

Lex Parker's On3 D&RGW

I have been a model railroader since I was a boy in South Africa, where my father was an engineer on the South African Railways. Even before moving to Canada, I modelled in HO, but I always admired the potential of O scale. About ten years ago I was introduced to narrow gauge by a friend - and the reality of modelling in the larger scale became a possibility when I realized the radii that could be used, even in the limited space that I had. It wasn't long before my entire collection of HO was disposed of to friends and local hobby shop.



K-37 494 has filled its tender and awaits its departure with a string of empty coal gons.

Photo: Pete Moffett, MMR

Up to this time I had followed the Canadian National and Canadian Pacific Railways, as I did all my friends, but I wanted to model the line that would provide them with a different prototype to enjoy. After all, I could still see and run CNR and CPR trains at operating sessions on friends' railroads, and some of the equipment on them was very familiar to me. The Denver & Rio Grande Western was chosen because it ran through colourful and varied typography and at that time fine models in brass and kits were becoming available. There is no question about the appeal of the line, as anyone who has seen its remnants will attest.

Coincidentally at that time, I was building a new home. The train room was marked out and immediately finished with drywall and a suspended ceiling. I knew that if I didn't do this first, the finishing would be indefinitely postponed as the enthusiasm of modelling took over. Carpet was installed on the floor and a few fluorescent fixtures installed temporarily. A year later the design for the layout was complete.



K-28 #473 enters Black canyon.

The area used is approximately 18' x 25'. It was a challenge to design a layout with as much running room as possible and still have areas wide enough for large structures. My criteria for the railroad was that all areas had to be at arms length for ease of construction and maintenance. Thus, an average of 18" to 30" was selected for bench work, which was "L"-girder construction using clear pine. The highest elevation was placed at 52" above the floor for realistic viewing, with the track dropping down 6" on a 4% grade; the track plan is a point to point arrangement without attached staging yards.

Since yards do not lend themselves well to a shelf layout in On3, I peeled out two islands about four and five feet wide, one for the yard at Chama to hold the turntable and roundhouse and the other for the small yard and town of Pagosa Springs. These detailed areas may be viewed from three sides, and the depth enhances the realism.



The "San Juan" still runs, and it was photographed in Black Canyon.

Photo: pete Moffett, MMR

The two yard areas were constructed on 5/8" plywood joined to the spline sub-roadbed of clear pine. Cork, 5/16" thick, was installed as a roadbed and for quiet running, Kappler ties were glued in place, then distressed and stained, and code 83 rail from Railcraft was hand spiked in place. The sides of the rails was weathered with paint and ballast spread; the latter was a mixture of grey crushed granite, cinders and ash.



In late afternoon, the "San Juan" is starting its climb into the mountains and leaving the drier valley behind.

Photo: Pete Moffett, MMR

The minimum radius is 42" eased into the tangents. All switches were hand built to follow the existing natural flow of the track routing, and they are powered using Switchmaster machines, which have slow and quiet operation. After all the track was laid, wired and operating with few flaws, I began giving thought to the backdrop scenery. This may be backwards according to some peoples thinking, but at least it got the railroad running.

The sky was first painted with latex house paints using a regular roller and a sky blue colour; white was added to the blue as it approached the horizon (which now was established by the bench work and track height). The horizon was set at 2" above the tabletop; any higher would detract from the realistic viewing height. I began adding grey until the sky was completely grey at one end of the room, which was to have a storm approaching. Again using the same 8" roller and white paint, I began creating the clouds with the edge of the roller and a "dry-brush" technique. Later on , a pair of speakers were added in the back two corners of the ceiling and a continuous tape was prepared of a thunderstorm on two distinct tracks. The balance of the backdrop was finished using artists acrylics.

I have tried to model the D&RGW in flavour only, incorporating locations that were in particular interest to me and that I thought worked well in controlled compression.



On the west slope, Colorado's famous blue spruce and aspen take over from various species of pines. The 268, running with just a caboose, is one of a few surviving C-16 Consolidations; it's taking water on at pagosa Springs tank.

Photo: Pete Moffett, MMR

I had not seen a layout which used five geological colours in the rock (several may be found in Rio Grande territory), so I decided to try it in an attempt to add interest and create a feeling of greater distances as trains run around the layout. Five types of rock were purchased from the Rock Quarry, the first being Chama Red, which naturally, was applied to the Chama area. Passing through Phantom Curve, with its pinkish-grey rock the train approaches and traverses a rock face and rock tunnel finished in South Park Grey. Entering Black Canyon, the rails cross two trestles; there is a wye here to turn trains, instead of a turntable, and two of its legs are on trestles over a river. One leg carries on to Durango (future), while the other goes on to Pagosa Springs, which is finished in Red Mountain rock.

I pulled a moment of time from the past to represent October 17, 1937, at approximately 4:00 p.m. for these photos. Fall has arrived and the signs of the Depression are apparent in the lack of maintenance and deterioration of facilities, although there is a glimmer of pride in the employees' efforts to keep the railroad running. Hopefully, too many anachronisms haven't crept into the pictures.



Pile Driver OB with a track gang work on replacing some a few pilings on the wye retaining the embankment.

In a normal session, trains run at reduced speeds of 20 m.p.h., which again enhances the feeling of distance and gives time to enjoy the sounds of the trains. A PFM system is used. Locomotive sound systems seem to contribute to the impression of distance on a model railroad; other modellers have noticed this too. The entire layout was wired for two control cabs, both PFM with sound, so that one to four operators could be used.

Railroad structures, like rolling stock, are gradually appearing along the right-of-way. Most structures and rolling stock are built from kits from companies like Tomalco, Trains of Texas, San Juan Engineering, Grandt Line, Thomas Yorke, etc., and all have been modified to add additional realism. Such things such as scale and individual boards, added castings, changes wings, porches or alcoves, wood grain and knot holes, stains and peeling paint have been made to the kits. The town of Pagosa Springs is slowly rising as time permits; it backs onto the railroad and has numerous buildings, a hotel, grocery store, blacksmith and others, in addition to the

railroads facilities. There are also several vehicles slowly coughing into town along the dusty roads there.



487 passing through Rock Tunnel with a string of stock cars with livestock headed for Chama.

Scenery is built up using cardboard profiles and crushed newsprint, then covered in paper towels dipped into Hydrocal plaster. After the newsprint is removed the final scenery is completed using Plaster of Paris for ground and rocks. Many of the rocks are from moulds made from the Hamilton escarpment here in Ontario. The plaster is then sprayed with diluted acrylics for colour and covered with play sand and secured with diluted white glue or matte medium. The sand has two purposes. First it fills in and smoothes out unnatural depressions in the plaster, as nature would do, and removes any tool marks in the process. Second, it gives a very natural appearance through the final finishing of soil and ground foam cover because of its own texture and small pebbles.

Trees and shrubs are also beginning to sprout around the layout. The deciduous trees are a home-grown, unknown shrub species that have a good trunk form. They are painted, then covered with ground foam from Woodland Scenics. Leaves are added and secured using a mix of artists acrylic matte medium and water. The leaves come from Sublime Designs.

The evergreens, from High Pines, are covered with more ground foam to add bulk; the foam is secured in the same fashion. Shrubs are selected weeds and lichen soaked in the binder and sprinkled with fine ground foam in a variety of colours. Grass and weeds are hemp, ground foam and dried plants from a florist.

The foreground of the backdrop was matched in colour to the ground foam and the scenery applied to meet the wall. It is built up slightly to form a knoll above and in front of the joint where the wall comes to the tabletop to create interesting and subtle layers of scenery to view over without actually seeing a joint.

Lighting consists of continuous double tube fluorescent fixtures mounted flush in the ceiling. Each fixture has a warm white and cool white lamp. recently I added about 21 low voltage (12 volt, 50 watt) halogen fixtures to punch through the flat fluorescent light and give strong shadows to the structures and rock textures. I am very happy with the results, as the layout has a very natural appearance of being in sunlight.

I plan to incorporate additional scenic sounds around the layout, such as birds chirping, running water and assorted other sounds to complete the audio-visual effects, but of course the layout itself will never be truly complete.