

New N Gauge Layout

This is the current proposal, representing ideas agreed at various meetings, but may be subject to change. We hope to start work in the small room after the 2019 exhibition (but may start experimenting before then). This does give us an extended opportunity to get it right in the planning stage.

Objective

The layout is to be used for club running and for exhibitions.

For club running, it will have four circuits, allowing four members to run trains at the same time. Each line will be switchable to allow DC and DCC.

For exhibitions, the layout will be readily disassembled and assembled.

Setting

The layout will be set in Lancashire in the "BR Blue" era (TOPS, small logo) (obviously in the club, members can run what they want). It will not be electrified (though we may look at that in the future).

Trackplan

The basic trackplan is two double-track loops, at two heights.

The "up" direction will be from right to left when looking from the front.

Upper level

The upper level will be a simple double-track circuit, each track having its own fiddle yard, with no connection between the two and no pointwork on the scenic side. It will be designed to be DC operated, but switchable to DCC (however we do not intend to get hand units for the upper level until there is a need to do so).

There will be twelve points. The scenic section will feature semaphore signalling (probably one signal in each direction).

The upper level will be 4" above the datum line. The upper level fiddle yard will be partly over the lower level fiddle yard.

Lower level

The lower level will be a double circuit, but will feature a station with four platforms. It will be designed for DCC operation, but will be switchable to DC (but only for one line through the station and fiddleyard in each direction to keep wiring simpler). The fiddle yard will feature three long loops in each direction, each capable of holding two or even three trains each, which will allow enough trains to be held whilst running with DCC at exhibitions.

There will be twenty points. The scenic section will feature colour light signalling.

The lower level will be on the datum line.

Baseboards

The layout will split into six boards. This will comprise of 4 boards at approximately 4' by 4', placed end to end to give a total size of 16' by 4', numbered 1 to 4 from the station end, and two boards for the upper fiddle yard, numbered 5 and 6 from the station end.

The two end boards, 1 and 4, will be 4' by 4'2", and will sit on top of trolleys of the same size (but it will be possible to take the board off the trolley to negotiate the stairs). When disassembled, the inner sections, 4' by 3'10", will slot into the trolleys under the outer sections for easy transport.

The trolleys will be of similar construction to the boards, and could be used for storage, for example for transformers.

The trolleys will have wheels of about 6" diameter (if possible), but will also have feet that can be dropped to allow levelling. The two inner sections will each have two adjustable legs.

Board 3 will be 2" lower, allowing for the river to be below the datum line.



The backscene will rise to 18" above the datum line.

These four boards will be open plan. They will be constructed of 18 mm ply for the four sides, and 9 mm for internal struts and trackbed. It may be desirable to have thin vertical pieces running under the trackbed to avoid sagging.

These boards will be 16 sq ft, slightly larger than Euxton Junc boards (15 sq ft), so will be comparable in weight.

An additional two boards, each approximately 7' by 1', will hold the upper fiddle yard, including all the upper level pointwork. These will be bolted together, then lowered into place on the main boards. This will make it much easier to work on both fiddleyards (at an exhibition you could even put stock on the lower fiddle yard before putting these boards in place). It will also reduce the number of rail joins. If we have one fiddleyard per board, the wiring will also be much simpler.

Baseboard joins and track alignment

We appreciate that having running tracks at different heights can be problematic, and have thought carefully about the issues involved. A thread on RMWeb was started to get wider opinions.

<http://www.rmweb.co.uk/community/index.php?/topic/137199-aligning-track-on-a-portable-split-level-layout/>

The issue is that flexing in the vertical will result in gaps between running rails on one level or the other. To avoid this, the baseboard joins will feature alignment dowels (pattern makers dowels?) at different heights. Specifically these will be positioned just below the two set of running lines at the front, below the lower fiddle yard and at the high point in the scenics.

The side profile is show in the diagram below (not to scale), the fiddle yard is to the left. Alignment dowels are yellow and bolts in red.



It will clearly be vital to get the layout level when setting up. We will need to ensure the higher bolts are accessible once scenics are in place.

Track and points

Track will be Peco code 55. Points will be operated by servos, possibly controlled by the Megapoints system. Peco are discontinuing electrofrog and insulfrog, in favour of a single unifrog point. As of writing, these are available for medium straight points but not curved or long.

The minimum radius will be 11.2". There will be no crossovers, slips or three-way points.

Scenics

Board 1: There will be a relatively large provincial station with four platforms on two islands, with station building on a road above. An urban area will rise up behind it.

Board 2: To the left of the station there will be a disused factory with overgrown siding. Behind that an embankment, and behind that the rural land will rise up to the the backscene.

Board 3: This will be dominated by the viaduct crossing both the river and the railway (note that the viaduct is straight and entirely on a single board). As the railway will cross at an angle, the spans will be too long for stone arches, so an iron bridge is proposed, perhaps modelled on Dinting Viaduct. Behind the viaduct is the head of the river, perhaps inspired by Ribblehead.

Board 4: This will be largely rural (with track in tunnels for much of it), but could feature a ruined abbey or castle. An opening at the side, covered in black cloth, will allow access to the track in the tunnels.

Recording progress

We propose to keep a blog of the progress on the layout (I believe the club website has this capability built in; otherwise perhaps on RMWeb). This would be publicly accessible.