Stumbleton Castle

This model railway was built with two intentions.

Firstly and most importantly to give young visitors to our exhibitions a chance to 'drive a model train'.

Secondly to show parents what a first layout after the Christmas set may look like. In a train set one will get some track, a simple controller, a locomotive and a few coaches or wagons.

Our group is known as the beginners group. Originally a juniors group it has morphed into a group for all ages who are new to railway modelling. We will take you through all the stages in order for you to have an operational layout.

The eagle eyed will note that our model is not finished. It is however, fully operational. It is the layout's first public appearance so we hope it doesn't let us down.

BASEBOARDS

A proper model railway needs baseboards. There are many designs out there that can be built with the average tool kit. We make ours from timber which can be cut to size by your merchant.

My preference is for plywood, its light strong and stable.

Ours were bought as a kit of Laser Cut parts from Grainge & Hodder. All that's needed is glue and panel pins to put it together.

We felt that the minimum size for a simple layout was 1800mm x 1200mm (6' x 4' in old money). This is an awkward size to store so we ordered two 900mm x 1200 mm board kits and hinged them together along the 1200 mm side. For storing and carrying they fold down to 1200mm x 900mm x 275mm.
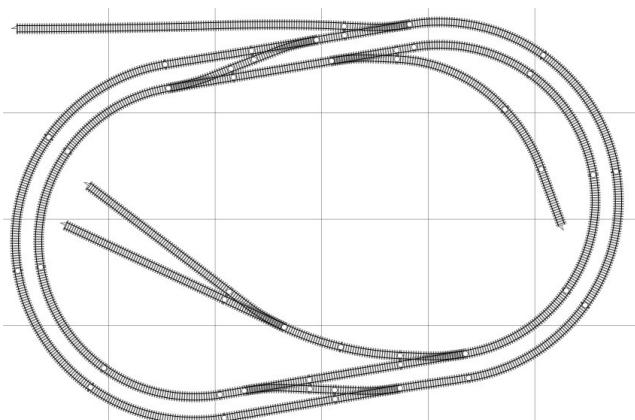
Once built all surfaces were primed and painted.

This layout is intended to be folded out onto a table and therefore comes without legs.

TRACK PLAN

As the main intention was to allow young children to operate trains, two circuits were included.

The design was developed in some free software called AnyRail.

CONTROL

1) Traction

In keeping with the groups move to digital control it was decided to operate the trains using DCC (Digital Command Control).

Some basic sets are now produced by manufactures. DCC allows multiple trains at any one time, more realistic operation and sound. However, when one hears about 'only two wires', its more complex than that!

A DCC system includes

Hand set

Command Station

Booster

Locomotive Decoder

The first 3 items are usually bought as a set with a power supply. There are a number of manufacturers from Europe and USA. We would always recommend trying different systems to see which one suits you best.

Locomotive decoders are required in every loco on the layout. Again there are many manufacturers but I have a preference for those made by Zimo, an Austrian Company. I will use decoders from Digitrax (USA) for older more power hungry locos.

Basic decoders cost approximately £20 and with modern models easy to install. Sound decoders are now in the £120 region. However Hornby do a system called TTS, though limited there is a significant saving to be made. The diesel sounds are pretty good too.

We have chosen MERG (Model Electronic Railway Group) for our DCC. These come as kits for members only that one has to build oneself. May be off putting for some but it does save a lot of money.

It has allowed me to build some very simply laid out controllers where the inexperienced can't mess things up.

2) Point Control

This includes points, signals and anything else one wants to operate.

Many DCC manufactures allow one to use DCC to control points etc. These all require decoders and to my thinking a rather gymnastic brain to operate.

As a group we want to keep control of trains (traction) separate from anything else.

One can operate points by hand, little levers, wire in tube, solenoids, motorised point motors or servos. For DCC however one needs to be able to switch part of the point electrically each time one

changes the direction. Nowadays this can be achieved by a 'Juicer', a clever little circuit with a relay. This makes everything easier.

We have used solenoids to operate points, many surface mounted. These are controlled from push buttons on a panel via some more build it yourself electronic kits from MERG, CBUS.

TRACK

We have used Hornby track for the curves 2nd and 3rd radius. These may have come from a train set. We have also used a little Peco flexitrack code 100 and 8 Peco Streamline short radius points.

To ensure reliability every piece of track has wire droppers soldered to it. These droppers are joined to the 'two wires' that exit the controller.

Wiring may look complex. Carefully planned its actually logical and straightforward. It is worth being shown how to do this as it prevents later difficulties. Having wired Stumbleton, to my delight it worked first time. When I originally did this sort of thing I may have spent hours trying to find where I'd gone wrong.

SCENERY & BUILDINGS

Scenery has been built up with polystyrene, Celotex foam insulation board and plaster bandage.

This was all coated in plenty of 'school' paints and various forms of ground cover. The cheapest being a shovel full of soil baked in my oven for a few hours before being sieved.

Unfortunately, some of the ground cover didn't survive the final vacuuming before packing for transport. Will we get it done before the exhibition opens?

Buildings are a mixture of Metcalfe Card kits.

The most notable is Stumbleton Castle itself. Metcalfe kits are a joy to build and are very sturdy.

The Station buildings are also by Metcalfe and are modelled on the Settle & Carlisle Railway.

Some of the other buildings come from Hornby and are made of resin, ready to place on the layout.

ROLLING STOCK

We were donated some of the Thomas Locomotives, wagons and coaches.

All locos have a DCC chip fitted and we have a Toby with sound fitted. Wagons with plastic wheels have had metal wheels fitted.

CONCLUSION

Even a modest layout like this is no small undertaking. One needs a number of skills to bring it to fruition.

Some tasks you will enjoy, others less so.

I enjoy doing the wiring, others think I'm odd because they prefer doing scenery or kit building.

The advantage of being a member of a model railway club is that one can learn off others and share tasks, ideas, problems and solutions.

Stumbleton is operational and will be fully tested by being exhibited. It is not finished though.

There is much that can be done to improve it scenically.

It also makes a great test track, easy to store, easy to erect and easy to put away.

Alan Banks

10th Nov 2023