

Bratton Fleming

Snow business in OO9 from **John de Frayssinet**.

Photos by the author

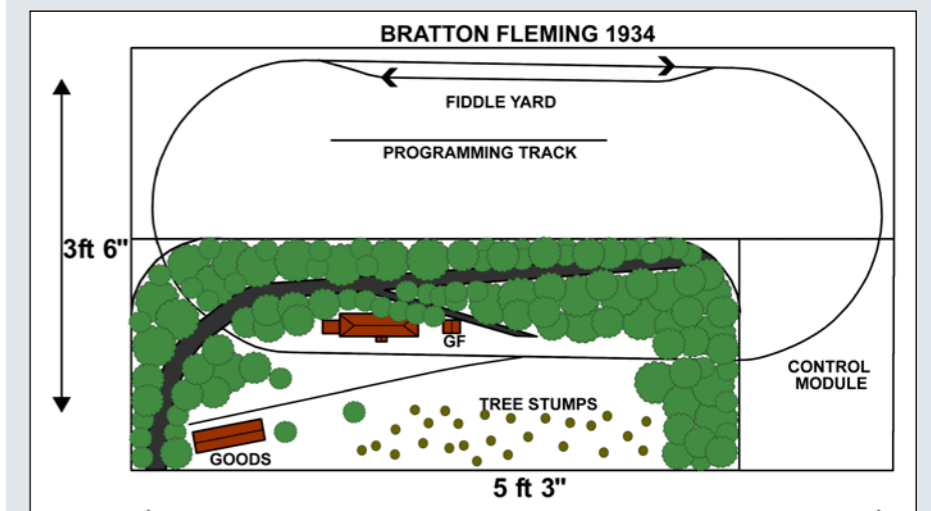
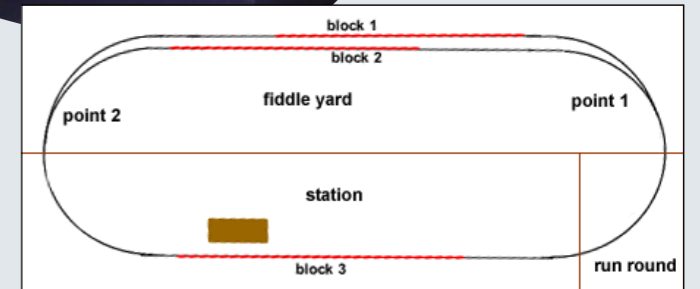


COME AND SEE US AT
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THE festival of
BRITISH RAILWAY
MODELLING
Doncaster Exhibition Centre



The baseboard modules were carefully finished and painted in dark blue emulsion and coated with matt Ronseal. Mould makers pins ensure proper register and toggles used for attaching them together as a unit. The diorama is designed to sit upon a table.

This layout is intended to operate automatically, using a laptop with Railroad & Co. software. Three blocks were needed to operate this. The blocks were cut with a fine saw. Only the one rail is involved.



Our main layout, County Gate is quite large and a considerable logistics operation is needed to get it to a show. Our small narrow gauge group which operates it all agreed that we needed a small layout for one day shows that would fit into an estate car. So that is how I found myself building the Bratton Fleming diorama. Bratton Fleming was a small station on the famous Lynton & Barnstaple narrow gauge railway, in North Devon. It was always very rural but the

station was originally provided with a passing loop and goods shed. The Southern Railway removed the loop and this is how the station was modelled.

I had a very rich and slightly potty Aunt who lived at Ilfracombe. She had a very naughty affair with a married driver on the L&B. This was considered a terrible disgrace by our entire family. In her autumn years, she related to me how a huge snowstorm gripped the area and trains were run throughout the night in order to keep the railway open. She hitched a ride with her 'man' in the Baldwin Lyn and, at Bratton Fleming, they managed to persuade the fireman into the station and then 'Got on with it' in Lyn's cab! The story was irresistible and naturally inspired the snow scene.

Modelling snow is always a challenge. I wanted to portray the wet sticky snow that one sees so often in our maritime climate. It lasts so little time before it begins to fall off. It is quite hard to get right.

The baseboards

The baseboards were designed to be as light as possible and were constructed in 1/8" plywood held together with 1/2" beech battens. Many dioramas these days are built to view through a

narrow slot. This makes it impossible for children and those in wheelchairs to see them at all as they are always displayed at standing 'eye level'. This was not an option so careful design was needed to ensure that the model looked right from a number of angles.

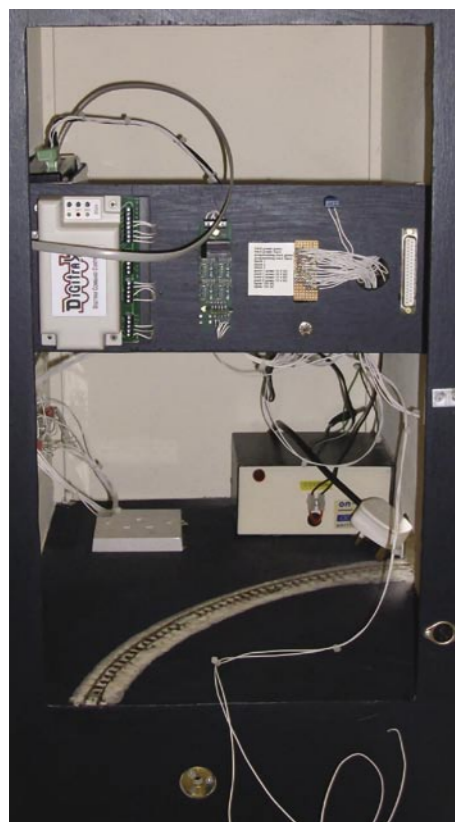
Track

The next task was to lay the track. I built the diorama before the introduction of the Peco 'main line' range of OO9 trackwork. I therefore used 18" N scale turnouts and Peco 'Crazy Track'. This was not an issue as the track would be obscured by snow in any event. I always glue the track onto the plywood sub base using 20 minute epoxy glue. This gives me plenty of time to nudge the track by eyeing it at track level to ensure nice smooth curves. As usual, every rail length is provided with a dropper that connects to bus bars below the baseboards. Additional droppers are provided for the frogs of the two points on the fiddle yard to provide for polarity change.

An additional length of track was laid on the fiddle yard which serves as a programming track.

I always ballast track as I think that this solidly fixes it in place forever.





The wiring of the control unit is almost complete.



The recessed Zephyr unit and manual switch panel. The Zephyr is held in place by Velcro.

Wiring

The wiring was relatively simple. Connection between baseboards is by 37-pin 'D' connectors and 7-pin DIN plugs.

I used Digitrax equipment with a Zephyr control unit. My thanks must go to Malcolm Alberry for programming the Railroad & Co software and to DCC Supplies for their help in the hardware installation. The operation of the layout was tested and once satisfied that all was well, we were able to progress to the next stage.

Backdrop

One of the things I cannot understand is why so many layouts have corners in their skies - I have never actually seen one outside! As usual, the backdrop was made in thin aluminium sheet and the corners rolled to a 6" radius. The layout is intended to show as both a day and night scene. It was important to find the correct colour for the backdrop which would work with both presentations. In the end, I chose that rather sickly yellow/grey sky colour that one often experiences after snow. This was printed on vinyl and laminated with matt clear vinyl and attached to the aluminium. This is always done for us by Signrite, of Leominster.

Structures

There are several good drawings of the station and many photographs in Lynton & Barnstaple books which can be purchased from Woody Bay, the L&B headquarters. The one building that is not covered is the goods shed, and only one photo exists of a corner of it. It is thought that the building was converted after serving other purposes previously.

I used Wills plastic sheeting to build up the structures. Brick arches, also supplied by Wills are cut it into the stone, as they ought to be.

Snow

For snow on the ground and roofs, etc, I use 'microballoon'. This is composed of minute glass



The road was moulded in plaster and microballoon was applied to simulate the snow.

balls, almost scale snowflake size in 4mm/ft. It is normally used to produce lightweight filler for the composite aviation industry. Europa Aircraft of Kirkbymoorside happily supplied me with a small box of the stuff that will do enough snow for the rest of my modelling life! This stuff is hard to handle and pours like water. Wear a mask, as one breath will blow it all over the house!

The material is laid down and carefully built up to shape using small soft brushes. It is very difficult to wet and I use isopropyl alcohol (track cleaning fluid) in a very fine mister.

This low viscosity liquid will run through the microballoon. I then use another mister filled with dilute PVA with a few drops of detergent. Once the material is thoroughly wetted, it will be necessary to apply more microballoon to obtain the correct effect. Where you wish to model slush, just leave the surface wetted. This effect can be seen on the platform shown

above. You can even put in footprints, using model people. The platform was modelled as though some snow clearance had been undertaken with a shovel.

You can see that the roof snow was layered and shows that some has slipped off and left piles on the ground. You will have to practice using this stuff but the end result is without parallel.

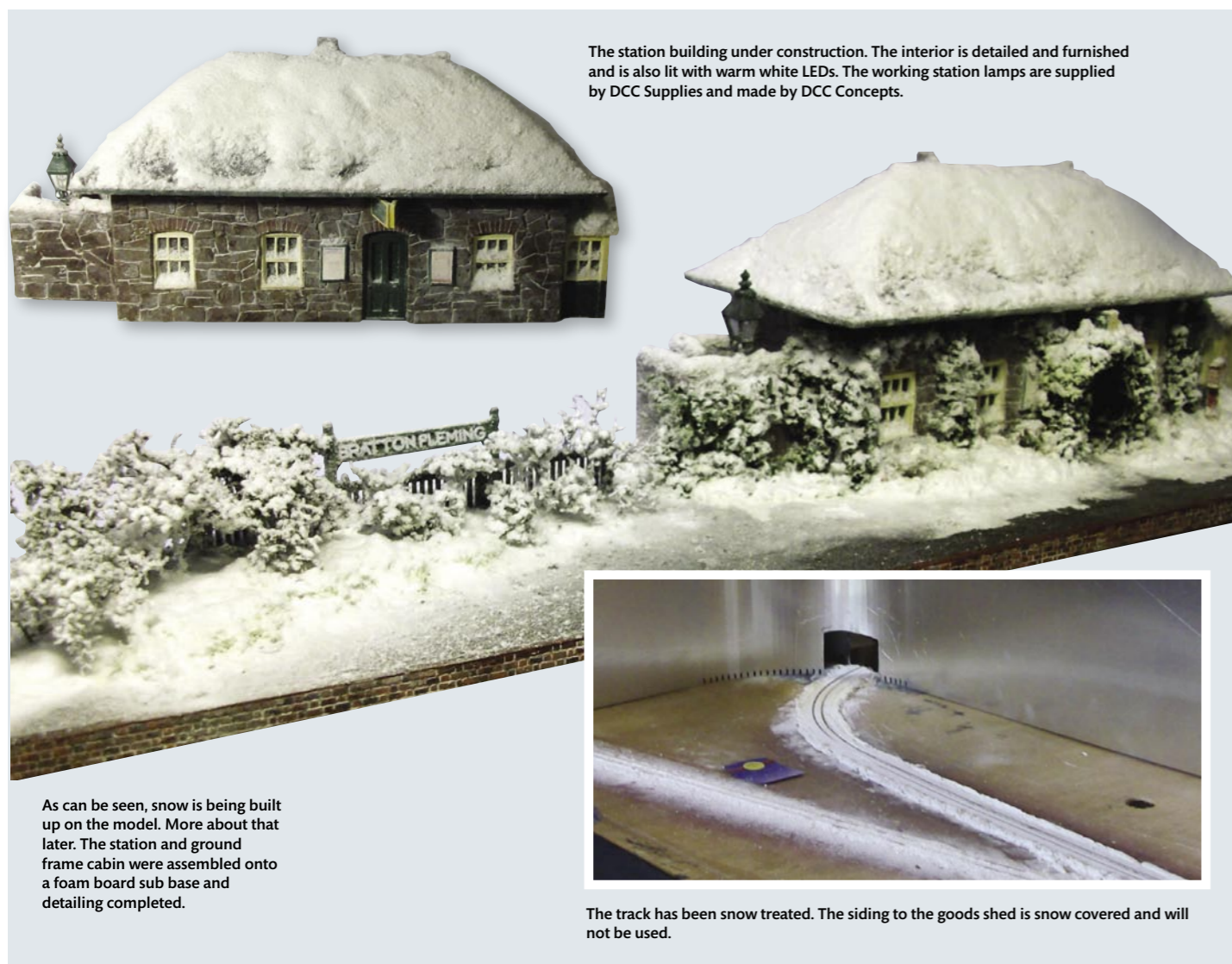
I wished that the snow over the tracks appeared as if the locos had pushed it aside. L&B locos were fitted with 'cow catchers'. The track was treated in a similar fashion and the snow built up over the tracks. As the PVA began to cure (after several hours) I used a plastic blade to level the snow to track height. The displaced snow leaves broken lumps along the trackside just as one would expect.

Once nearly cured, the track was properly cleaned off and very carefully, flangeways were created by drawing a cocktail stick against the



Now comes the fun part. The tree is sprayed with snow effect from Model Mates. This is an excellent material. The quality of the snow can be varied by the distance the spray can is held from the work. In my case I wanted heavy snow. The trunks are covered from one side only, as one would expect in a snow storm.

rail. Try not to use metal, as you may take off the track paint, which is impossible to put back satisfactorily. It will take a little while to get the track working properly again and test trains should be run until you are happy with the result.



The station building under construction. The interior is detailed and furnished and is also lit with warm white LEDs. The working station lamps are supplied by DCC Supplies and made by DCC Concepts.

As can be seen, snow is being built up on the model. More about that later. The station and ground frame cabin were assembled onto a foam board sub base and detailing completed.

The track has been snow treated. The siding to the goods shed is snow covered and will not be used.



Trees in the background are simply shaped sea moss, tightly packed together. The photograph below shows the gradual build-up of the trees and details. The backdrop has had the vinyl fitted. This is protected by masking paper to allow the background trees to be snow sprayed in situ.



Not a good day to go out driving in a pre-war car!

The completed diorama showing the felled trees in the foreground, necessary for the station to be visible!

Topography

With such a small diorama, I had to be careful that the trains were not visible entering and leaving it. The road bridge at one end was helpful but the real camouflage are the trees. By the end of the railway's life (1935), Bratton Fleming was hidden in woodland. This did cause a problem for the forefront of the layout however, as if modelled correctly, the railway would be virtually invisible. It is here that artistic licence was used and we cut down the trees! The stumps were left in to

show that this had happened.

The station and platform, goods shed and bridge were first fixed into place. Care was taken to ensure that the trains did not foul these structures. The land was then added using expanded foam roof insulation. The final shape was made using Polyfilla brushed over the foam. This was the time that fencing was added.

Scenics

Much of the scenery is trees. The trees and tree stumps in the foreground have trunks made

from sage brush, collected by a friend from the Nevada desert - they are available commercially, by the way! The small branches are made from sea moss, glued on with superglue. I always use accelerator which gives a virtually instant bond. Care is taken to make sure that the seeds in the sea moss are removed. The assembly is sprayed with a light brown grey and any ivy required is added.

Lighting

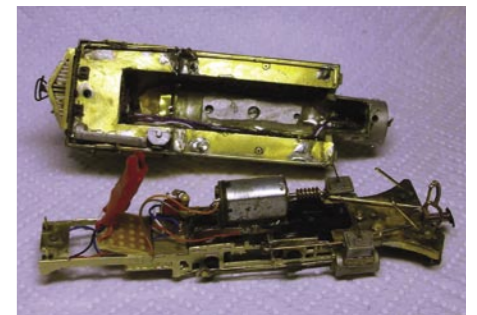
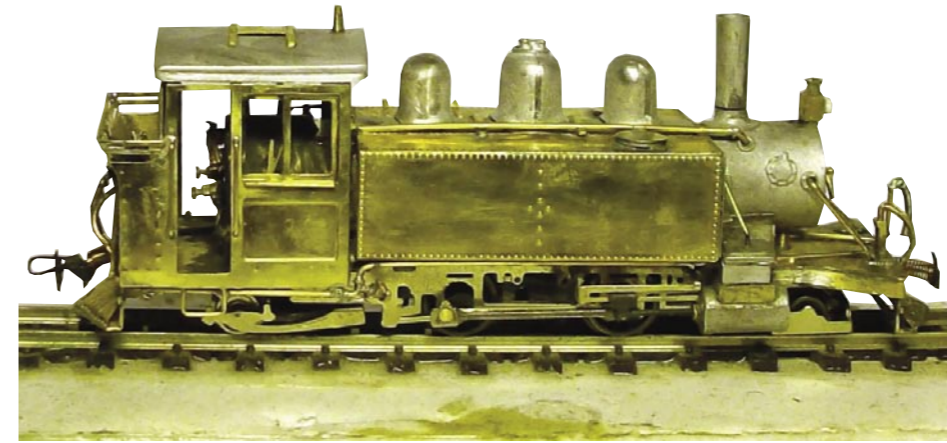
The lighting was a bit of a challenge as we wished to be able to change from a grey day to night. The lights are mostly 12 volt LEDs. Daylight uses the cold blue white light that was usual with original LEDs. These have become hard to find and eventually, I found a source on eBay from Hong Kong. These LEDs are glued into holes cut into the 'ceiling' after being carefully aimed. The photo shows the first lights being installed. Blue LEDs were added in between.

The pins of the LEDs were attached to terminal blocks and then the wiring was installed. We have a control panel which allows different combinations of lights to be switched on or off. All lights are controlled by variable resistors.

In between the LED spots, we have installed blue strip LEDs which were purchased from IKEA.

Rolling stock

All rolling stock was built up especially for the diorama. The two locomotives are built up from



The completed Lyn prior to painting and the modified chassis.

Backwoods kits. I find the Backwoods chassis difficult to build and even more hard to maintain. For this reason, the locomotives were mounted on modified commercial chassis.

For the Manning Wardle, Exe, the chassis was modified from a Bemo outside frame H0e diesel. Full details how this was done can be seen at www.bratton-fleming.1me.net/exe.htm

The Baldwin, Lyn is actually built onto a Graham Farish Class 08 outside frame diesel locomotive. The chassis was butchered to produce a 2-4-2 of the correct wheelbase and as with Exe the Backwoods outer frames, cylinders and valve gear were added - details of this project will appear in a future BRM.

Both locomotives are fitted with Digitrax DZ 125 chips. They have working lights and a red LED that shines down from the firebox to illuminate the snow covered track. The locos were sprayed black and out-shopped for professional lining. All transfers were supplied by Peter Blackham.

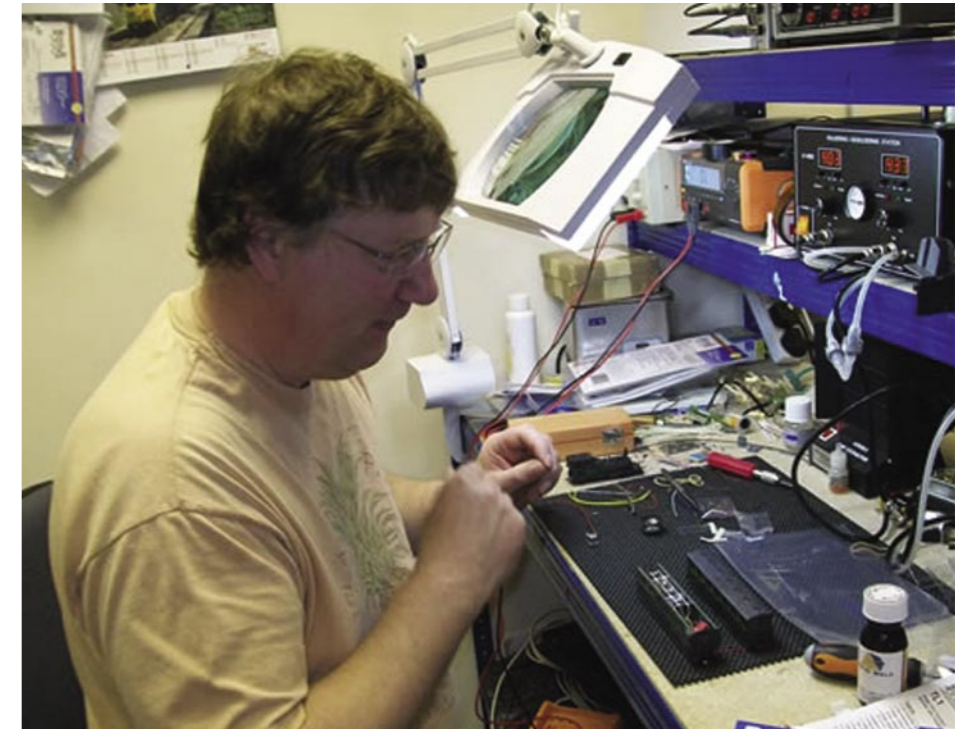
The coaches are made up from etches that I had prepared when building up the L&B stock on my County Gate layout. L&B coach etches are available elsewhere too. They use Greenmax bogies which are excellent quality. They are fully detailed inside and are fitted with lights. The windows were lightly sprayed on the inside with artist's fixative to give the impression that they are slightly misted up. The coaches also collect power from the track. This is passed to the locomotive for reliable running. Additional wires connect the coaches for the lighting which includes a red tail lamp. The coach lighting is controlled by an additional single function chip which is fitted into the parcels section of a coach. The blind side of these coaches have the doors removed from the parcels section and the sound loud speaker fitted within.

The sound chip was fitted into the coaches by Andy Forty of DCC Supplies. The correct sounds were loaded into the chip by his wife, Fiona who then programmed the lot to get them to operate correctly. The diorama is an intimate affair, so loco sounds are turned down to the minimum.

Snow was added to the locos and coaches where appropriate using micro-balloon and dilute PVA.

Operation

After the complexities of County Gate, operation of Bratton could not be easier. One train arrives at the station, waits a while and



Andy of DCC Supplies performs keyhole surgery on a sound module coach.

then departs and parks behind scene. The train in the opposite direction then takes its bow. The sound effects are very good and my thanks go to the team at DCC Supplies. Day slowly turns into night and Bratton becomes a magical place! The red LEDs shining on the ballast from the firebox are most convincing. A black cloth hood can be fitted to the front of the diorama to cut down on ambient light.

Those who know the Lynton & Barnstaple Railway well will notice that the locomotives are operating in the wrong direction. This was done for the sake of composition as I wished the front of a loco to emerge from under the bridge.

The layout has already been well received at a few exhibitions and we look forward to taking it to more.

So, we have a little snapshot of an event on the L&B pre-war. Perhaps, one day, trains will yet again run through Bratton Fleming.

For more information on the layout visit: www.bratton-fleming.1me.net/

See Bratton Fleming at the Festival of British Railway Modelling, Doncaster on February ??/??, 2012.



The baseboard upside down showing the start of LED installation.



FURTHER DETAILS

Lynton and Barnstaple Railway
www.lynton-rail.co.uk/

DCC Supplies
0845 224 1601
www.dccsupplies.com

DCC Concepts
www.dccconcepts.com/

Model Mates
07926 196 471
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Peter Blackham
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Backwoods Miniatures
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