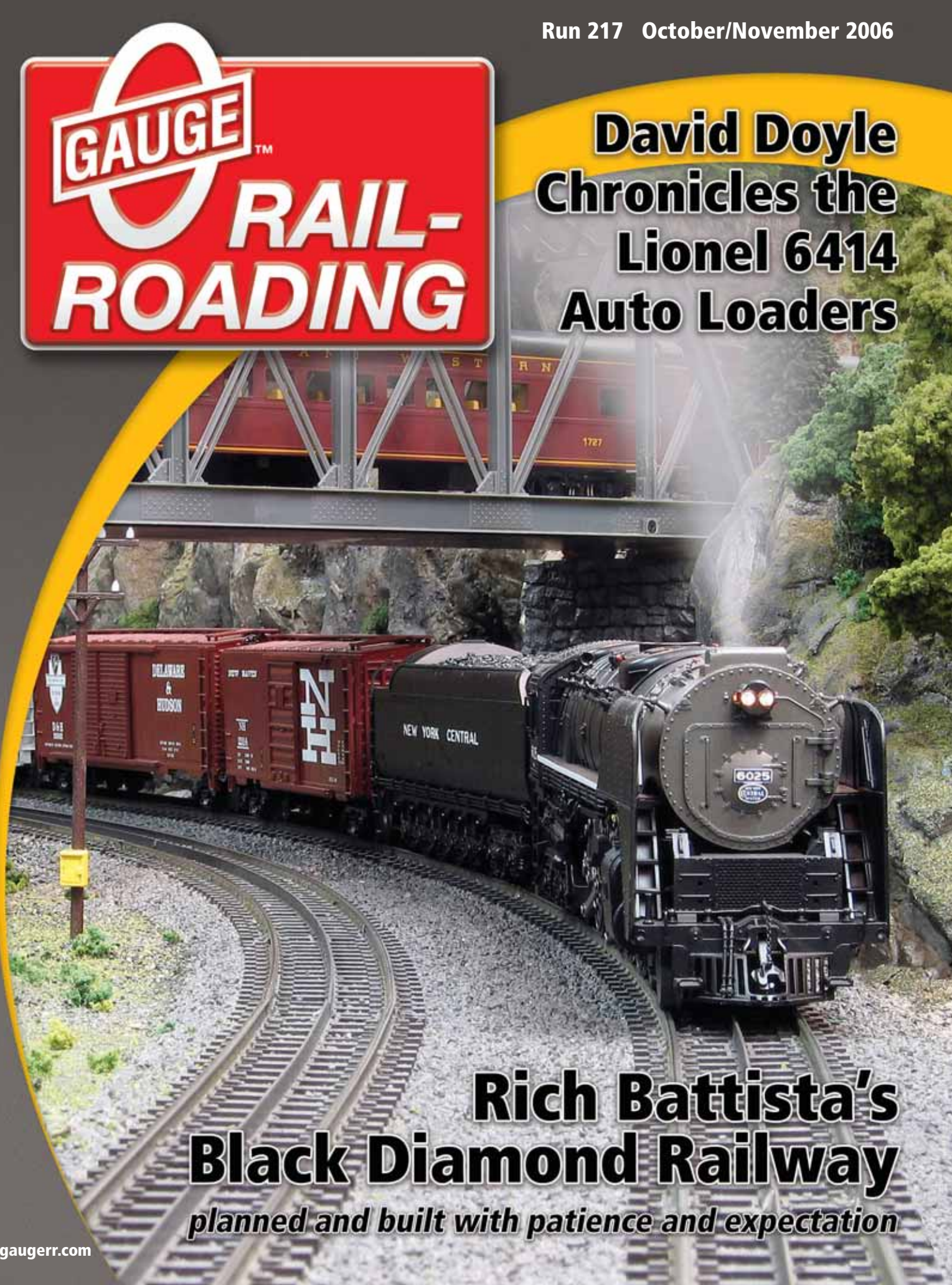
Run 217 October/November 2006

O GAUGE™ RAIL-ROADING



David Doyle Chronicles the Lionel 6414 Auto Loaders

Rich Battista's Black Diamond Railway

planned and built with patience and expectation

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Rich Battista's Black Diamond Railway aptly demonstrates the four Ps of layout construction: proper planning promotes perfection.

Black Diamond Railway

Article and Photos by Rich Battista

ABOVE: Middletown is definitely a scene set in an Appalachian valley. Buildings and most of the operating accessories on Rich's layout are from MTH. Hopefully, a way freight won't run a freight car onto the siding by the switch tower in the foreground. The driver of the blue Caddie will have to move his car off the track before the train arrives.

LEFT: Mountain railroading lives with the Pennsy K4 scurrying its varnish consist to its next station stop while an N&W coal drag trundles overhead on the MTH truss bridge. In a scene that is typical to mountainous terrain, local vegetation clings to moss-covered rock.

Imagine me when I was five years old outside in the front yard with some rusty tube track connected in the dirt, some toy cars, boxes for houses, and a Popsicle stick that I used to scratch out roads. This was my first layout. One day while my dad was at work, and without my mom knowing, I got this train my dad just brought home. It was a nice red and silver diesel engine that looked like a car. I put it on my outdoors layout and pushed it over the rusty track, thinking to myself it must be broken because it was so hard to push. Although this may be painful to read, that diesel ended up staying outside in the rain and all until it rusted its way into junk. There's not much I remember when I was five, but I will never forget making those "layouts" in the dirt and playing with that rusty track and the Santa Fe F3.

At a train show some 25 years later, I saw a beat-up, nicked, and scratched 1948 Lionel Santa Fe F3 diesel selling for $800 and realized the enormity of the mistake I

A deadheading MTH Pennsy M1 drifts slowly by the MTH yard tower and passenger platform at Middletown.

made that day. No one knew at the time that an old train would be worth so much. In 1990 I bought the remake of that Santa Fe F3 set from Lionel in order to gain closure. I recently received the latest version of the F3 from M.T.H. Electric Trains, which may be the best O gauge model of the Santa Fe F3 ever.

As a child, my urge to build a serious train layout was fueled when my parents and I moved into a bigger house with an attic. My dad put together an L-shaped layout from two 4x8 sheets of plywood and built a plaster tunnel in the corner. In the years that followed, I spent much time putting together different layouts and devising a neat mechanism that used a weight-activated switch and insulated track to automatically stop trains from colliding at the 90-degree crossing. Unfortunately, we never took a photo of that layout with our Polaroid camera.

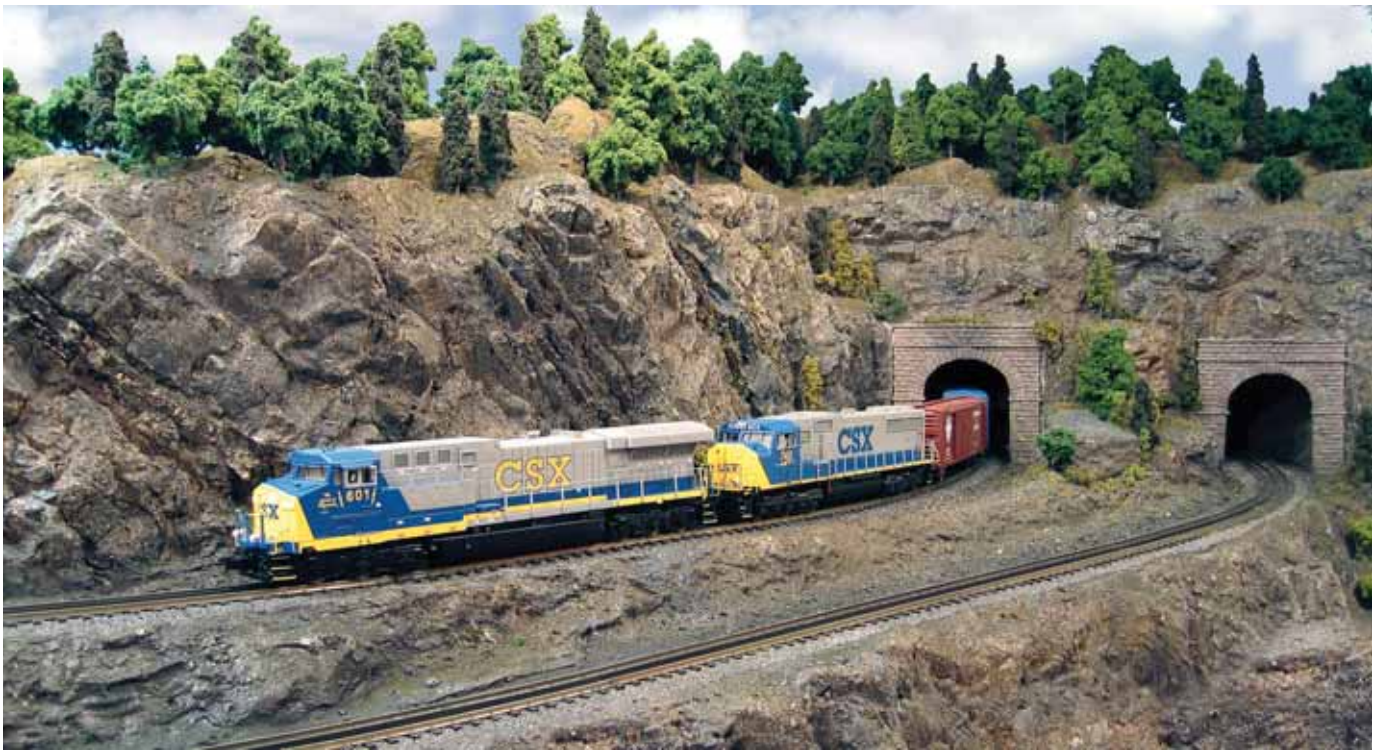
The only train I had at the time was my grandfather's Lionel 665 Hudson set. I "accidentally" found my next train, the Milwaukee Road passenger set, under my parents' bed while searching the house one day before Christmas. My parents tried to salvage the surprise by saying it was my cousin's. Some time later, my dad took me to a train meet in Hamburg, PA, where we bought Missouri Pacific diesels from a train dealer, who had only one table at the show. His name was Charles Ro, and, as is well known, he later became Lionel's largest dealer. I was very excited to have these trains and spent many hours running them. When I was a kid, I used to think the Lionel 665 Hudson was the biggest engine I'd ever have. I had no idea that trains like the scale Big Boy would eventually appear in O gauge.

The next part of the story is similar to that of many other hobbyists. After graduating, getting married, and having established a career, I started to think about trains again. Having money also helped. The problem now was space, especially since we lived in San Diego, CA. I built a "temporary" Christmas layout that lasted about two years in half of a two-car garage. We moved into a house with a three-car garage six years later, and the layout I built inside an elevated and enclosed room in the third stall was unbelievable. What was unbelievable was that I went through all that effort to "shoehorn" a layout into the house. It was a desperate act. It didn't matter, though, because less than two years later we relocated to northern Virginia to get close to family after the birth of our first child and to take advantage of an opportunity to work for a promising start-up company. I am pleased to say both reasons have been a huge success. But I wonder if the reasoning behind the move wasn't influenced in part by the subconscious knowledge that there would be a basement.

After spending the first year in an apartment, a house with a basement finally appeared. With the basement issue settled, I thought it might be a good idea to get a kitchen, family room, and a few bedrooms and bathrooms as well. I joke, but the truth is I was not sure I would build a large layout, at least not right away. One reason for my hesitating was the wish to build a realistic hi-rail layout, and I was not real excited about the trains I had or about my track and my buildings. The other reason was that we had twins! All I did for the first few years was to put a layout under the Christmas tree. It was not until I truly discovered MTH and all its products, especially its new Digital Command System (DCS), that I began to get excited and was motivated to do a large realistic layout that would be impressive to look at and fun to operate. It was time to plan the entire room and layout from scratch, thinking everything through before I ever started to build anything.

Room Preparation

I started my train room in the unfinished portion of the basement by first building the custom-made train shelves



Switching from 1950s to contemporary railroading, GE and EMD third generation diesels from MTH hustle a mixed freight out of one of the twin tunnels. At the tunnel portals, the tunnel bores are realistically lined.

Could the beehive of traffic in contemporary downtown Middletown indicate a thriving economy? Like many real towns with timeless old buildings, only the road vehicles and railroad locomotives testify to the year the photo was taken. Rich sets the time of his layout with his vehicle vintages corresponding with the era of the trains.

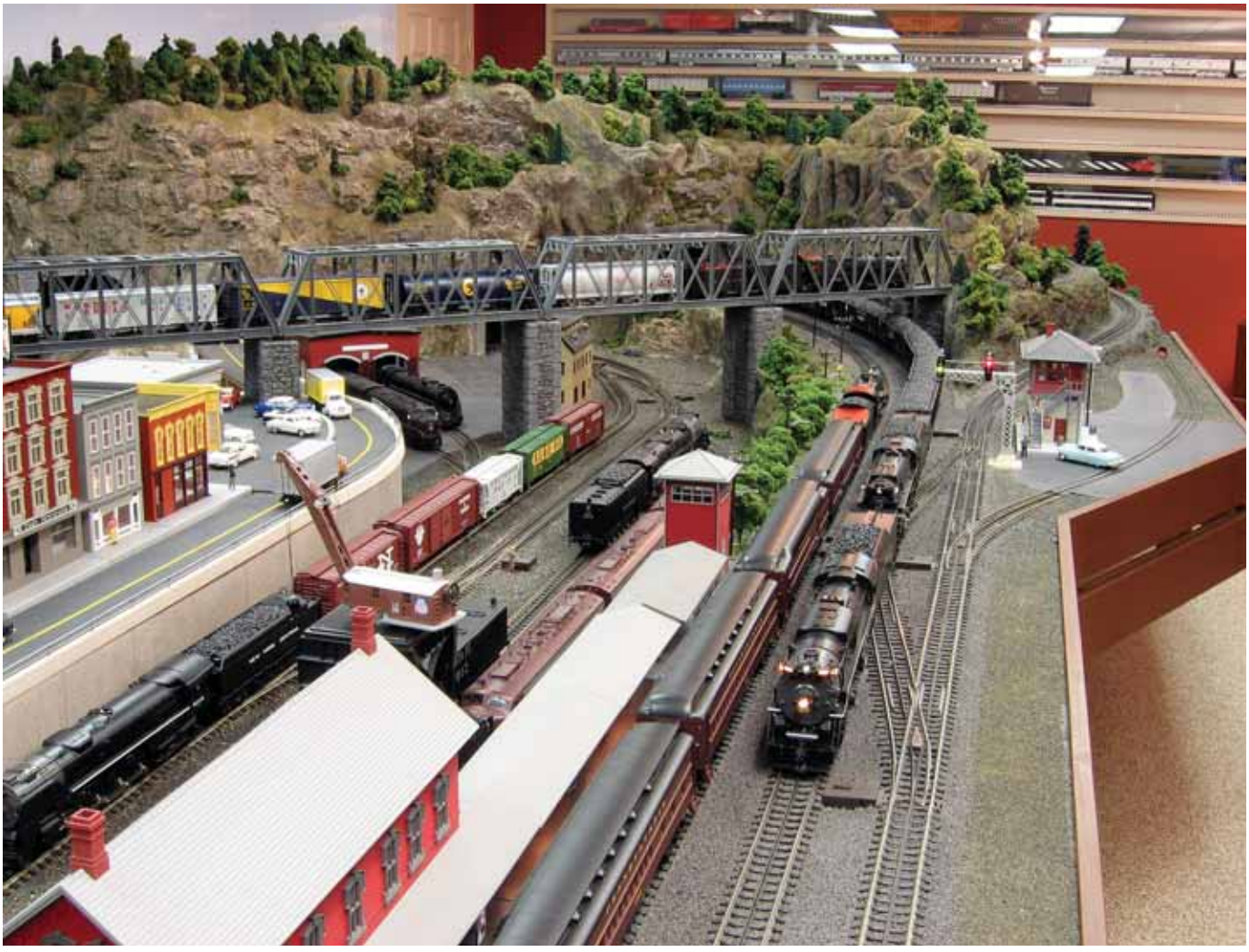
that I planned to mount into the walls. For the shelving, I used hand-selected 1″ x 12″ premium pine that I ripped to the desired width with a table saw. To build flanges from strip wood for holding the sliding glass doors, I made a guide for the table saw so that I could cut grooves in the same location for each strip. Then I glued the strips to the front of the shelves. After the framing of the room was complete, the shelves were mounted into the frame, and the room was ready for electrical work. I wanted both incandescent and fluorescent lighting with two switches that allowed me to use half or all of the fluorescent lights and a slide switch that let me vary the brightness of the incandescent lights. This arrangement gave me a wide range of lighting. The trains had their own circuit and receptacles controlled by a lighted switch to remind me to turn the power off because I planned to use fixed-voltage transformers for the platform lights. Additional wiring prepared the room for TV, intercom, cable modem, telephone, and computer networking. Then came the drywall, ceiling, and paint. The only thing I did not do myself was the carpet.

Now the room was ready for the layout.

The Layout

I used the RR-Track software to design the layout, and there were many features I required: minimum O72 diameter curves, three levels, four separate loops, all tracks connected, a yard and engine house, and no manual switch controls. I wanted everything controlled through the DCS Remote. I also wanted to be able to run a train from top to bottom without having to switch tracks. "Eye loops" on the top and bottom levels make this uninterrupted run possible, and the result turned out even better because a train can traverse all the track on the top and bottom levels before reaching the eye loop. It is also possible to park trains on the top and bottom levels while another train turns around through the eye loop. The layout can run trains on four loops independently or on two loops in the middle with one train looping from top to bottom with or without parked trains. All the switches can be changed with a push of a button, using the DCS and the Track Interface Unit, to achieve these configurations. I can select a configuration I named as "Top Park," and all the switches needed to park a train on top and create the alternate eye loop will throw. Five large trains (20-plus cars) can comfortably be run and maneuvered at one time on this layout. Even more can be run by putting more than one train on a loop, which is easy to do with DCS. All my engines except for one MTH Proto-Sound 1 engine and my family heirlooms use

A bird's-eye view of the valley and the MTH ScaleTrax leading into and out of Middletown. A two-stall engine house is just visible in the background. All switch motors are wired to a Track Interface Unit for DCS control of the entire layout.



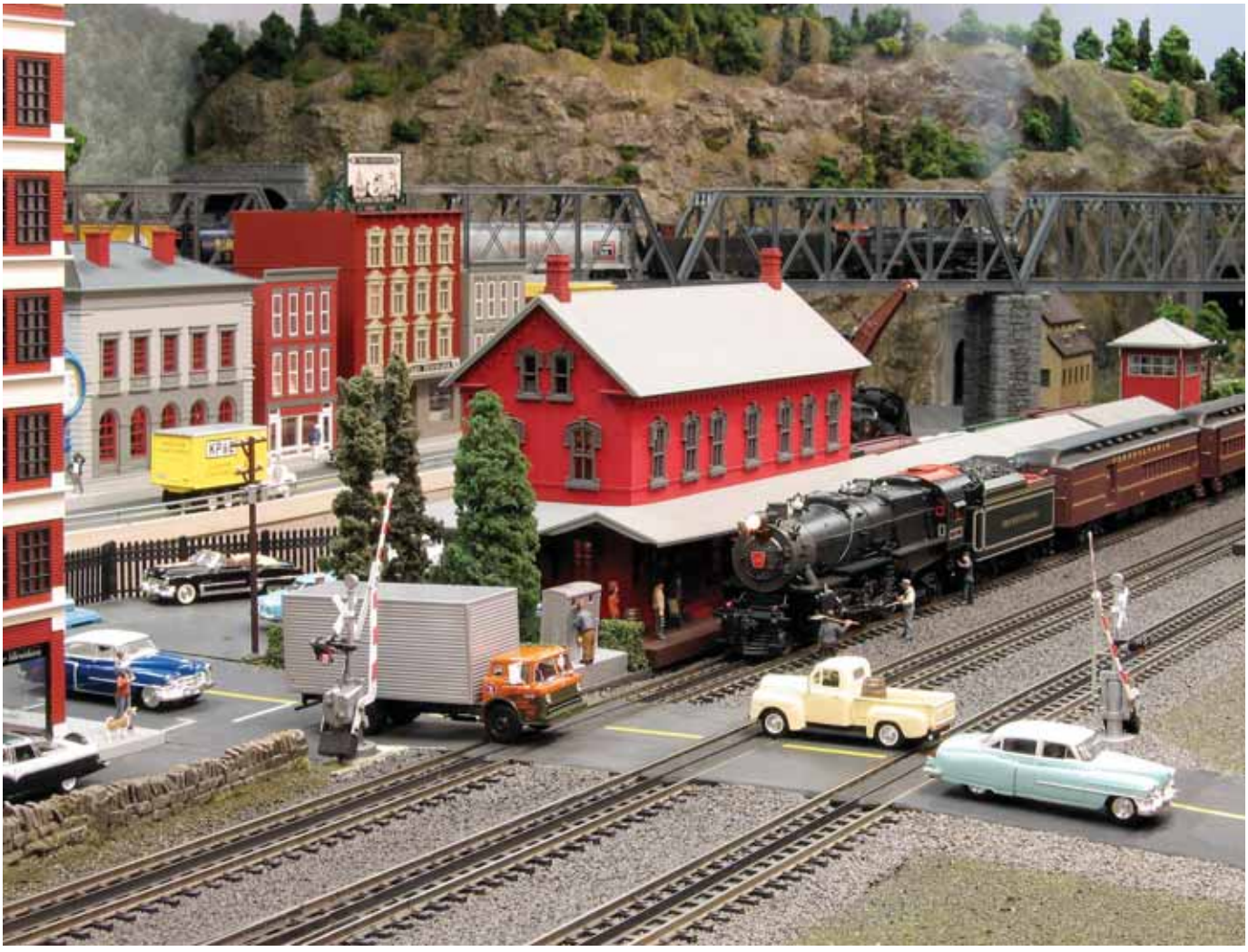
DCS. I sold all the rest of my Lionel and Proto-Sound 1 engines to buy more Proto-Sound 2.0 engines.

The benchwork was constructed using 2x4s, 1x6s, and plywood for a sturdy platform I could stand on. I used screws instead of nails for sturdier joints, and so I could work quietly after the kids were in bed. The layout has enough access areas to reach any part, but none of them are visible from the viewing area. To make some areas even more accessible, I built in removable sections. There is plenty of storage under the layout for all my boxes. I chose the MTH ScaleTrax for my track because it was realistic looking and easy to use. Its plastic ties and bindings actually provide good sound dampening by themselves, although I laid all the track on cork bed as an added precaution.

With the layout fully operational, it was time to start the landscaping.

You can almost hear the flanges squeal as the MTH N&W J drifts into the curve. Haze-shrouded hills in the background give the illusion of distance between the hills.

Local traffic crosses in front of the MTH K4 as the train crewmen go about their business during the prolonged station stop. In the background, a Pennsy M1 drags its freight across the five-section truss bridge that spans the valley.



Rich Battista's well-planned train room and layout uses either fluorescent or controlled-brightness incandescent lighting for the visual effect he wants at the moment.

Rich's recently acquired MTH F3. Unlike the fate that befell his dad's Lionel F3 of years before, Rich states this one will never see the light of day, let alone the dirt in his front yard.

Mountains

The landscaping turned out better than I hoped for, especially the mountains. My technique is a fairly common one, but with some unique twists. I start with a sturdy wooden frame of 1x2s and plywood to which I add the usual strips of weaved cardboard. I then take pieces of heavy brown wrapping paper and crumple them into a tight ball. When the ball is unfolded, the heavy paper maintains a rocky looking contour that makes a good base for a mountain surface. I built the entire mountain out of this crumpled paper, shaping it to look like natural rock as I stapled or taped it to the frame. Then I dipped sheets of paper towel into Hydrocal plaster one at a time and covered all the paper. After the Hydrocal dried, I began the art of applying rock molds and rocky plaster to the bare surface. My kids had fun mixing the Hydrocal and pouring the rock molds, helping me make well over 150 molded rocks from only eight different molds. The molded rocks were applied with thickened Hydrocal on the back, starting from the top and working down to avoid dripping plaster on finished rocks below. To fill gaps between molded rocks, we used "lumpy" plaster, which is made by allowing plaster to dry in the bucket and then mixing the scrapings from the sides of the bucket in fresh plaster. As soon as the plaster fill was applied, we sprayed it with water to erode the plaster between the small lumpy pieces. This process gave it a very rocky texture on the surface. From there, I used standard techniques for coloring and applying ground cover and trees. One nice touch was to apply the molded rocks on an angle and in layers, using different patterns and colors of rock molds and even tree bark to simulate the layers of rock you would see from a real cut in a mountain pass.

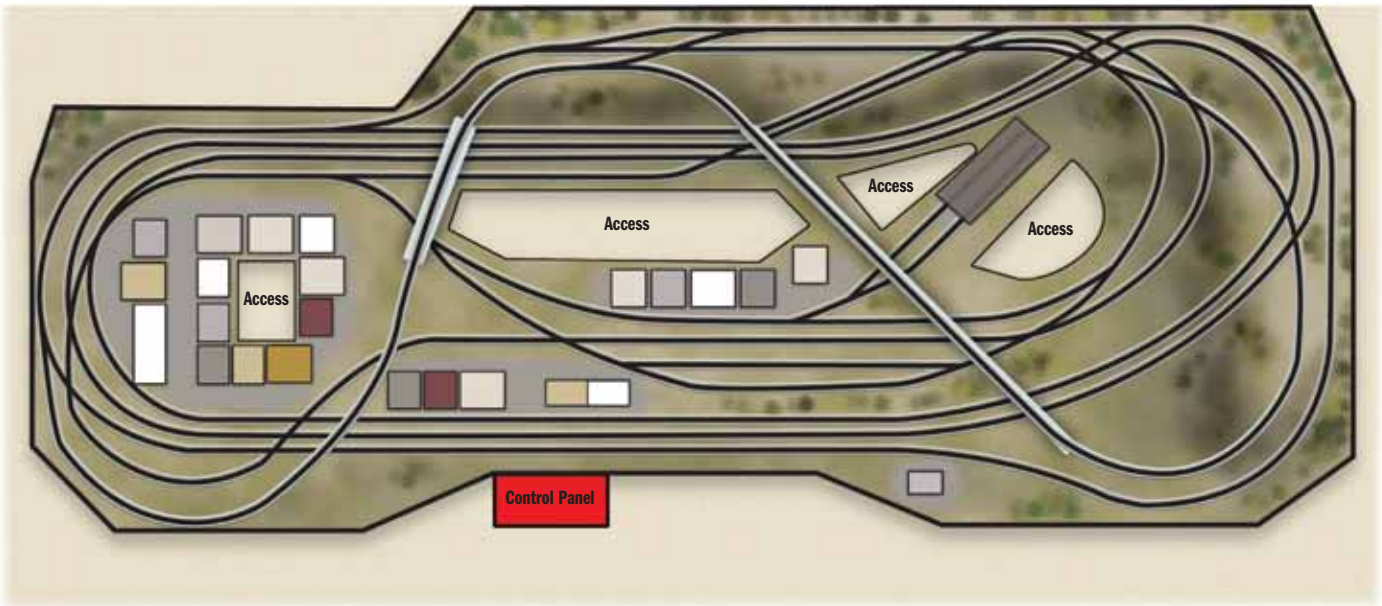
The mountains were colored to blend into the picture of the West Virginia mountains on the backdrop from Backdrop Warehouse. I had to paint the wall above because the backdrop did not go all the way to the ceiling. A custom-mixed paint matched the blue sky in the upper part of the backdrop. Because it wasn't a perfect match, I used a paint swatch to find the right color to mix in to adjust the color to a perfect match for the blue sky. I then painted the wall, the seam, and the upper part of the backdrop to blend everything together nicely. Finally, I used a clear lacquer spray paint on the trees in the backdrop to darken their appearance and better match the trees on my layout.

Ground Cover and Ballast

About half of the ground cover on my layout comes from real rock; the other half is from various Woodland Scenics products. The real rock came from behind my parents' house in Pennsylvania, where I used a flat shovel to scrape the sediment off the surface of an old coal mining road. I cleaned the sediment, allowing it to dry, then used different sized strainers to get the various sizes, including some that I used as ballast at the base of the middle mountain. Most of the ballast, however, is from Woodland Scenics, but I wasn't happy with the color choices. The gray ballast was too light, and black was too dark. So I decided to paint the gray ballast darker by spreading the ballast out in a thin layer on some cardboard and dusting it with black spray paint, shaking a little, then dusting again and repeating this about five times until the color was just right. This process also made the ballast look more realistic by giving it a slightly speckled or nonuniform look. Once the ballast was applied, I dusted it and the track lightly with black spray paint to give it that dirty look caused by engine exhaust.

When I set out to build this layout, my expectations were that I would satisfy my urge to build a big train layout and that my family and I would enjoy using it to operate my train collection. If I were lucky, I might get some photos published in a magazine. I am very pleased to say that my expectations have been met and exceeded.

Train watchers outside the local pub appear to be enjoying the A-B-A trio of MTH FMs growling their way through downtown Middletown. However, the window shopper and pedestrian are apparently taking little notice of the visiting CN diesels.



About the Author:

Rich Battista is the director of engineering for Satellite Communication Company. Both he and his wife are graduate engineers from Penn State University. Besides building train layouts, Rich enjoys golfing, basketball, pool, fishing, and red Corvettes.

Rich shows video clips and more photos of his layout on his website at www.toytrainsontracks.com.

BELOW: Built-in train display shelves have sliding glass doors.

BOTTOM LEFT: As Rich described in the article text, he built the tracks for the sliding glass doors from strips of wood.

BOTTOM RIGHT: Rich's childhood Lionel trains are displayed beside his O scale Big Boy from MTH. What a difference a few decades make in 3-rail O gauge trains.