



## Buckingham Air Operated Pointwork

By John Tomlinson

First Published in

Newsletter 76

March 2009

The point work on the old Gauge One Garden Railway was conventionally operated by point lever and Roding and required adjustment before each running session, which became a chore. I came across air operated point work on a Gauge "O" outdoor railway which seemed to be the way forward, no moving parts apart from the air switch and cylinder and no electrical contacts.

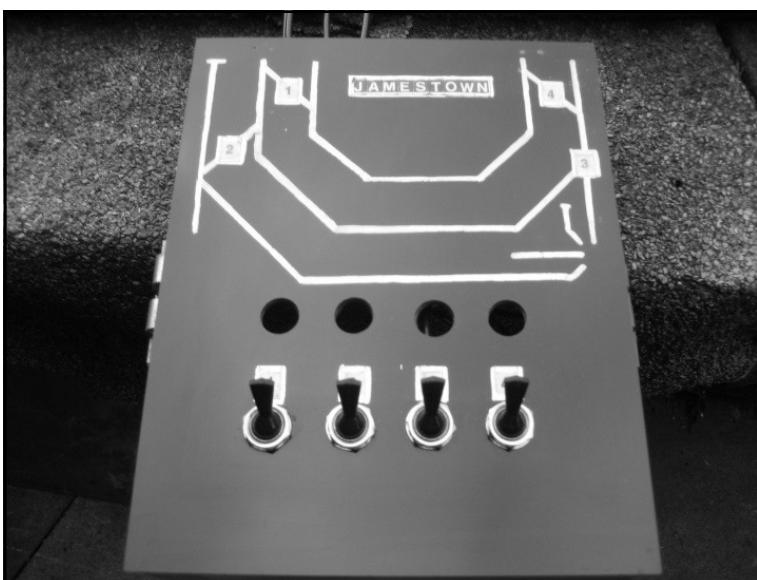
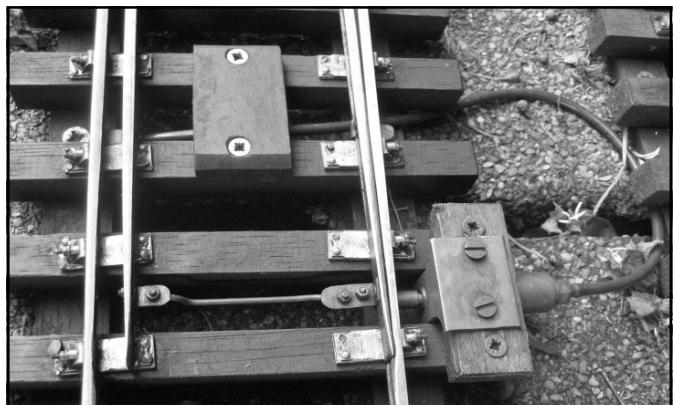


Four "Delair" cylinders and air switches were bought from Brandbright at the A G M, these were built into four turnouts and placed in the garden on the baseboard a year or so before they were connected to an air supply. When I came to operate them I found they jammed on the return stroke. The cylinders are air powered on the outward stroke with spring return.

When stripped I found that the spring had rusted through and broken causing the jamming, I wound a new spring and increased the piston rod to 1.5mm diameter and greased the internals, since the mods the operation has been reliable. The Delair cylinders are fitted parallel to the running rail and operate via a bell crank.

The "Easyair" cylinders are mounted at right angles to the running rail and operate directly on the tie bar. Four of these were obtained from Brandbright, these have a much larger piston rod and appear to be more robust all round. The Easyair cylinders replace the Delair units which I believe are no longer available.

The pointwork is operated from one signal box at the moment in the Jamestown North position, as you can see from the track diagram the layout is simple.



There will be two signal boxes when the layout is completed; Jamestown North controlling the RHS access to the outer bay, turntable and shed, and Jamestown South controlling the LHS the inner bay, head shunt and access to the yard.

The spare holes in the panel are for directional air switches to control the signals. This is a convenient way to operate the signals with the points, no interlocking and not fail safe since the main line signals will be off when the air supply is off.



The air supply comes from a portable compressor which is about the size of a toolbox so can be easily carried; the system operates at 40psi and has a temporary electricity supply at the moment. The panel is hinged and can be opened to work on the pipe work as shown in the middle-left picture.

The middle right shows the weather protection cover which clips into position between running sessions, the compressor lives in the garage between sessions.

Finally the bottom picture shows the insignificance of the air cylinder (Easyair) compared to a point.

