drain

Diagram 2(side view)



Next edition I will describe the electronics side.

Catch you down the track…Tony Mikolaj.