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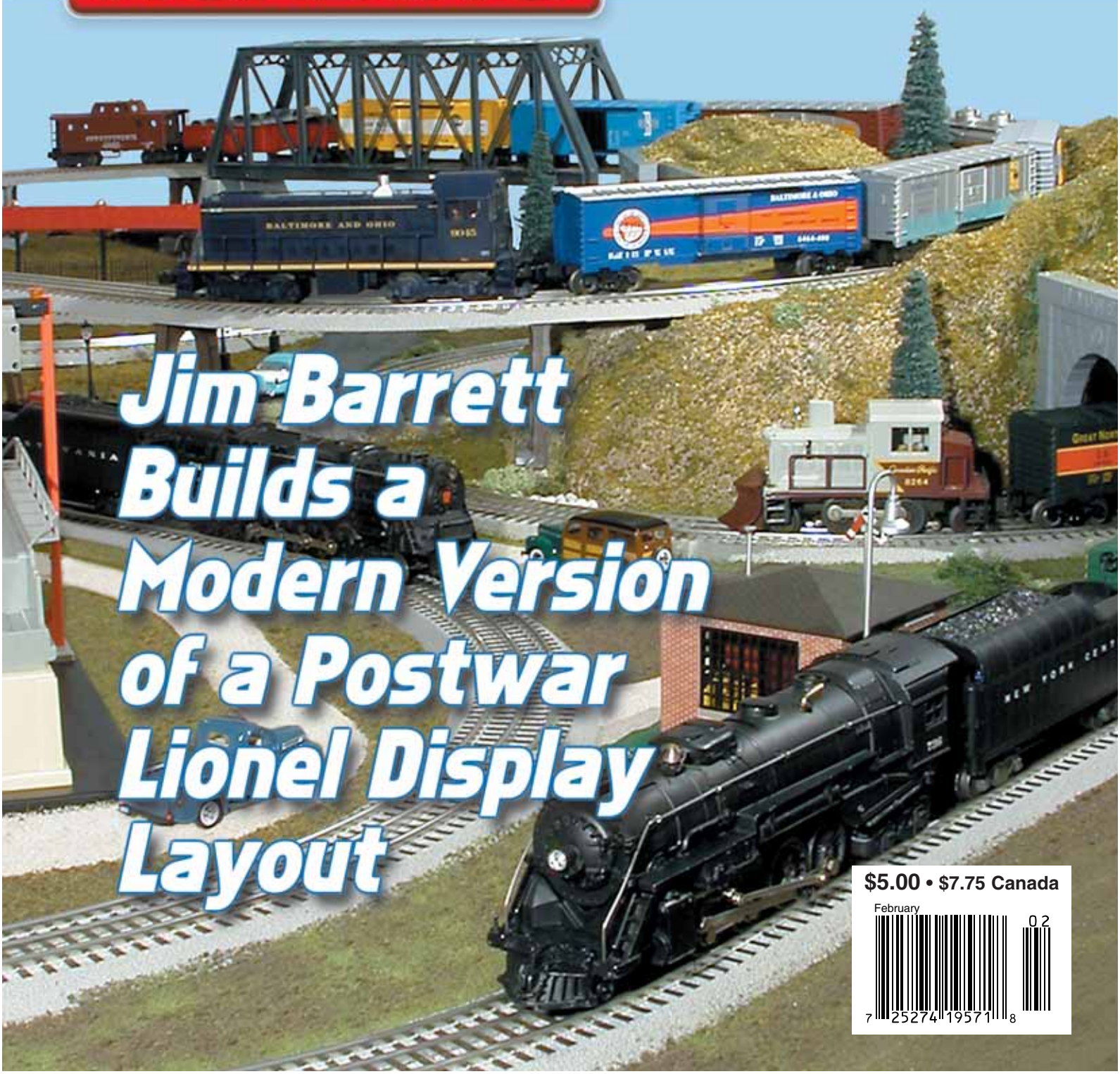

Jim Barrett Builds a Modern Version of a Postwar Lionel Display Layout

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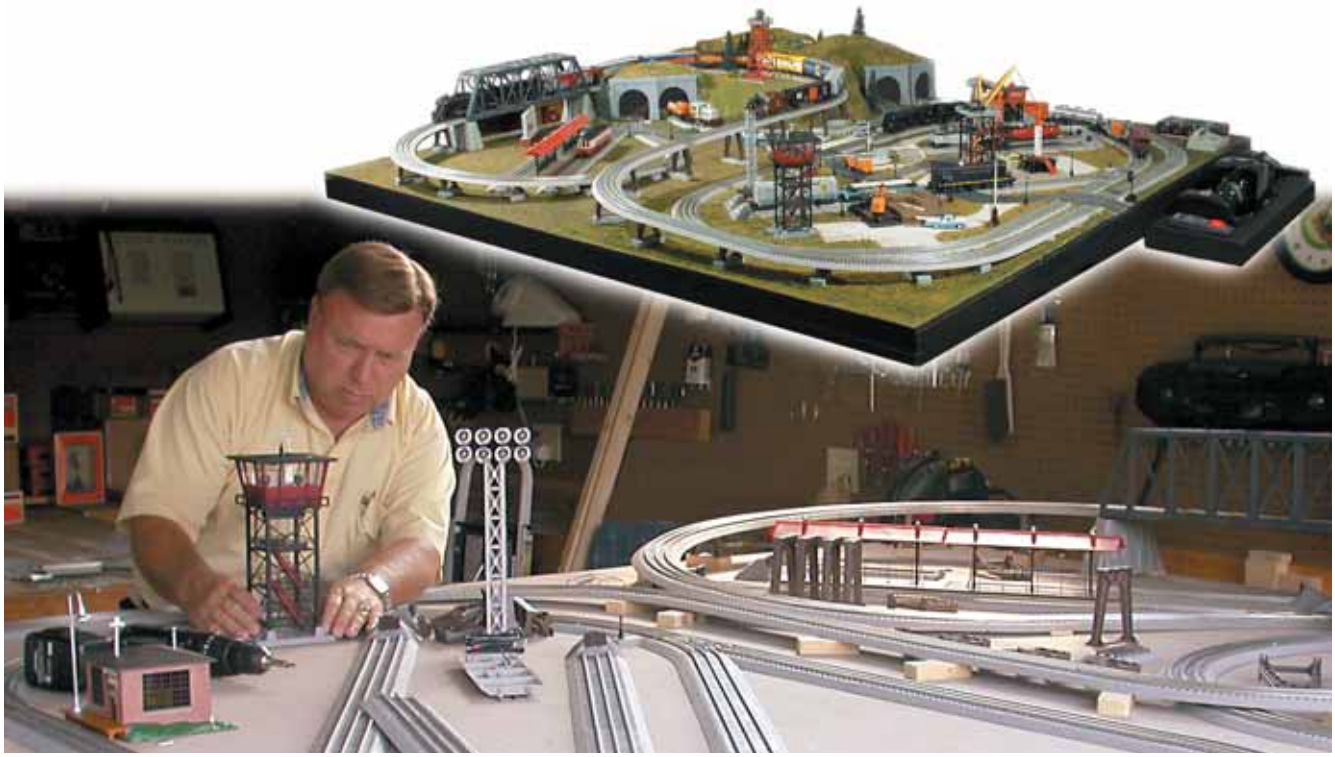
OGR ***readers know Jim Barrett´s skills as a train repairman. In this two-part story, he shares his skills as a talented layout builder.***



New Life for Lionel's D-265

Part One

Story and Photos by Jim Barrett

Ah, it was the thing of dreams! Imagine being a kid in the fifties and traveling with your mom and dad from your home town to the "Big City" for a Christmas weekend. The sights and sounds of the lighted streets, the department stores, the people, the clanging bells out on the sidewalk — it was all part of Christmas when you were a kid in those years.

The biggest thrill for me was to get to the toy department on the fourth floor of the department store to see what was new from Lionel. There were always the orange boxes, parents buying trains for their kids, the new catalog, and, most important of all, there was the Lionel display layout!

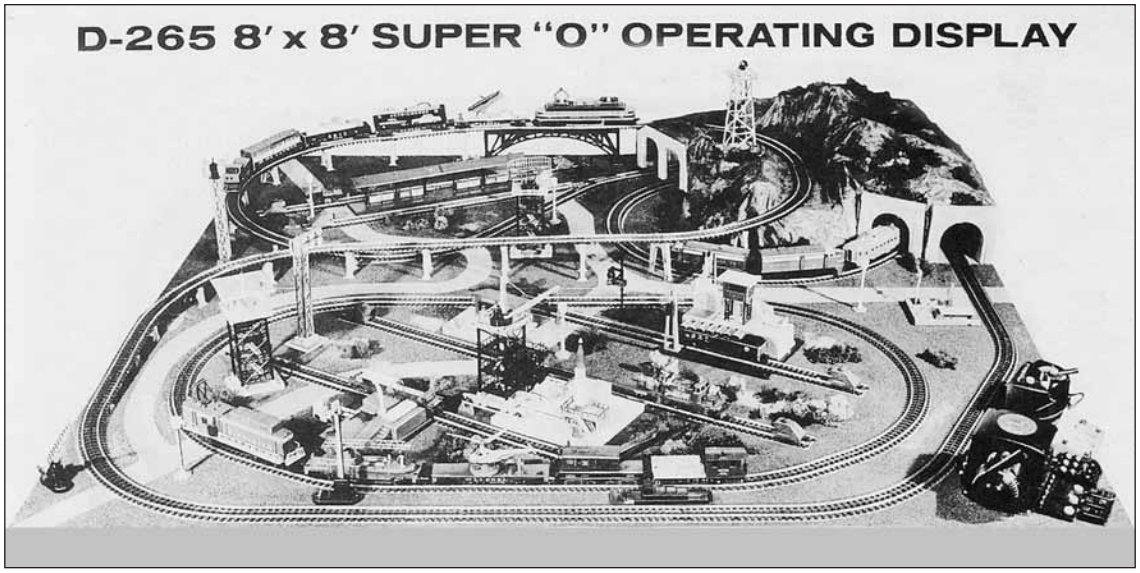
Lionel Dealer Display Layouts

Lionel had many of these layouts over the years, either 4´x 8´, 5´x 9´, or maybe even 8´x 8´ in size. They were relatively simple things compared with what I see in today's world. They had modest scenery, including painted-on grass and roads, some lichen or cut up sponges here and there for shrubs, maybe a mountain tunnel, and that was that. But they always had the newest Lionel trains, accessories, and transformers! The only thing better than those layouts were your own dreams after you had studied the latest Lionel catalog.

I didn't find out until much later in life that most of those layouts were built by the elves at Lionel, and that they had a style number and were offered to the stores (for a price) with the gentle hint that they could easily be sold after Christmas to some eager customer. Over the years, I came to recognize all the layouts of my memories by their assigned Lionel "D," for display, number.

Recently, I learned a lot from a book owned by my friend Roger Bockman: *Classic Lionel Display Layouts You can Build by Roger Carp*, Kalmbach Books, 2000. In it you can find almost anything you might want to know about those Lionel Dealer displays, including one layout I'd never seen, the Lionel D-265.

It is right there in the book: an



The original Lionel D-265 display layout (Photo courtesy of *Classic Toy Trains*).

8´x 8´ layout with three loops, two sidings, and a couple of bumper tracks. It even had a trestle and an elevated section. But I couldn't remember ever seeing that one. My friend Roger Bockman filled us in on some background (see Ed Boyle's "Collector's Gallery" story on page 104), and also steered me in the right direction of existing D-265 displays.

Re-creating Lionel's D-265

Most of you know me by now. After the first "ooh, aahh!" all I could think of was: how can I build this thing using modern track, switches, and accessories? This layout was really neat, but it just wasn't practical in this day and age to hunt down old Super "O" track to recreate it, and available standard Lionel tubular track just didn't have the geometry to produce a layout that was originally built with Super "O." Super "O" track was based on curved sections that made up a circle of 36″ diameter, and the curves of Lionel tubular track come in lots of circle diameters, but not 36″. But then, eureka! Lionel's new FasTrack is made on the exact same O36 footprint as the old Super "O".

That discovery made the track plan very easy! Now I was on my way, and my plan was to make a new updated version of the original D-265 and show it off in our booth at the Train Collectors Association meet at York, PA, this spring. I thought our readers might enjoy seeing this thing come to life again after 46 years.

Accessories

Luckily, most of the accessories on the original layout have been reissued by Lionel in recent years, and the reproductions would allow me to build a modern layout that was almost exactly like the original. To determine precisely what accessories were available, *O Gauge Railroading* called the good folks at Lionel. When they heard what we were up to, they were willing to "kick in" and make this dream come to life. They donated what they had on hand, which included all the necessary FasTrack, the switches, lights, billboards, trestle sets, modern equivalent transformers, and even a few accessories the original D-265 didn't have.

One of them is the ingenious operating Train Orders Building (6-14166). You just have to see this one to appreciate it! The continuously illuminated interior is complete with a potbelly stove that has a flickering fire in it. On the platform out in front of the building is a flood light. When the Train Orders Building is activated by either a passing train or a momentary push button, the door slowly and smoothly opens, and a station agent emerges with the train orders attached to the end of a long pole. He swings the stick up in the air for the passing engineer to grab the train orders, while the door slowly closes behind him. At the same time, the semaphore signal on top of the building slowly raises its two arms to the outstretched position. After the train has passed, the door slowly opens again; and the agent retreats into the building, lowering his pole as he does so. The door then slowly closes. I placed the agent right were the original D-265 layout had the No. 1047 Switchman with Flag, and he's right at home there.

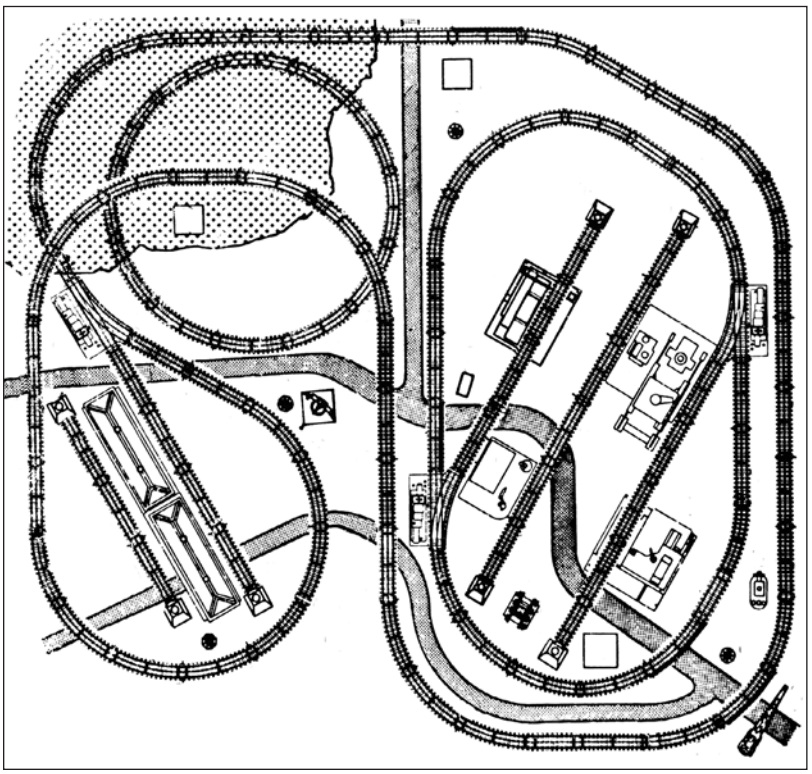
A quick look through our dealers who advertise in the magazine produced reissues of the postwar Rocket Launcher, Culvert Unloader, and Fork Lift Platform. I was also able to come up with the reissue of the flat car with the rocket on it, a culvert car with the necessary sloped ramp, and a flat car with boards for the Fork Lift guy to remove and stack.

The D-265 Table

A look at the layout diagram makes you realize that the original D-265 layout must certainly have been built on two separate 4´x 8´ tables joined together on the long edge, with only two track sec-

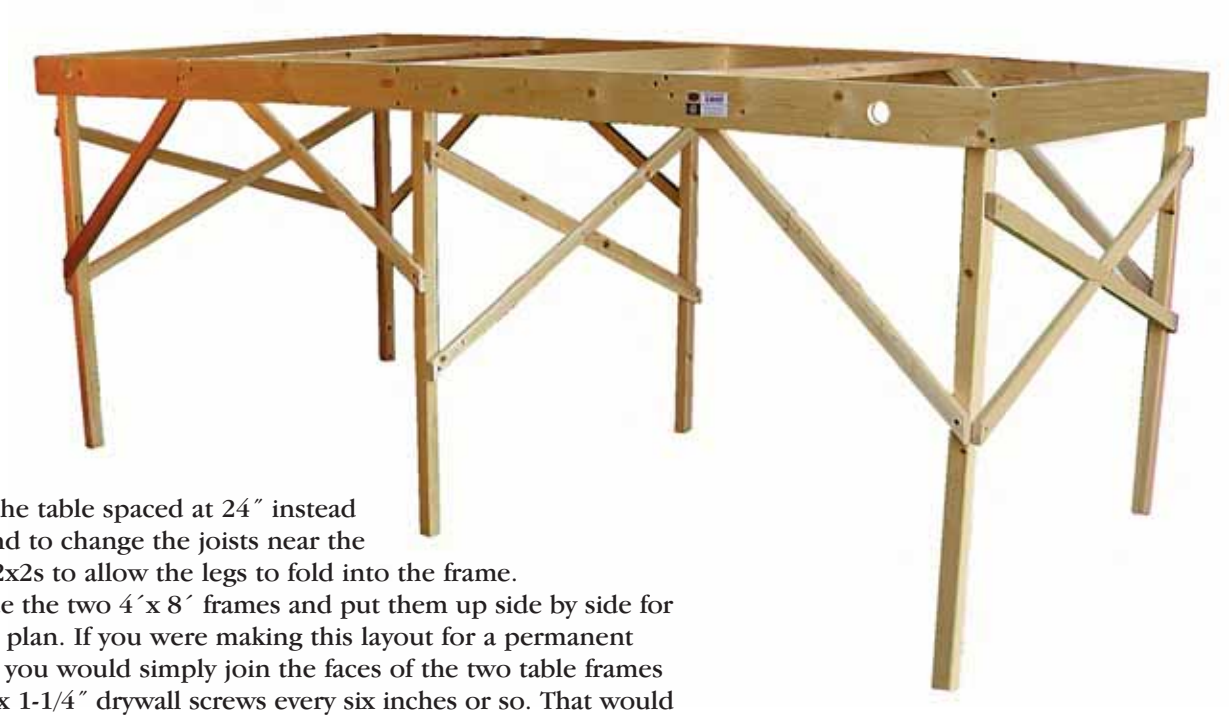
ABOVE: an overhead view of Jim Barrett's modern D-265 layout.

LEFT: the track plan of the 1959 Lionel D-265 (drawing courtesy of *Classic Toy Trains*).



tions needed to bridge the joint between the two tables. It is a clever design that lets you build the layout and complete the scenery with everything in easy reach before you join the halves together. I decided things would be even more convenient if I designed a table with legs that folded up into the frame so the two sections could be easily transported.

Since I wanted to use minimal dimension wood to keep the layout sections as light as possible, I made the frames out of 1x4 #2 pine boards with a 1x4 joist at the middle. In between the middle joist and each end of both frames I added a 2x2 joist for additional support to the table frame. The legs were made of 2x2s with 1x2s for braces. I covered the tops of the tables with a 4´x 8´ sheet of 1/2˝ BC plywood. A quick glance at my Backshop article in Run 185 (*OGR*, February 2002) will give you the materials, dimensions, and details for building a table in this manner. The only changes I made were to make the



joists in the table spaced at 24″ instead of 16″ and to change the joists near the ends to 2x2s to allow the legs to fold into the frame.

I made the two 4´x 8´ frames and put them up side by side for the track plan. If you were making this layout for a permanent location, you would simply join the faces of the two table frames with #6 x 1-1/4″ drywall screws every six inches or so. That would make a nice 8´x 8´ table. Because I want my layout to be transportable, I will simply clamp the frames of the two tables together along the underside with some "C" clamps or their equivalent.

The original D-265 layout diagram shows layout power furnished by a Lionel postwar 275-watt ZW and a postwar No. 1033 transformer. I wanted my sources of power to be as close to the originals as possible but in a form that is currently available from Lionel. I also thought it would be neat to add capabilities for Lionel's TrainMaster Command Control and MTH's Digital Command System to this layout, so I decided to move the transformers and other hardware to a separate transformer stand attached to the side of the layout.

The transformer stand is a simple plywood piece measuring 13″ deep by 42″ long on a three-sided frame. The frame is only under the front and the ends of the transformer plywood, and the unframed back of the stand's plywood is attached to the underside of the table anywhere the operator wants. This modification, the only one I made to the original table design, would give me the room necessary for the new ZW and power supplies, the CAB 1, the Command Base, and the Track Interface Unit (see my Backshop column in this issue on page 110).

Reproducing the Track Plan

I followed the original track plan faithfully, with a couple of exceptions. I squeezed the ends of some loops just a bit closer to the table edges. I also stretched the length of the grade in one instance to make it a little easier for the locomotives to do their job. That change resulted in the relocation of one road, but I think the trade-off is well worth it. Since Lionel LLC didn't have an arch-under bridge, we substituted the Lionel #6-12772 bridge for the arch-under bridge on the descending slope in the back.

It becomes pretty obvious that this department store display layout can be easily modified into a more functional layout for an individual owner. It contains, for instance, two tracks that end in bumpers solely for demonstrating "bump-and-reverse" motorized units. I made a gentle "S" shape in the bumper track located between

TOP: the completed table.

CENTER: The completed leg set, hinged up. and into, the underside of the frame.

BOTTOM: Jim screws the completed leg assemblies to the table frame.

LEFT: the modified Lionel piers.

RIGHT: Jim locates the rotating beacon on the mountain "floor."

the Fork Lift Platform and the Culvert Unloader. It just made a more interesting path for a Lionel Fire Car to travel on. The space for those tracks might be better used for a siding to mount an operating accessory, or simply for scenery. Another obvious feature of the layout is that it can be added to on any, or even every, side for future expansion. It's a wonderful layout to start with.

Placement of the trackside accessories can take a bit of fiddling. The plastic base of FasTrack is much wider than the ties of original Super "O", and I had to trim the edges off some track sections to fit them into the metal bases of the Culvert Unloader and the Fork Lift Platform. The results, however, were worth the trouble because Lionel's FasTrack looks much better than Super "O" ever did in those accessory bases.

I completed the track plan by snapping together the Lionel FasTrack and just laying it in the general area where the track would ultimately go. Sometimes this meant that track was lying on top of other track, but it's what you have to do to make sure the track plan actually fits. The original designers weren't above making "field changes" when they found the drawings just wouldn't do it in real life! I had to make a couple of them myself to get the track to conform to the picture of the original.

Bridges and Mountains

One thing that needs adapting is the graduated trestle set, which is designed specifically to fit with Lionel's tubular track. I was able to make it work with FasTrack by making a few changes.

On the underside of the new FasTrack are plastic bosses where the screw holes are. These bosses are too long to fit into the openings in the tops of the Lionel trestle supports, so I removed them from the track base by twisting them off with a pair of pliers. I had to do this at every location of a trestle support. Atlas O makes some long, narrow screws with which I attached the Lionel FasTrack to the trestle supports by passing the screws through the hole in the FasTrack and down through the plastic of the trestle support.

That anchored the track nicely, but I still had a problem. Because the trestle support was now inside the hollow base of the FasTrack, the skirts of the FasTrack "ballast" made the overhead clearance too low for a train passing underneath. The cure was to find a nice piece of scrap 2x4 lumber from which I cut a bunch of pieces exactly 3/4″ long. To make them look like concrete bases for the trestle bents, I sanded each piece to remove burrs and sharp corners and spray painted it with light gray primer. These concrete bases raised the track to exactly the right height. In the final assembly of the track plan, I glued each of the wood bases to the top of the train table with some Elmer's glue.

The last piece of table I added was a "floor" for the mountain to give the track something to come up to and descend from. It had to be big enough to come out to where the tunnel portals would be, and I didn't forget to add some on the inside of the curve for a nice rotating beacon. No mountain is complete without a rotating beacon!

I cut some scrap lengths of 1x2s to make legs to attach to the underside of this floor piece with #6 x 1-1/4″ drywall screws and made sure I spaced them so they would not interfere with the tracks inside the mountain. After I positioned the mountain floor subassembly, I put some Elmer's glue on the bottoms of the 1x2 legs to fix it permanently on the layout.

Now we have a completed table, track plan, trackside accessory placements, and mountain floor. In Part Two (in Run 207) we'll do the wiring and scenery.

About the Author:

Jim Barrett is *OGR's* Dealer Network Manager and the author of the "Backshop" column.

Jim Barrett finishes the D-265 layout in this second part of the story.

New Life for Lionel's D-265

Part Two

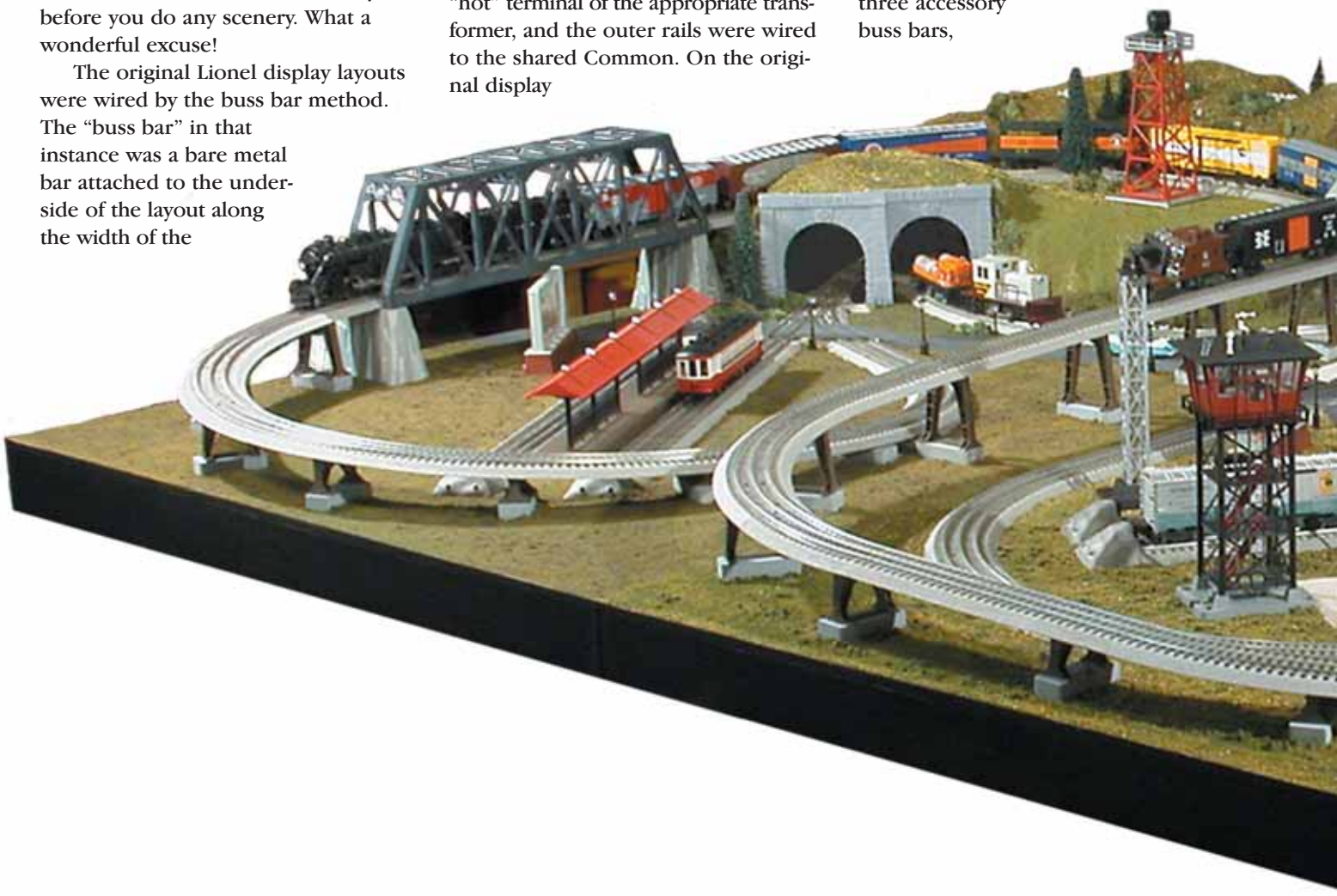
Story and Photos by Jim Barrett

Finishing the Wiring

If there is one lesson I've learned the hard way, it is to make sure the layout runs the way I want it to before I add any scenery. Reverse those priorities, and you'll almost certainly have to tear up scenery to correct mechanical defects. So take time to run the layout before you do any scenery. What a wonderful excuse!

The original Lionel display layouts were wired by the buss bar method. The "buss bar" in that instance was a bare metal bar attached to the underside of the layout along the width of the table. It allowed the power from the two transformers to be easily available anywhere under the table.

Lionel used one buss bar for each power terminal of the two transformers and one bar for the AC Common to both transformers. The center rails were wired to the bus bar from the "hot" terminal of the appropriate transformer, and the outer rails were wired to the shared Common. On the original display layouts, the two tabs of the old ZW powered two bus bars for accessories, and the two handles powered loops or circuits of track. The 1033 used one bus bar for the variable handle, and one buss bar for fixed voltage accessories. Three different voltages were then assigned to the three accessory buss bars,



and switches for the accessories were fed from the bus bar carrying the voltage that made a specific accessory run best.

I decided immediately that our layout would have a slightly more sophisticated system. On my new D-265, track power was indeed supplied directly from the transformer, but I added a thin plywood panel (1/8″ plywood available from Midwest Products at most hobby stores) on the lower right corner of the layout so that I could control the accessories individually with toggle switches (Photo 1). That panel let me use the three remaining variable power supply terminals for all my accessories.

Controls for the original D-265 were situated on a corner of the layout; but my switch panel, Lionel TrainMaster Command Control (TMCC) command base, and the new ZW and PowerHouse units required a separate transformer stand (Photo 2). It looks better in any case to have the transformers off the layout, and I also wanted to make this layout work on M.T.H. Electric Trains Digital Command System (DCS) as well as TMCC, so the additional space came in quite handy.

Instead of bare buss bars, I used 16-gauge supply wires from each of the three voltage sources. I decided in advance that two of the three would be fixed at some predetermined voltage, and the third would remain variable. The variable source would supply power to all the toggles designated for operating accessories. This arrangement was necessary because the electrical design of most postwar accessories requires individual power adjustment to make each accessory perform at its best. On my reconstruction of this layout, a dedicated toggle switch turned each accessory on or off, easily regulating power to individual accessories. All other accessories were powered by the two fixed voltage wires.

I wired the three main loops with paired wire (AC + and AC Common in a pair) and used the buss bar Common for accessories only. Sometimes DCS and TMCC work better with this wiring scheme. For each accessory toggle switch, I ran a supply wire from one of my three main accessory voltages, depending on the accessory, then ran a wire from the toggle switch to the accessory.

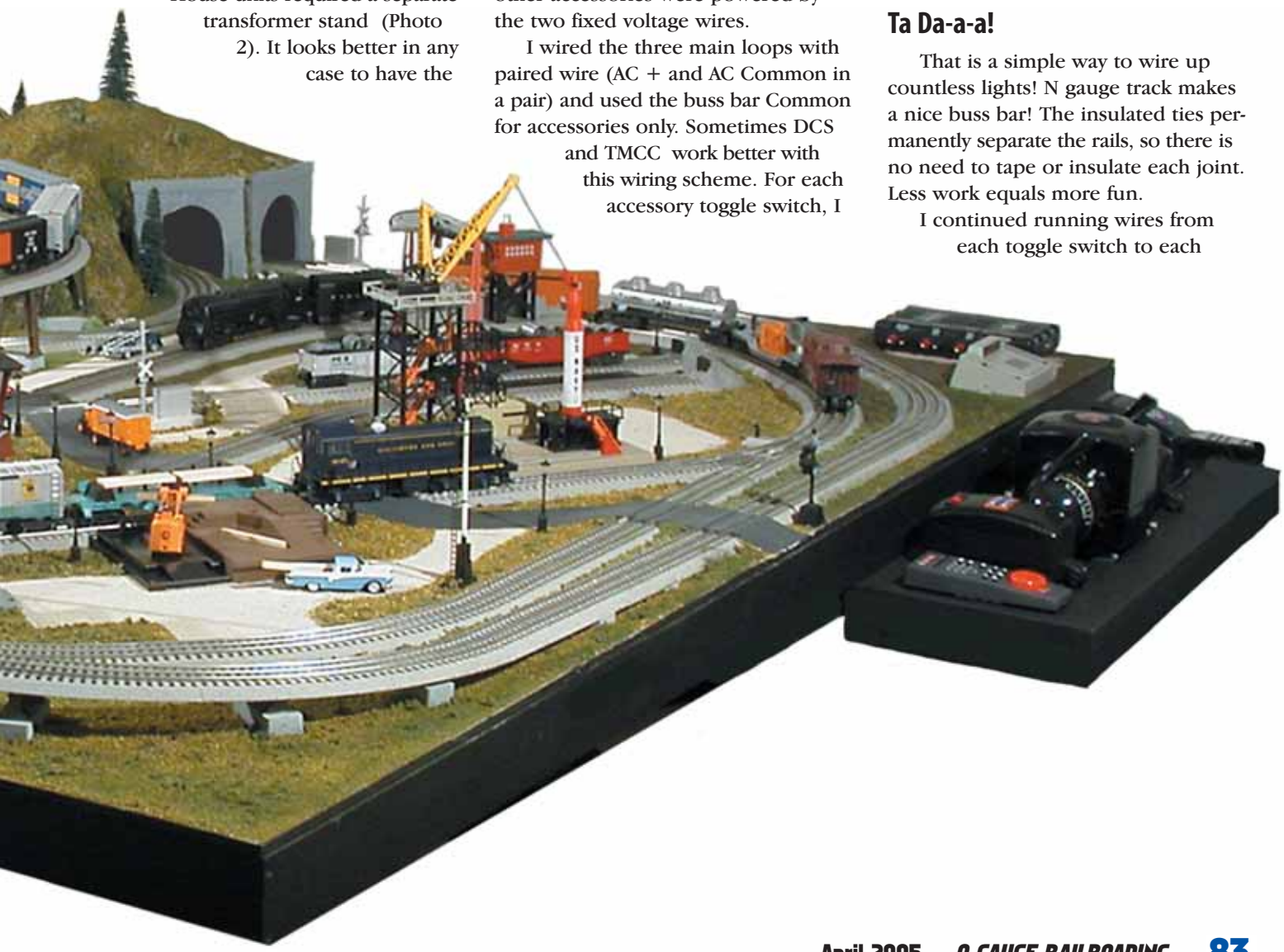
For street lighting, I used a trick Bill Bramlage taught me (see Bill's story on page 88 in this issue of *OGR*). I stapled a piece of N gauge track to the underside of the table running roughly along the line of the street on top of the table. From each mounted street light, a pair of wires (one red, one white) drops through the table top, and I soldered each red wire to one side of the N gauge track and each white wire to the other side. It doesn't matter which side (Photo 3).

Once that was done, I connected one of the N gauge rails to an AC Common wire under the table and the other to the toggle switch labeled "STREET LIGHTS."

Ta Da-a-a!

That is a simple way to wire up countless lights! N gauge track makes a nice buss bar! The insulated ties permanently separate the rails, so there is no need to tape or insulate each joint. Less work equals more fun.

I continued running wires from each toggle switch to each



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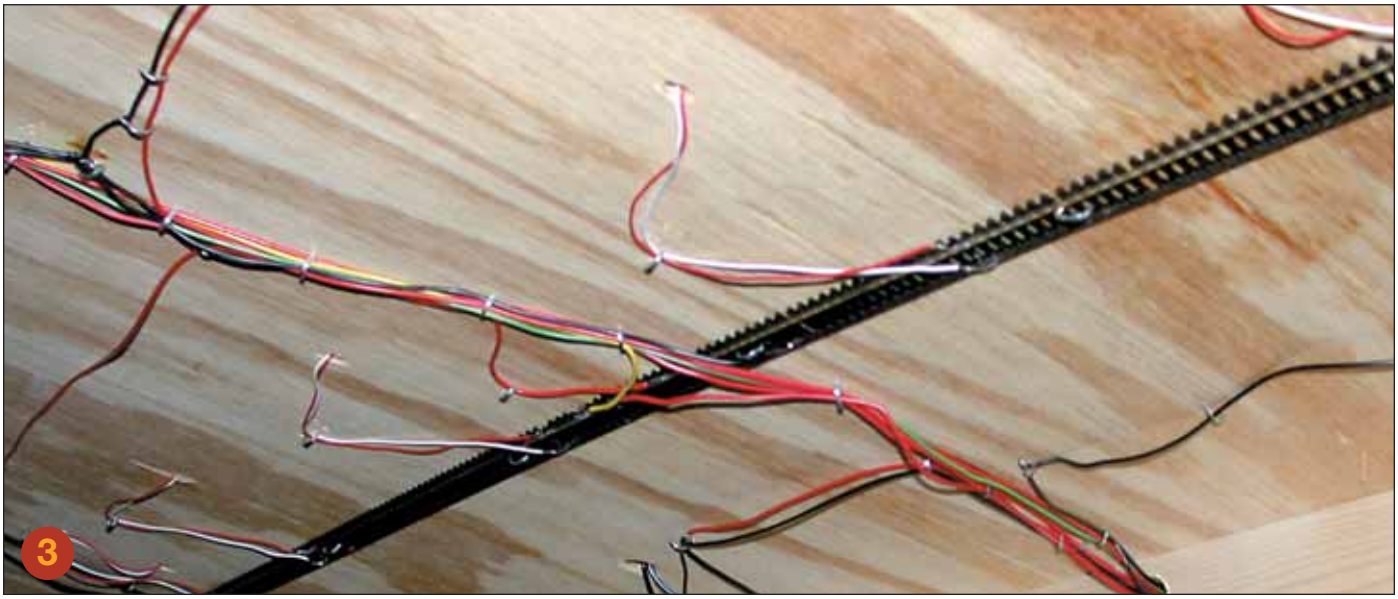
accessory's AC + until all were running at the mere flick of a switch.

Scenery

I like to keep scenery as simple as possible. There is a wonderful book in my library titled *How To Build Realistic Model Railroad Scenery* by Dave Frary (Kalmbach Books; ISBN: 0-89024-124-4). If you can find a copy, by all means get it. I use Dave's water-based technique whenever possible.

The space between the table top and first track level of the mountain is filled with strips of cut-up corrugated cardboard. One end of each strip is attached to the layout surface with hot glue, and the strip is then rumpled through the fingertips. The other end is attached to the top of the upper floor of the mountain. Strips are mounted in succession, left to right, until they fill a side of the mountain from one end to the other. Once the vertical ones were complete, I wove horizontal strips of cardboard through them. At each cardboard strip crossing, a little spot of hot glue holds it together. If you follow my procedure, start at the bottom and go to the top until your cardboard hillside looks like Photos 4 and 5. Attach strips to the back side of tunnel portals also.

For the top of the mountain (Photo 6), I crushed sheets of newspaper and taped them down with masking tape to create valleys and peaks. It's a good idea at this point to cover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all tracks on the layout with 2″ wide masking tape to keep scenery materials off them. This step now will save lots of time later.

Next comes the surface. Mountains look intricate, but it's unbelievable how easy it is to model them with the materials available to us in this day and age. One of the *OGR Online Forum* (www.ogaugerrr.com) sponsors is Scenic Express (175 Sheffield Drive, Suite 100, Delmont, PA 15626-1723; phone: 800-234-995). It sells a fantastic product consisting of a roll of plaster-impregnated cloth called Plaster Cloth. All you have to do is cut the roll into squares, dip them in a paint roller pan of warm water, and lay them on your cardboard strips and newspaper. That's it! That's all you have to do.

While the plaster cloth is still wet, smooth it down into the valleys, along the base of the mountain, and along the track roadbed. It sets up in a hard shell in about an hour. I found that some areas needed a little more plaster, so I mixed up some plaster of Paris (sometimes called molding plaster) and made a "slurry" that I painted on to the surface with a sponge brush. It gives the mountain surfaces just a little extra rigidity and thickness.

When all the surfaces were complete, I painted the entire area with a light brown paint to simulate earth where there was no scenery (Photo 7). It looks surprisingly realistic where scenery materials leave a gap or on lightly covered areas. Once the paint was dry, I brushed Elmer's glue directly on the surface, working roughly one square foot at a time. I then added various consistencies and colors of Scenic Express landscape materials to give the area a nice country look. These materials were firmly fixed in the surface glue by an overspray of water mixed with a few drops of dishwashing detergent and applied with a Windex spray bottle. This mixture is called "wet water" by scenery experts, and it coats the scenery material and lets it sink into the glue. Sometimes I also apply water-diluted Elmer's glue right on top of the material by dribbling it from a squeeze bottle, such as an empty French's mustard container. Finally, a few trees were spotted in, making the mountain look very real (Photo 8).

Roads and sidewalks have always been a challenge to me. But not anymore. Woodland Scenics (P. O. Box 98, Linn Creek, MO 65052-0098; phone: 573-346-5555) makes a material called Smooth-it that makes great roads and sidewalks. It works with another of their products, a narrow strip of thin foam tape. After the tape is applied as edges to a road or sidewalk, Smooth-it mixed with water is poured to fill the area between the edges and then smoothed with a


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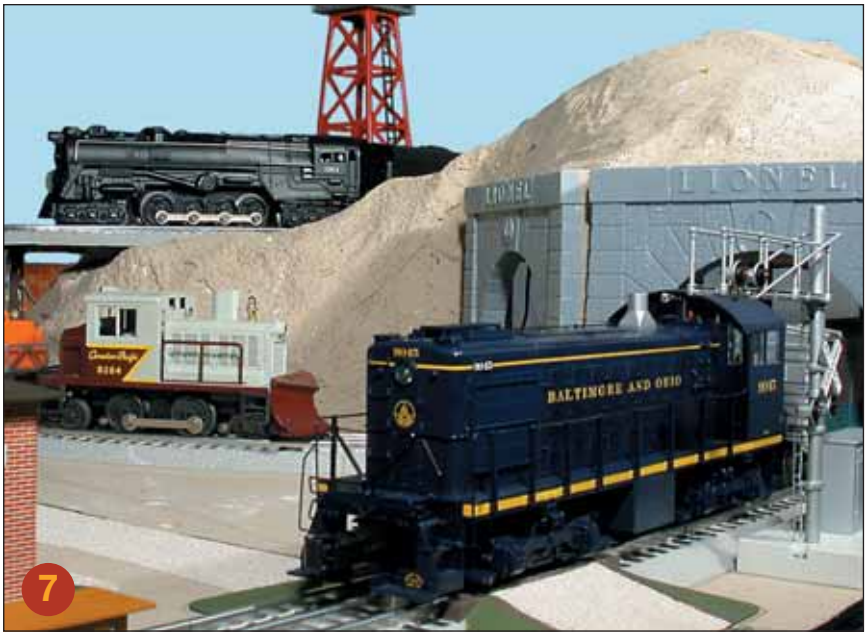

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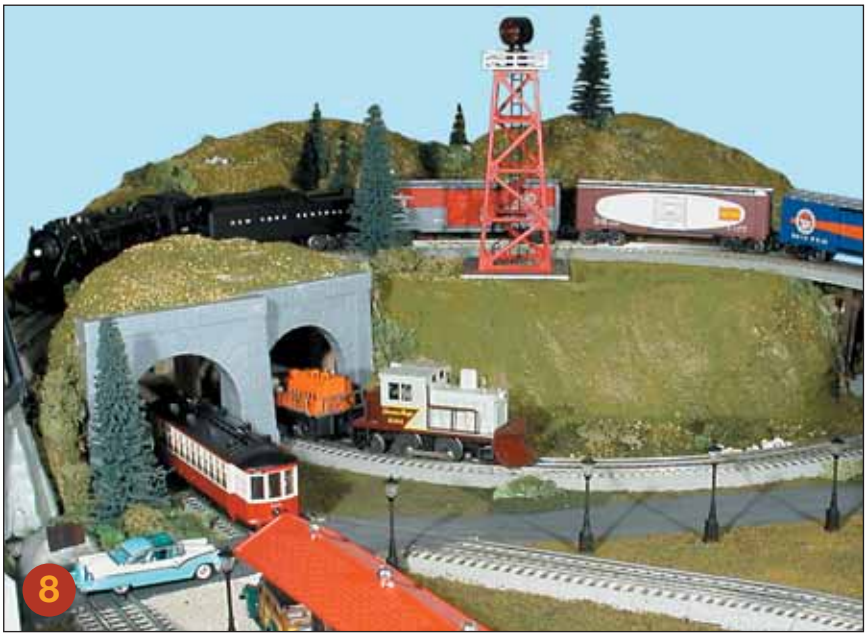
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plastic spatula.

When the Smooth-it has dried, the tape is pulled up, and the surface is then lightly sanded to remove any bubbles or irregularities. Woodland Scenics also makes squeeze bottles of paint labeled "Blacktop" or "Concrete." Squeeze one of these on and spread it with a brush. The result is a very real looking pavement (see Photos 9-11)!

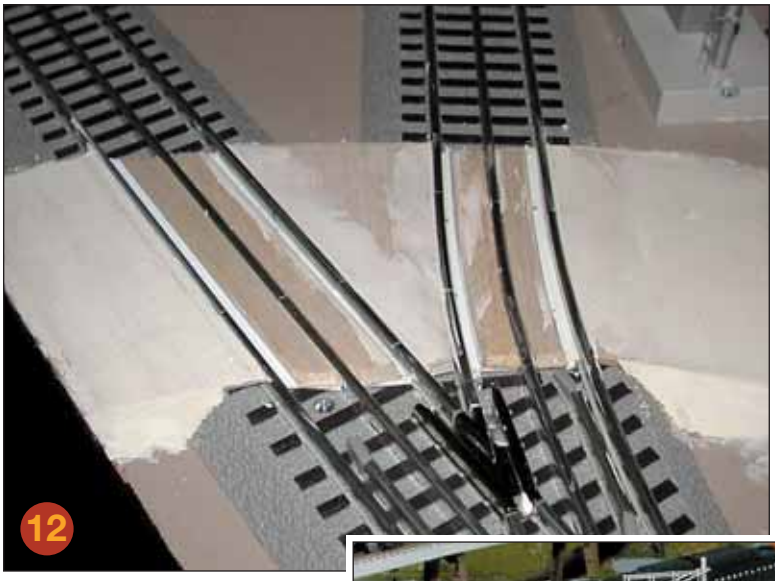
Grade crossings were made from a combination of balsa wood flat stock and standard spackling compound. The balsa wood is attached to the edge of the rails with Super Glue. When it is secure, spackling compound is pushed into the edges of the ramp, making it look like earth or asphalt mounded up. A gentle smoothing of the spackling compound completes the edges of the approach (Photo 12).

For the grade crossing itself, I cut balsa wood to roughly match the space between the rails and then trimmed off a space for the wheel flanges with a pair of scissors. Once the crossing "filler" was roughly shaped, I glued it between the rails and corrected any trimming errors with more spackling compound. While the spackling compound was drying, I slid a scrap piece of balsa wood along the flangeway next to the rails for a smooth squared-off groove.

After the Woodland Scenics blacktop paint is applied and dried, the tops of the rails are easily cleaned with a fingernail or some scrap pieces of balsa wood. Be sure to clean out the inside of the rail edge for the wheels as well. Electrical contact is made on the inside edges of the rails as well as the top surface.

For O scale gravel roads, I used HO scale ballast, and my favorite way of applying this gravel is with a layer of Elmer's glue applied straight to the table surface. I sprinkle the gravel over the glue and then spray with the aforementioned Windex bottle with the wet water mixture to let the gravel sink in to the glue. When the glue dries, the gravel is going nowhere (Photo 13)!

To complete the layout and hide a multitude of sins like mismatched tunnel portals, I added loose rocks, weeds (lichen), and brush. When I was done, I stepped back and got that old feeling I had as a kid looking at the original department store layouts. The thrill of what toy trains used to be came flooding back.



A wise old model train nut once told me we need all the super sounds and remote control of today because we've lost the imagination we had as children.

I don't know for sure, but I have a feeling he's right. Running this completed D-265 layout put me in the good old days, and in no time I was right back there running the freights, unloading and loading materials in the cars, making timed runs to the next town, and watching the lights in the night scene. There's just something about all those wheels, the noise, whistles and horns, watching that rotating beacon flash red-green-red. . . .

It just doesn't get much better than this!