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Cover: Romanos Scrap Metal is a busy industry for Neville Rossiter’s Bay Ridge Harbor Railroad.

Centerspread: A shot on the main line of the BRHRR going towards South Brooklyn.
Neville Rossiter’s Bay Ridge Harbor was the first layout featured in OST, back in the Premier issue (You can download a PDF from our website at www.oscalemag.com). Although many of you have been following what he’s been up to, as loyal readers of Neville’s column, we’ve asked him to sum up the progress on the BRHRR in this, the 25th issue of OST. Here’s Neville:

Living in the most isolated capital city in the world (Perth, Australia), and so far away from the American railroad scene, I feel privileged to be asked to contribute a follow-up article on the Bay Ridge Harbor Railroad for the 25th edition of O Scale Trains. May I also take this opportunity to congratulate the OST crew on reaching this milestone.

With the passage of time, even I had to pull out the original layout plan to appreciate how much the BRHRR has changed over ten years. The first major change took place when I installed Pier 31. Although built initially as part of an exhibition layout, it had always been my intention to incorporate it into the BRHRR. However, integration of traffic movements to and from Pier 31 proved to be a teaser. I had plenty of ideas of how I would like to see the layout evolve, but the thought of all the associated electrical work was a major deterrent. The break came when my good friend, Bruce Temperley (who had helped me prepare the Pier 31 exhibition layout), offered to assist with rewiring. After bouncing around several options, I decided to bite the bullet and get on with the next development phase of the BRHRR.
Originally traffic to and from the BRHRR was either via a theoretical direct rail connection to the South Brooklyn Railway or by carfloat. The plan, as it exists today, is for the BRHRR to be operated as an isolated industrial railroad served exclusively by carfloats from the Erie yard in New Jersey.

The Bay Ridge Float Bridge Yard was dismantled and re-erected on the site of what was previously Second Street Yard. Team tracks, the power station, and the freight house, were replaced with a double crossover, classification tracks, and a line around to Millers Meat Works.

These changes quickly started a snowball effect. In the space vacated by the removal of the float bridge and associated track work, I have indulged my military background and built the Brooklyn Army Depot. The whole area, including the adjoining coal and gravel siding, lumberyard, and the track around to Miller's Meat

3: Switching the Inwards Freight House. Atlas loco, Intermountain boxcar
4: Aerial view of both BRHRR Freight Houses, built with Lionel factory kits

5: Miller's Meats Brooklyn built from Downtown Deco kits

6: Selby Steel in North Brooklyn. Future plans call for a much bigger crane
7: Scratchbuilt Checkers office at the main entrance to Inwards Freight Yard

8: Branum Meat Works built mostly from Korber kits

9: Switching South Brooklyn Yard
10: Aerial view of trackage. Left to Right: Brooklyn Army Terminal wharf, Pier 31 runaround, and mainline

11: Float elevator with loaded floats and open car loads on bottom shelf

12: Switching Brooklyn Army Terminal

13: Switching the ice platform at Pier 31. Ice platform by Suncoast models

14: Neville’s tribute to a great man, John Armstrong

15: Even the BRHRR has a Chinese restaurant! Figures by Artlista, building by Downtown Deco
Bruce was true to his word. He rewired both yards and installed cab control. At the same time, he replaced the old “probe” method of turnout solenoid control with capacitor discharge units and pushbuttons. Having started the ball rolling, we decided to continue and update the remaining control panels.

Operating improvements as a result of our efforts, however, had a leapfrog effect. The run-around at First Avenue, essential for serving Pier 31, was now a bottleneck for North and South Brooklyn Yard traffic moving around to the float at Bay Ridge. This became a situation for which there was no quick-fix solution.

Resolving problems like this is what stimulates and maintains the pleasure of railroad modeling. After a brainstorming session, the conclusion was reached that each yard needed to be self-sufficient in terms of runaround facilities, and needed to be totally independent of the connecting line through to the float at Bay Ridge.

This next round of alterations gave me the opportunity to, at long last, incorporate a crossover that I had purchased many years ago. Access to the oil depot is now through a direct crossover connection from First Avenue. A direct line could then be laid from North and South Brooklyn through to the interchange tracks at Brooklyn Yard.

With the wisdom of hindsight, we found a conventional cab control system was restrictive in the context of operating the BRHRR, especially when there are only a limited number of operators available. I’m not sure if the new arrangement could still be called cab control as such, but what we have done is to make control of the connecting track through to Bay Ridge accessible to all operating positions. The circuit links up to each control panel similar to cab control, but is interlocked so that only one cab can control the connecting line at any time. LED’s on each panel indicate who has control of the line.

The site of where a short length of narrow-gauge track once ran from the dock to along side Romano’s Scrap yard is now occupied with BRHRR tracks serving the Selby Steel yard and Stilgoe Print Works. The resulting increase in traffic volume passing between North and South Brooklyn resulted in the need for two extra turnouts and more track to speed up the transfer. It now looks really good to see two operators working together as they break down trains and switch cars through this section.

As the number of car movements has increased, so has the problem of staging capacity within the remaining space available. Inspired by an idea published in an article by one of our smaller scale colleagues, my next project is to build a powered four-level staging elevator capable of holding sixty cars.

I know it is not easy to tear down many hours of work, but being prepared to learn and change is what has kept the BRHRR as vital and dynamic today as it was ten years ago.
Along with the Great Depression, the Rio Grande Southern faced natural disaster as well when a mudslide cut the railroad into two pieces. Struggling to remain financially solvent in the face of these difficulties, the RGS developed Motor Car #1 as a cost-effective solution to severely reduced passenger, freight, and US Mail traffic. Based on the replica of Rio Grande Southern Motor #1 that resides in Colorado’s Ridgeway Railroad Museum, Bachmann delivers whimsy and realism in two narrow gauge scales with these anticipated Spectrum® models.

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Hardly a week goes by without some permutation of the following:

Dear Scace

I can’t choose/have chosen between DCC, DCS, or TMCC. Please (1) tell me what to use, (2) write a learned treatise about each, or (3) do not disagree with me in any way.

Signed,
I. M. Stymied

This may sound like Scace is on a really good wobble only because he is, so take this (with a tip of the skimmer to Randy Brown) as an Olde Pfartz rant. The question so often laid before the Oracle is, “Which control system (DCC, DCS, TMCC, and Bingo was his name-o) do you recommend?” Since I’m the proud owner of a new basement filled with nothing but opportunities, it’s a choice I’m facing too. I’ve a fair amount of experience with DCC and TMCC, and some with DCS. Here are some observations as a private citizen O Scaler.

**Sound**

All three systems feature locomotive sound. For me, sound is cool for the first five minutes or so. Then it becomes an annoyance. In the real world, the gates go down and the far-off wail of the whistle can just be heard. Soon the hammer of the exhaust, the clatter of wheels, and the rush of a thousand other sounds all mingle together in a delightfully oppressive auditory stew, thrashing the brain. Just as suddenly, and dramatically, the sensation is gone.

The problem I have with sound in locomotive models is twofold. First, the damn thing won’t shut up after the train leaves the scene. Those of us who are the followers of the Ellison/Armstrong Theory go to great lengths to create scenes that a train enters and leaves, hopefully making the railroads we build seem bigger in an illusionary sense. Sound, as it is now, destroys that illusion. No matter where the fool thing is in the entire room, it’s blasting merrily away, never coming or going. Give me an up-arrow and down-arrow key (with a Doppler shift when you go from one key to the other, thank you) and perhaps this anachronism can be dealt with.

The other issue is, “Where are the rest of the sounds?” I, and many of my ilk, couldn’t care less about some voice telling me over the “radio” that “those black diamonds are red hot”, or that the 20th Century Limited is ready for takeoff on Runway One-Eight-Right or some such palaver. How ‘bout using that bandwidth to add a track with the train sounds that rush past with that locomotive!

Until sound isn’t a detriment to the illusion I am striving to create, it has no place in my world. Better the real sound of an O Scale train smoothly traversing the scene and (thankfully) going away than the audio-anachronism of current sound-equipped locomotives.

**So, now what?**

Since sound is not a big attraction as it currently exists, what choice will I make? My Givens and Druthers are based on robustness, simplicity, cost, and time. “Time?” gasps the congregation, “Whatever do you mean?” Time is an issue to consider. Mine is a very precious and rare commodity, as the faithful followers of Scace’s Snappy Patter know all too well. The system I choose needs to be quick to install (on both railroad and locomotive).

My hobby time needs to be devoted to building and detailing a railroad, and operating some trains before the Big Dirt Nap. Soldering wiring harnesses to circuit boards, shrinking heat wrap, programming ID’s and functions using the simple 31-step procedure outlined on page 57 of The Geeks Guide to Command Control using the little tiny buttons on the handheld, all take time from my other goals. My fat ol’ fingertip covers at least six of those little buttons, and I can’t even see ‘em because some idiot decided that light gray buttons look “tech-y trendy” on a dark gray panel! The system that yields the most operational benefit for the least amount of the above is my best choice.

Quick installation also speaks to expense. Fitting the receiver/decoder into my (not some discrete manufacturer’s, mine!) existing power is a requirement. If the receiver is cheap, but I have to send it and a $200 check out to someone to install because it’s beyond me, it isn’t a win from the cost sense. This puts the proprietary systems at a big disadvantage for my purposes.

Simplicity is closely allied with time. I want to turn a big knob and move my train out to do its work. A system that comes with a 70-page manual written in “Geek-speek” with a totally nonsensical index isn’t simple. If you expect an Olde Pfart (Randy, I LOVE that term!) to even remember where the manual is when the system cobs up because he (that’d be me!) pushed the wrong button in the wrong sequence, yer nutz! An entire evening I can devote to trains is all-too-rare. That evening spent reading the manual rather than running my railroad is something I’ve experienced with DCC all too often. It isn’t pretty. If your passion is control systems, electronics, computers, or computer games, there might be something to be said for DCC. Certainly, it’s the choice with the most open architecture of the three. It isn’t my thing, though.

Robustness is another real issue. In my environment, I’ve had survivability issues with even the highest amp-rated decoders. My locomotives are mostly older and heavy, with big can motors. The grades and curvature are challenging, and the trains are long and heavy. There is little of the modern lightweight free-rolling stuff. I could invest time and treasure in upgrading rolling stock. Then again, nah. I don’t even want to spend time cleaning track (O Scale is nice that way.) So what happens? The arcs between brushes and commutators, and between dirty wheels and dirty track, caused spikes that weakened and finally killed even my highest rated decoders. Now, for several friends of mine, DCC has been “the nutz”. John Peterson’s B&M runs flawlessly every time I visit, and he is really pleased with his system. For me, though, DCC was a failure.

So what’s the epiphany here? There’s actually two, one for you, I. M. Stymied, and one for me. You, don’t be afraid to ignore peer opinion (or mine, for that matter). Try ’em all out. If you like a system, use it. If you don’t like one, don’t suffer with it to humor somebody else. None are perfect (or even very close) for O Scale 2-Rail, and don’t expect the major players to worry about accommodating the foibles of our market very quickly, when the sales volume is in either HO (for DCC) or 3-Rail (TMCC, DCS).

My epiphany is also clear. I will use the system with DCC and TMCC, and some with DCS. Here are some observations as a private citizen O Scaler.
some Colorado narrow-gauge teakettle) and plug into the USB port prewired on the receiver. That’s right, open the water hatch and plug it in!

All the addressing and functions are done on the computer screen using simple prompts, rather than some bizarre non-intuitive manipulation of the keys on a handheld that looks like a piece of avionics. No “program track”, just dump all the loco-specific info on a memory stick and download it through the water hatch! All the “consisting” and addressing can be performed on a small laptop with a USB port, so the handheld doesn’t need all those buttons. Yes, this system is laptop based, so the most geeky can have a ball with the open architecture, while we (I can’t resist it one more time!) Olde Pfartz can just point-’n-click.

I’ll use the system that is robust and survivable, that is easy to use (even after a month or so between opportunities to run the railroad). I’ll buy the system that (not someone else) I can put in any locomotive I own, not just one manufacturer’s product. I’ll buy the system with a wireless handheld throttle that has a knob, reversing lever, and a couple of intuitively arranged rocker switches that ramp the sound up and down. It’s the system that works out-of-the-box, and you can buy simple add-on components on blister-cards at the hobby shop, like the R/C modelers can, and more intricate programming features (for those who groove on such things) on a disc, like the computer-game people can.

If my HP scanner/printer/fax can be a USB peripheral that even I can use, why not the railroad? Given what the computer-game people are manipulating, this can’t be outside the capability of today’s technology. As a matter of fact, I’m sure the design folks in the gaming world would have a howling good laugh at the current DCC protocol. The system I describe probably could come from their world right now, pushed by folks who had an interest in both worlds, a little capital, and a penchant for challenges. Who knows, it may bring more Gameboy-age kids into the hobby!

Until then, I. M. Stymied, I’m going to use conventional cab-control, and put a little Dorsey on the radio.

Let’s go Exploring!
Structures

One of the major differences that strikes me, as I compare views of O Scale railroads of the 1930s and earlier (and even often in the 1940s) is the absence of structures/buildings. It is hard for those who have come into O Scale in the last twenty years or so and have known only the excellent, highly-detailed products available from the manufacturers and retailers who advertise in OST, to conceive of a time when nothing remotely like them was available. As one looks at older railroads, one sees locomotives and rolling stock, track, and even some scenery (hills, cuts, and tunnels especially, likely also bridges and trestles), all familiar on today’s model railroads. Look for the buildings, though; there’s rarely more than an occasional station. Actually, tinplatters did better, particularly with European-styled imports by Maerklin and Hornby, but most modelers were concerned with getting their track down, trains running and not much beyond that.

The single greatest influence in changing that situation was surely Frank Ellison. He was one of the first model railroaders to articulate a rationale for his railroad, based on prototype practice. This required a setting or context in which the trains would operate with, not only railroad-oriented structures along the right of way, but, more importantly, various industries to generate and receive traffic and justify operating the trains in the first place. In his series in Model Railroader in the 1940s (mostly collected in the long out-of-print Fawcett paperback, Railroading with Frank Ellison) and in many articles in Lionel’s Model Builder, he demonstrated how to build structures and scenery. As anyone who has learned more about him knows, it was his extensive background in professional theatre that prepared him to stage a production for a cast, called the Delta Lines. As with working theatricals, image was more important than reality, and Ellison was not so much concerned with exact scale models as with suggesting a miniature representation of the full-sized world through which real trains ran, but that was more than sufficient. Even today, model railroaders appreciate that, however excellent an individual structure may be with laser-cut wood, Styrene, urethane, white metal and dental-stone castings, it needs to be part of a larger scene. Model railroaders of a certain age still genuflect towards New Orleans when his name is invoked.

I was thinking of this when I bought a mostly-untouched Tru-Scale “Corrugated Aluminum U-Build-Kit” some months ago from Jerry Snow (who was disposing of a remarkable estate with a wide variety of early kits. It was produced in the immediate post-WWII years, when the second generation of scale model railroading really took off, and it is not really a kit for any particular structure so much as a selection of various components from which one might build different kinds of structures. The instruction sheet offers views of a number of credible possibilities, although there is no indication whether any had actual prototypes. The instructions say, “We have attempted in our two years of experimentation to make this kit one of the most complete kits of its kind. And that is why it comes complete with an ample supply of corrugated metal, wood strips for framing, lumareth [an older kind of clear plastic] for windows, rivets for ventilator and smoke stack detail, door slides for moveable doors, and a strip of industrial ladder stock.”

Some years ago, Keith Wills discussed the product line (available in both O Scale and HO) in his Railroad Model Craftsman column mostly dismissively, as the corrugated sheet provided was really heavy aluminum foil and difficult to work with. What interested me, however, is the possibility of its ancestry for a slightly more familiar line, the corrugated building kits offered by Ed Suydam, using solderable tinplate. There seems to have been a connection among Tru-Scale (mostly remembered for its milled-wood roadbed), Ayres, and Suydam, with designs passing from one to the other in turn. All three were located in mushrooming post-war southern California. Perhaps a reader can speak more authoritatively about the relations among the owners. While Suydam’s HO line had many more offerings than in O Scale (identifiable by being packed in a green box, rather than the more-typical yellow one), he offered a reasonable selection of basic industrial-type buildings. These were of a type often seen in the 1940s/1950s real world where rapid (and inexpensive) construction, using techniques developed during the war, was common. Lionel currently catalogs a Quonset hut, but otherwise one is now left to scratchbuilding to produce a model of this once-common structure. Modern “Butler” style construction uses similar methods and materials.

Scanning the All Nation and Boxcar Ken catalogs from the early ’60s, the Suydam line included several structures of note. The line consisted of a furniture factory as a trackside industry, a water pump house with wellhead tower, a warehouse or “general purpose factory” (same sized kit as the furniture factory, but with different ends and roof detail), a sawmill shed, the Northside Tool and Die Company (with a distinctive sawtooth roof), and the Black Bart Mine. There was a ringer in the line, a wood interlocking tower and track-gang shed, manufactured from matboard (like many of the Suydam HO structures that originated as Ayres kits) and apparently based on an SP prototype. In addition to replacing the aluminum sheet (although he continued to sell it separately) with tinplate, Suydam replaced the wood bracing with tinplate angles to which the sheets would be soldered during assembly. This resulted in a very sturdy model. As well, printed windows on acetate sheet were provided, so that one no longer had to scribe the panes on the lumareth. The current owner of the line, Alpine Division Scale Models, has assured me of his willingness to consider producing these long-unavailable O Scale structures, if there is sufficient interest, and even to produce some of the matboard kits formerly available only in HO in a more proper size. Vote with your dollars.

When I was fairly new to O Scale in the late 1970s, Jim Sycks introduced me to the Model Structures Company of Santa Cruz, California. He showed me their catalog (by then more a price list with a few illustrations). What really impressed me was that almost all of their kits were based on a specific prototype, which was still not common some thirty-odd years ago. I was also impressed by the prices, which were NOT cheap. Their kits came two ways. “The Standard Kit is designed for the man who has a small power saw and drill press...” while “The Master Kit is a hand-assembly job. Only a few simple hand tools are required.”

I have since acquired a first edition catalog from 1940, and it is impressive to see what one could buy in those early days,
if one could afford the tariff. Among the more impressive models were a five-stall roundhouse “which is an exact copy of the Wabash at North Kansas City” with all interior details including pits and lighting, a coaling station and related kit for the sand bin and dryer house from the Alton Railroad (at Venice, IL), a splendid two-stall enginehouse (prototype not identified) comparable to their roundhouse, a modern-design (for 1940) large brick passenger station, water towers incorporating details from the SP and B&O applied to the AREA standard 50K gallon design, and an SP freighthouse with two-story office. The line also included many smaller structures.

By 1960, the lineage starts to get murky, however, as two of their kits (the country combination station and the through-girder bridge) were catalogued by All Nation as their own production, succeeding Model Structures. I also own a kit, for the same model of the station, produced by Arvid Anderson. To mention Anderson suggests, to most O Scalers, his brass car kits or trackwork components. Somewhere he also had a hand in the station kit, and I suspect it may have been incorporated later into the Suncoast line. Suncoast has had what looks like an improved version of it from their beginnings, going from wood to card to Styrene construction. Some of the smaller Suncoast kits also resemble some of the Model Structures ones.

Bob Colson’s All Nation also, apparently, took over production of Model Structures’ extensive bridge, trestle, and tunnel portal line during the 1960s. It’s another of those cases where research starts to generate more questions than answers, I guess. Among the other early structures produced, I should mention Skyline, who offered die-cut printed cardboard kits with wood internal bracing in both O Scale and HO/00. They had a fairly extensive selection, much of it recognizably-based on Eastern prototypes, particularly the Pennsylvania Railroad, although much of their market was the toy train crowd. Ideal Model Company also had card structure kits of a somewhat better quality and design, although mostly in HO. By the 1950s, Model Hobbies kits from Pennsylvania offered good-quality, adequately detailed structures, almost all based on specific prototypes from the region. Unfortunately most were again, in HO but with some smaller O Scale ones, such as a passenger shelter, a toolhouse, a wayside waiting room, a station platform, and several kinds of fences. One also may occasionally still find boxes of Model Hobbies ties at shows. Boxcar Ken, normally a wholesaler and retail mail-order house, produced a kit for cattle pens with a loading chute. Lastly, I possess a Purina Chows “Pine Bluff” feedmill kit, primarily of matboard and wood, produced by Argy. This (circa 1952) product is very similar in construction to the HO Suydam line; I have some sense that Argy was a predecessor of Ayres, but I just don’t know enough about them. It’s a nice kit for a small trackside industry. Around the fringes of the hobby were small manufacturers of kits designed primarily for use by architectural firms, mostly tract houses of the sort going up in suburban developments all over the country.

Scace is calling “Board!” again, so any more thoughts on pre-1960 structures will have to await another column; nominations from the readership gratefully accepted.

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On our model railroad layouts, we are trying to create a miniature world that includes railroad tracks, landscapes, streets and buildings. We would like to have these looking as realistic as possible. I have found that, to be able to make things more like the real world that we are trying to model, you need to include structures that aren’t served by the railroad as well as ones that are.

Over the last couple parts of this article I have shown you how to do the scenery. In Part Seven we created a scene, although one of the components still remains to be done, the building. Starting in this issue, I am going to walk you through the techniques I use to take a plain plastic building and make it look more realistic. We’ll upgrade our building with paint, signs, weathering and details, plus I will show you how to make an interior for it.

In Photo 1 you can see the building that I have chosen to use in this scene. You may recognize it as the office building from Walthers’ lumberyard kit. On my old layout, I used two of these kits to make my lumberyard, but I only used one of the office buildings. The other one was put aside with the thought of using it for another purpose in the future. To fit the available space in this scene, on the new layout, I wanted a small structure that was not served by the railroad. The little office building is ideal for this purpose, and will fit into this scene very nicely.

All I had to do was come up with a type of business that would suit my needs, one that you could find using an older wood structure such as this. I started rooting around through my drawers of detail parts to see if I had anything that would give me some inspiration. I came across some old Walthers metal castings of toilets and sinks, as well as a Berkshire Valley bathtub kit. A plumbing supply house would be a perfect job for this structure and I could use these detail parts in and around the building. All I needed now was a name for my newly found business.

I remember reading, somewhere, that the person who designed the first flush toilet was a gentleman called John Crapper, hence we sometimes use his first or last name to describe a toilet nowadays. In my typical manner of using humorous company names on my layout, I decided to name my new plumbing business after him. With all this decided, it was time to start painting my building. I decided on the colors I would use, grabbed my paintbrushes and got to it.

**Painting a Building**

If you have been following this series, you will have discovered that I like to use Polly Scale paints, as they are non-toxic and do not have a strong smell. They are also easy to use. The colors I have chosen are #411388 SCL Hopper Car Beige and #414230 BAR Blue, to contrast a little with the red and yellowish brick colors already used on the layout. In Photos 2 through...
4, you can see how I have painted on the beige paint. I use a 1/4” wide brush for this and I’ve only finished the first light coat of paint. Don’t try and paint with one thick coat; you can ruin your model. Once the first coat has dried (about fifteen to twenty minutes), I apply a second light coat. You will notice I like to paint the walls before I assemble the building. It’s a lot easier for me to handle them instead of trying to hold a box shape in my hands, especially in O Scale.

One of the other nice things I like about Polly Scale paint is, when it dries, it settles down nice and smooth without any brush marks, giving an airbrush-like finish. Let the beige paint dry overnight. Then start painting on the blue, as seen in Photos #5 and #6. For the blue color, I use a 1/8” thick brush. Again, you need to do two light coats. Don’t forget to paint the inside edges of the door and window frames as well. Paint all the walls the same way, as shown in Photos 7 and 8. Put them aside and let them dry. Once they are dry, go back with a fine brush and do any touchups. Your walls are now done (Photos 9 and 10). Don’t forget to paint the backs of the walls above the roofline and down the back edges (Photo 11).
Next paint the windows and doors with the same colors as the walls. I like to do this while they are still on the sprue (Photo 12); this makes them easier to handle. Once the paint has dried, cut them off with a sprue cutter and glue them in place (Photo 13).

The next thing to paint is the roof, which I painted Grimy Black # 414137. I find this color works well for a tar and gravel roof. I do not try to recreate the gravel as the individual pieces (roofing gravel being only about a quarter inch in size in real life) would be too small to duplicate in O Scale.

Using the techniques that I have described, painting structures is quite easy and if you take your time you can do a good job. These same techniques can be used on any sort of buildings. Once the building is all painted you are ready to put on the signs.

**Making Your Own Signs**

To make signs for my buildings, I use a drawing program on my computer called Corel Draw Essentials, as you can see in Photo 14. I create all the signs and print them off onto plain white paper (Photo 15). I cut them out from the sheet of paper, then spread a thin coating of white glue on the back and apply them to the building. You could print them out onto white decal paper and apply them as you would any decal, if you prefer.

With the signs on the building, we are all ready to do the weathering and add details. I will show you how to do this in Part Nine of this series. In addition to sign creation, I have used the Corel Draw program to do all the drawings used in this series, as well as the track plan. It is an easy program to use.

So until next time...

Happy modeling.
Deichman’s Depot

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All kits include brass etched grills, appropriate detailed parts, and preformed grab irons for indicated model. These kits include only the parts above the frame.
Do you own a Diesel with portholes? Did you make Stuart Ramsey’s aluminum headlight reflector from his article in OST #13 and now you need a lens for it? Do you want to know where you can get great headlight lenses, almost free?

You must have said yes to at least one of these. Making lenses and portholes is not as hard as you think. Both are made of plastic, and porthole windows are easily made using some clear Styrene purchased at your hobby shop.

To make the headlight lenses, however, you need to visit a camera store and ask to see the recycling bin. Disposable cameras have been available for years now. They come in different configurations, but they all have plastic lenses. Go to your nearest camera store and take as many garbage, or “recyclable”, cameras home with you as you can. These are cameras that have had the roll of film removed by the staff, and have been thrown away. Maybe bring this magazine and show them what you want to do. Also, wear rubber gloves when you take apart the cameras, because it’s easy to get an electrical shock!

Now, we need to make the windows or lenses round and to size for the model we’re working on. Someone suggested to me that the lens or the Styrene could be held in a jig and milled as the jig is turned. Although that might work, I don’t have a milling machine. We’re in Mel Thornburgh territory here, so here’s how I do it.

Whether you’re making headlights with camera lenses or round windows with clear Styrene sheet, the pieces can be cut with heated brass tubing. It’s tricky to know what the final size will be. The size you think the tube will cut will be wrong, since some plastic melts away. The best way to use this less-than-precise process is to have several brass tubes of different sizes. I sharpened one end of each tube from the inside, and the other end was sharpened from the outside. This way, for every tube, I got two tools in one. I used a lathe and a Dremel motor-tool to grind the ends of the tubes, but a drill with a large chuck would hold and turn the tubing just as well. Wear a face shield, earplugs, and a quality two-elastic “N-95” dust mask when you do this.

You can experiment more if you want to, but you’ll find that pushing the sharpened tubes into clear Styrene with a drill press accomplishes nothing more than dulling the tube and uselessly embossing the plastic. You’ll need heat on the tubing. The torch I used was a common plumber’s type, and I made the flame as small as possible and kept moving it around on the tube. If you use excessive heat, the window will bend in the middle or a circular shape may appear in the middle. Make twice as many as you need. Wear a faceshield when you do this; it would be terrible to burn your face because you were clumsy. Also do this outdoors, if possible, so the fumes won’t collect in your workshop. Choose an overcast day, or a shady spot, because you won’t be able to see the flame in bright sunlight.

By the way, I’ve found “grain-of-rice” bulbs to be the best for headlights cut from disposable camera lenses. Since the lens is real, it actually magnifies and diffuses the light, making a tiny bulb appear more impressive. I’ve tried some larger bulbs with their own lenses, but their performance was disappointing. They draw more current and aren’t as bright.

So, follow the directions in the photo captions and I guarantee that once you have the materials it won’t take long (unless you’re sloppy with the torch) to crank out all the round windows and lenses you’ll ever need. With care, you should end up with some bright headlights and sharp flush-mounted porthole windows.

I would like to thank my father-in-law, Alberto Hurtado Moreno, for making this article possible by buying my wife and me a digital camera. That’s his National of Mexico F9 I was working on.

(Continued on next page)
These are the basic tools you will need to make lenses and porthole windows. The visegrips hold the tube and prevent you from getting burned. The four tubes are in ascending sizes, and each has been bevelled concave on one end, and convex on the other with a Dremel tool. To choose which diameter tubes you will need, take your unfinished model into your hobby shop and find the tubing you believe to be the right diameter. Then also buy the next size or two larger, and the next size or two smaller.


I've arranged the tubes like a telescope to show the ascending/descending diameters. If you cut a lens or window too big with the concave end, try the convex end. If that's still too big, use the concave end of the next smallest tube.

Once you've cut a window, 9 times out of 10 you'll find it stuck in the tube! To get it out, I made a jig consisting of a stick in a vise. Just heat the tube again and the window should pop up like a tin can lid. Don't use excessive heat or the window will bend. The first time I tried this, I had the torch set on 100% . . . the window turned into a little ball of molten plastic.

CA or MEK cement will fog the windows and lenses you have so carefully made. Epoxy will be a yellow color when it dries, and white glue will not dry clear. My favorite window glue is called “Wilhold R/C 56”, from my days with radio-controlled airplanes. It’s made specifically for gluing clear plastic canopies in place. It’s water-soluble, and I like to apply it with a toothpick.

Cleaning up a porthole window. Don’t remove too much material! Keep checking the fit with the model in front of you, and don’t forget to wear a dust mask. If you still have some plastic left on the window after you have the right shape, carefully cut it away with a sharp X-Acto knife.

A finished porthole window. You’ll get faster and faster as you make more. If you’re making windows for an E8, you have only seven more to go!
Fitting a porthole window in place. You can see a pile of unfinished windows in front of the model, and the excess plastic that needs to be removed from them. I pick, finish, and fit as I go in order to choose only the best windows. A headlight lens is installed in exactly the same way.

An installed porthole window. Sometimes, you might get your fingerprints on the window or lens as you move it into position for gluing. No problem! The “Wilhold R/C 56” glue can be washed away with some soap and water, and you can start again. You can also remove fingerprints or dust from an installed window with a wet Q-tip.
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The Art of Finescale
Michael Cougill

The Long and The Short of It

Much has been written about the increased realism of finescale trackwork. Modelers working in Proto48 often spare no effort to make their track look as realistic as possible, with individual tieplates, jointbars every 39’, and all the other bells and whistles you can imagine. If you read my article “The Track as Scenery” in this issue, then you know I’m one of that crowd.

What I’d like to discuss here is a little different. When I think of building a layout to finescale standards, naturally the appearance of the track and wheels comes to mind. However, I think the term could be used in a much broader sense than that. I like to think of it as applicable to every aspect of a layout (except wiring and benchwork maybe). Think beyond track for a minute. What about scenery? What would constitute finescale scenery? Individual blades of grass, or tree leaves? Let’s hope not! What about structures? Does a contest-quality structure built from individual boards of stripwood or Styrene qualify as finescale?

I don’t want to invent new terms or generate stupid controversies. I’m simply suggesting that the term “finescale” could be more broadly applied to non-traditional areas of modeling. Let’s go back to track for a moment. I think finescale applies to the flow and geometry of model track as much as to the amount of detail one includes. What about using a higher numbered turnout than normal? How about a #10 or even a #12 instead of the standard #6 or #8? I know, I know; somebody is already screaming, “Who’s got the space for something that big?” O Scale is big; a #10 turnout measures around 18-3/4” from the points to the tip of the frog. By the time you reach the clearance point where two cars won’t sideswipe each other, we’re over four feet in distance from the points. I agree, higher numbered turnouts eat space quickly. I also agree that there are many situations from the prototype where a short numbered turnout is appropriate, such as industrial areas, street trackage, narrow-gauge and so on. I’m not saying to use larger turnouts unilaterally; but to try them where they would be used on the prototype.

I’ve described my layout before. It’s a simple shelf style switching pike 2’ wide by 24’ long. In essence, I’m modeling a single scene, featuring a large industry with several car spots, a team track and other features. I’ll have nine turnouts, when all is said and done. Three of them will be #7s, all the rest are #10, including those at the ends of the run-around track. I’ll be running modern equipment (1970s-1990s era cars), so the long turnouts will complement the car lengths nicely.

My layout design process consisted of a series of personal choices reflecting my interests in the hobby. Your choices will be just as personal and very different from mine. Here’s the core of my thinking. I chose #10s based on appearance as much (if not perhaps more so) as operation. I just don’t like the looks of a short numbered turnout trying to masquerade as mainline trackage, at least not on my layout.

We make choices and compromises galore in this hobby. O Scalers have to make more compromises than others, I suppose. Those who want the maximum amount of track and operation in a given space and who don’t really care how it looks are going to have a very different set of criteria than I do, and I say more power to them. Do what you enjoy in the hobby and have fun. That’s what I’m doing. But let me suggest that just because something hasn’t been done before, or isn’t considered part of conventional wisdom in the hobby, doesn’t mean it shouldn’t be considered. Prototype trackwork and long turnouts aren’t the exclusive domain of P48. Folks working in Standard O can have track that’s just as nice looking as any, and a lot of them do. It all really boils down to choosing what works for you and going for it.

Best regards,
Mike

One end of the author’s P48 finescale layout, featuring a #10 crossover with Code 125 rail in the foreground with the unstained ties for a #7 turnout leading to the team track behind.
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Bob Stevenson, 2326 230th St. Boone, IA 50036
When I started building my freelanced O Scale Great Western in 1990, and everyone was using cab control, I wanted to use command control. Now, when the move is to DCC, I'm headed in another direction.

Early in my layout's construction, Keller Engineering's Onboard system appealed to me because it had the ability to add sound. When I built the layout, I used very rugged wiring as per Keller's recommendation. Bus lines are 8-gauge wire to minimize voltage loss. Virtually every three-foot section of track has a feeder line soldered to the bottom side of rail joiners at each end. Every turnout has wiring connecting the frog to the direction of travel. The layout is divided into six large blocks for trouble-shooting. The Onboard system requires a constant 14 volts on the track.

Despite the wiring safeguards, I had control problems. It was always difficult to locate the source of the problem because they would often happen in layers. The fussiness of the control system, bad locomotive transmissions, sloppy engine/truck sideframes causing dreaded short circuits, these are things that all command control systems hate. I learned that electrical transmission and sideframe problems were common with early 1980s O Scale brass imported Diesel locomotives, making them better to look at than to run.

When DCC took model railroading into a new world in the mid-90s, the Keller Onboard system disappeared from the market. Like others, I hung in there for a while, but then began investigating alternatives. As I considered the options available, I wasn’t convinced that DCC was going to solve all my train running problems short of spending the money for all new motive power. Of course, converting a large railroad to DCC is a major additional cost. Another negative consideration is having tethered controllers on a walk-around system.

My preference now is for wireless. During my contemplation time, I read a fascinating article (written by David Hull) about battery-powered radio control, in the October 1999 48/ft O Scale News. He described the RCS control system, made in Australia, utilizing gel-cell batteries hidden in a flat car for power on an outdoor O Scale layout. I decided to experiment with Aristo-Craft’s onboard radio control (now sold under the Crest brand). The Aristo system is reasonably priced and, like RCS, operates on the 27 Mhz band. It is a durable system designed for large-scale outdoor use. The system consists of a hand-held transmitter (CRE 55473) and onboard receiver (CRE 55490). A combined set is offered (CRE 55492). A plus is that the system will run on my existing constant 14-volt DC track power, and will not interfere with trains running with Keller receivers. The Aristo/Crest receivers are large, which is okay for O Scale cab units (the majority of the Great Western’s power are EMD F-units or Alco FAs) but a little too big for narrow hood switchers.

The Aristo-Craft/Crest system provides lots of options. If a receiver won’t fit in a locomotive, I can put a receiver in a caboose for the switchers, or use conventional DC controlled by Crest’s external stationary R/C receiver (CRE 55471) in each yard. The system didn’t necessarily solve the problem of poor running engines until I tried battery power. Now those old brass engines run like finely tuned watches, leaving me with no cares about wiring, sloppy sideframes or short circuits. Part of this success comes from current state-of-the-art battery technology, an outcome of the rapid growth of digital and cellular phones.

I used two Radio Shack 7.2 nickel-metal-hydride (NiMH) bat-
Battery packs (RS 23-421), intended for radio controlled cars, wired in series (DO NOT WIRE IN PARALLEL) to provide 14.4 volts. As the man at the Radio Shack store said, “That’s some serious power!” NiMH batteries are longer lasting than NiCADs and will take a charge without suffering from a memory. The battery packs are rated at 3,000 mA/h (milliamps per hour), which is double the rating of the traditional NiCADs.

I put the battery packs in a boxcar with a metal underframe, to hold the significant weight of the batteries (The new Atlas 53’ boxcars are excellent for this purpose.) In addition to the batteries, the wiring goes through a small project box (RS 270-1801) containing a fuse holder for a 4 amp fuse (RS 270-1066) and an on-off switch (RS 275-618A). The extra matching connectors are from Radio Shack’s 7.2V battery pack and R/C Car Connector Repair Kit (RS 23-445). That box goes in the boxcar as well. The boxcar body rides on the frame. I don’t use attaching screws so the body can easily be removed to reach the on-off switch and to charge batteries. Sets of male/female connectors connect the battery car to the motive power. The connectors from Radio Shack come in various pin configurations. For example, 12 connector females are RS 274-242 and corresponding males are RS 274-232. I don’t need the plastic housing because I mount one set on either side of the coupler, ensuring that they won’t touch.

The evening before an operating session, I charge the batteries. Right now there are four fueling locations on the layout, meaning battery chargers are plugged into a power strip below the layout at four stations. To refuel an engine the boxcar body is removed, the batteries disconnected from the project box, and each is plugged into a charger. It takes five hours for a complete charge.

An engine hauling a fifteen-car train will run continuously for about two hours before a charge is necessary. That’s more than ample time for a start-and-stop operating session. If the battery switch is turned off in the boxcar, the engine can be occasionally run for months before a charge is necessary. If not switched off, there is a slight drain and the batteries will be completely discharged in a week or two.

If you recall, I mentioned the importance of sound. Crest offers a plug-in accessory control unit (CRE 55495). It contains five relay switches that can be activated by remote control. Of the five switches, three are on-off (latching) for things like headlights, back-up lights and bells on sound units. Two are momentary relays to accommodate whistle or horn sounds. Adding sound from Dallee Electronics to a very satisfying control system is my next project. With rapidly improving battery technology, don’t be surprised if this type of control becomes practical for HO Scale one day soon.

If you would like more information about R/C systems go to the Internet and look at Crest [www.aristocraft.com], RCS [www.rcs-rc.com], or Keithco’s Locolinc [www.locolinc.com].

So call me a contrarian, but I can’t begin to tell you how satisfying it is to run trains without worrying about electrical contact. There is something very realistic about a train working across the railroad while carrying its fuel on board.
Going Around and Around

At the writing of this column, the holidays are behind us. Gone too are the ornaments and tinsel and the seasonal layouts of my 3-Rail friends. The Christmas trees and decorations have come down and the track and trains have been “put up” for another 11 months until they are called into service once again. As I watched all of those holiday trains going around and around and around I was reminded of Albert Einstein’s definition of insanity, “...repeating the same behavior again and again and expecting different results”. Try as hard as I did, I could not imagine those trains being anything more than just toy trains. One would really have to imagine hard to see them running out on the mainline of a realistic looking model railroad. The trains would probably like to stretch their legs and go for a good run and burn off some of those old smoke pellets... that would surely produce some of those old ozone smells!

Generations have run trains like this. For some that is all they know or appreciate about model trains. One Christmas morning long ago I, too, got my start with a holiday layout. Each year more and more track and accessories were added and the trains seemed to stay up longer and longer. Eventually they stayed up all year long. And, you know, I am still adding track and accessories after more than 50 years. I am proud of my 3-Rail heritage. That is where I got my start with model railroading. That is what has brought me to this point in my search to improve my modeling in this enjoyable hobby.

As a Hi-Railer in transition I note that my 3-Rail friends are the ones who really run trains... just for FUN. Whether large expansive layouts with lots of detail and scenery, or huge modular groups of several railroaders, all strive to make their railroads look as realistic as possible. These “kinder, gentler” gentlemen of the hobby encourage everyone to run trains just for the FUN of it. They share new ideas and information at the drop of a spike and are quite willing to help answer any questions that may come up. I owe a lot to my Hi-Rail friends. Their encouragement over the years has helped me grow as a modeler. Hi-Rail model railroading is also about choice. Many Hi-Railers are now considering weathering their locomotives and rolling stock. That is significant.

My modeling maturity has aged to the point that I have come to realize that the center rail no longer has a place in my modeling. Looking at it again and again just doesn’t bring different results, and I have been around and around and around on this issue just like a holiday train. This hobo believes that when one boxcar door closes another one opens. I welcome the opportunity for change. That is why my modeling is in transition.

As a hobo in transition, I also note the other side of the tracks where my O Scale 2-Rail friends reign. It is my observation that these hobbyists are scholars and craftsmen. Concerned with prototype and model fidelity, they are authorities on all model railroad topics... or at least they act and think that they are. A lot of 2-Rail guys do have layouts, but they are very difficult to see since they often exist only in their minds. For many, their command control center is located at the user friendly armchair where the “Daydream Express” makes frequent stops. Information is not necessarily shared. A long time ago, 2-Rail rules were established such that they were to behave like Middle Age monks in guarding the truths and secrets of the hobby. Most O Scale railroaders are really nice guys, “they just don’t like to show it”. (You might even see them smile as they read an entertaining column such as this.) They consider their modeling to be SERIOUS business.

Their contributions and suggestions to me are appreciated. I am learning to make friends with some of them. I once observed an O Scale display at a large train show. The proprietor noticed my interest and quipped, “These are scale models; these are NOT toy trains.” Me thinks the O Scale community just needs to loosen up, relax, and have some FUN.

After all that is what this hobby is supposed to be about: FUN. When it stops being fun and enjoyable it is time to take it all down and “put it up” for another time and season... or even Ebay. The FUN part is that the hobby will continue to grow and expand. My transition right now is like a lot of other guys and gals who have come to the modeling fork in the road. “We may take the road less traveled by...” but it will make all the difference and we are going to have FUN. I am a Hi-Railer in transition, but I am also more. I am a Hi-Railer who is also a hybrid hobbyist. I merge what I learn from both 3-Rail and 2-Rail to get the best of both worlds in my transition to O Scale.

Hobo’s column is for tips and techniques and observations. This is not an editorial; he leaves that for the O Scale -- ace. What Hobo wants is for everyone to learn new modeling ideas and experiences in a “kinder, gentler” tone. Hobo will promote and provide FUN. On his journey he will consider all readers to be passionate scale modelers regardless of the number of rails they have on their track.

Part of my holiday time was spent converting several rolling stock pieces to 2-Rail. New wheel sets and scale couplers made a big improvement. I was reminded that specific trucks are for specific cars. The cars now have a more prototypical profile and run great on the scale track. I even lightly weathered them to make them look even more real. As a Hi-Railer in transition, I have a lot more to do, but the end result will be that I will enjoy them and have fun. Building, painting, weathering, detailing are all part of the process. Improving what I already have for a more scale and realistic look is the direction that I am headed. Stay tuned. More exciting and FUN ideas are just ahead.

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In Issue #24, I wrote about the new Bachmann On30 two-bay steel hopper. While I was first examining this model, I wondered if I might be able to modify it so that a load of coal would empty properly through the four discharge chutes. After a few tries, I developed a simple design that has worked extremely well. I am now thinking about a similar conversion for my fleet of 24 Weaver standard-gauge hoppers. On my Northway Railroad, I use black aquarium gravel to represent coal and crushed limestone for ballast. The cars also are used to transport very fine sand that I am able to obtain from nearby Wasaga Beach.

Have you ever tried to make O Scale hopper unloading doors function properly? Even if you are particular enough to make working hinges and locks, it is almost impossible to reach in to unlock and open a chute door and even more trouble to close and lock it from below and outside the car. With our models, almost any kind of aggregate that you can carry in a hopper, including coal, ore, crushed stone, or sand, will eventually work its way into hinges and locks and create havoc. Tiny particles will inevitably prevent the doors from closing properly. Unloading chutes and doors create continuous operating and maintenance problems, just like on full-size railroad hoppers.

My solution was to completely remove the doors, hinges and locks. I created a “plugplate” assembly to fit over the chute openings from inside the car and a vertical lifting plate that looks like an inverted Y. Quite simply, the load holds the plugplate in position and prevents unloading while in transit. When the lifting plate is raised about half an inch, the load flows smoothly under the plugplate and through the discharge chutes. The plugplate is then lowered into position for the next load.

When a hopper is full, the load usually covers the top of the lifting plate and it is not noticeable. When the car is empty, the lifting plate gives the hopper a character that is quite unique.

With one look at the photo you can see how simple this is and you might come up with a better way, but this is how I did it: Open Up the Chutes

The discharge doors are lightly glued in place and can be pried off easily, but the chutes behind the doors are solid so open them up with a drill and files. Surprisingly, the car now looks just like a hopper with the doors removed.

Create the Plugplate

Start with a piece of 1/32” thick styrene and make a rectangle 2-1/16” long and 1-11/16” wide. Eventually, you’ll score this plate at the halfway point on the long side and bend it to match the angle of the center slope sheets, but not yet. Now comes the tedious part as you file and fit until both ends will slide down over the main beam of the car and cover the discharge openings perfectly. A nibbling tool works perfectly to get close to your lines. Use a coarse file to start and finish with a very fine file.

If you experiment with one car, you will learn that there are some tricky angles and protrusions in the hopper walls that are not apparent at first glance but, with some patient filing and fitting, you can make your plugplate fit properly.

When you are satisfied with the fit of both ends, score the plate at the halfway point and bend it, but don’t break it off. You can see through the chute openings when the angle is just right.
Attach the Lifting Plate

Fashion another piece of styrene into the lifting plate and glue it into the crack that resulted from scoring the plugplate. Let the joint cure and then test it by grabbing the top of the lifting plate with your finger and thumb. I drilled a hole so I could use a long shank screwdriver or a crochet hook to lift the assembly. I found that coarse aquarium gravel works perfectly but that the very fine sand from our local beach leaks out a bit. Perhaps other commodities will work better.

The plugplate requires only two small pieces of styrene.

A number of hoppers can be modified for pennies each and you can always remove the plugplates, glue the doors back on over the discharge chutes and return the cars to their original condition.

I hope some adventurous readers will try this simple idea and share your experiences with us on the O Scale Trains Magazine Interactive Forum at: [http://www.oscalemag.com/wordpress/]

Happy trains to you until we meet again.

Bobber Gibbs [http://groups.yahoo.com/group/Otrains] [http://groups.yahoo.com/group/On30conspiracy]

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Growing Up O Scale

By Andrew Brusgard III and Bob Lavezzi

The New York Society of Model Engineers Inc. has a program of junior membership; at age sixteen, a person can submit an application. We've had some interesting people who were junior members of our Society. We know, because we're two of them.

Mort Mann, of Sunset Models, became a junior member in 1943. His first introduction to O Scale was at the 1939 World's Fair, at the transportation pavilion. Ed Alexander, and others, had a huge O Scale working layout there. Mort's uncle had a great job during the Depression, which allowed him to give Mort a Lionel train set each Christmas, whetting his interest in the hobby.

While Mort was a junior member, World War II was raging. The Society was suffering from a manpower shortage. He loved the fact that he could duck under the layout and pop up in the access holes, surrounded by this huge model railroad. Learning to operate this massive layout was no easy chore. There were dispatching boards, tower boards, and engineers' boards to master. He learned wiring, track-laying, and maintenance of the large banks of relays that controlled the CTC (Centralized Traffic Control) system. Mort also learned how to operate the large layout, utilizing the massive interlocking.

Icken, Alexander, and Fischer were building the equipment that he was running, models that are still highly prized in O Scale. His mentors at the club were an engineer on the New York Central, and (Guess what!) one on the Pennsy. No wonder there is such a diversity in the equipment Sunset produces today.

During his membership, the Society was located in Manhattan, in the Knickerbocker Building on the corner of 42nd and Broadway. Our model railroad was in the basement, set up in the shape of an “L”. Then came the words every model railroad hates, “We have to move.” Mort was there for the dismantling and moving of the layout to 35th Street, across from the Empire State Building. One memory he has of this location is the time a B-25 struck the Empire State Building, while he was in the base ment across the street, running the layout.

After the war, the Society moved to Hoboken Station in New Jersey. At this point, in part due to the long commute, Mort resigned his membership. Oh yes, he had also discovered girls, leaving him less time to spend with trains.

Another junior member is Robert Wagner. He studied industrial arts at Columbia University in Manhattan, and his professors said there was nothing that they could teach him. He worked for Standard Oil as an industrial artist and model builder. As a teen, in the late 20s, he wrote over 350 letters to companies that owned billboard reefers, so popular in those days, collecting data on these cars. He measured, photographed, and hand-built prototypes of these special styles spanning 60 years. Wagner built 43 of these cars, his last in 1990. His collection is unequaled. AtlasO is now producing these cars as a tribute to his model building, his diligent research, and his appreciation of detail and accuracy.

James Moran became a junior member in 1949, when the Society was still located in Hoboken Station. Jim was basically involved in track-laying and switchwork, learning from people like Clark Pool and Ernie Hubner. This led him to become involved in attending, and being graduated from, the Maritime Institute in New York. He served on eight ships during his years here. Each have cars named for them on his private train, lettered for his Port Morris and Harlem railroad, with the diner named after the ship that served the best food.

O Scale has always been a part of my life. My earliest memory of model railroading is of an Atlas O Scale train set, which ran around the floor of our living room when I was a toddler. My interest in the hobby grew as my father, Andrew Brusgard, Jr., took me (as a little boy) to the New York Society of Model Engineers, where he was a member. Soon I became a regular at the club and, during our expositions, was even allowed to help out. I was given the task of “gophering”, re-railing trains, pushing stalls, and getting soda for the operators. But, I had my eyes on operation.

At home, my father encouraged my interest in the hobby by assisting me in building my first model, a Mainline double sheathed boxcar, when I was 11. He also began to show me how to operate the upper yard of the NYSME's layout. I began to practice there, preparing for the day when I would be allowed to run the mainline panel. During the shows I watched as other members operated the railroad, and learned what switches to throw and what throttles to turn. One member, Marvin Nicholson, a NJ Transit tower operator, took an interest in me and showed me the ins and outs of the mainline panel. He showed me where the power blocks were, and even showed me some of the tricks of operating “wrong-rail”. Marvin also allowed me to run the upper yard during the shows, he and I interchanging trains between the yard and the mainline. Thanks to his help, by the time I was 14 I was an operator on the mainline panel during the club's exhibitions.

During the months when the Society was working on the layouts, I learned the basics of model railroading. Spiking track, laying ballast, soldering wires, and laying switches were all part of my education. Outside of the club, I was building as many kits as I could find, from Atlas, Intermountain, Mainline, Weaver, and Walthers. Many members of the Society gave me positive feedback as I continued to bring in my projects from home. I also worked with another member, Bob Lavezzi, who built home layouts. He taught me how to build benchwork, use homasote as a roadbed, and how to wire a railroad. By the time I became a junior member at 16, I had learned enough to build my first brass steam engine, having been around the New York Society for over ten years. During college, my interest in trains did not wane. I returned to the club to run the layout during the holiday and spring shows.

Today, at 25, I am a full member of the Society, and even serve on the Board of Directors. I now find myself to be a member to whom others turn for help and advice, as well as teaching others the skills I have learned from the members who took an interest in me when I was younger. When people my age ask me why I'm interested in model trains, I have to remember those people who encouraged my pursuits when I was younger. I encourage model railroaders everywhere to take notice of young people who have a fascination with trains. It might develop into a life-long passion with just a little of your time invested.
Decatur, Illinois, 1914, on the Illinois Terminal
An ideal focal point for home layouts and display modules

One of the reasons I love railroad books so much is that they lead to wonderful modeling opportunities that you might, otherwise, never discover.

For example, one of the finest traction books to appear last year was Dale Jenkin’s *Illinois Terminal: The Route of Friendly Service*. From the perspective of content and White River Production’s excellent design and layout, this is one of the most thoroughly satisfying traction books I’ve ever encountered. (Read my review on the *O Scale Trains* blog.*)

From Dale’s book, I discovered the *Flyer Newsletter, The Magazine of Illinois Terminal Railroad History* which represents an equally important resource. The Spring, 2005 issue, (Volume 19, Number 1) of *The Flyer*, in fact, contained an excellent station that could be the nucleus of any home layout or traveling module. On Page 10 of that issue, there was a trackplan of the Wood Street Station, followed by several photographs of the building’s 1914-era conversion from a factory to a through-type railroad station.

**Traction, Stations, and Model Railroads**

Stations play a major role in most of our layouts. Stations not only provide logical beginning and ending points for our runs, but stations also provide a logical place to display our favorite models, even if they’re not currently being used. Stations also tell a lot about the communities they were located in, and the financial health of the railroads that built them.

Through-type stations like Decatur’s Wood Street Station are especially appropriate for traction layouts, since no backing-up or pole reversal is needed as trains arrive or depart. The Wood Street Station covered most of a city block. Trains entered a doorway located in the back of the building, and departed from the front of the building which had been opened up to provide access to several tracks.

The Wood Street Station contained a single curving through track, next to a waiting room and concrete platform, plus three additional stub tracks, one of which contained an inspection pit. An additional stub siding along the side of the building also had an inspection pit.

Aesthetically, there’s a lot to like about the Wood Street Station. For one thing, when viewed from the front, or “train shed” opening, the through track made a gentle S-curve through the station. This curve, of course, plays to the strength of the short-radius trackage characteristic of traction lines.

More important to creating an authentic atmosphere, the Wood Street Station was not particularly “beautiful.” It projects a very utilitarian approach to business, in keeping with the limitations of most traction lines. Recycled from a factory, with the front opened up, the station is thoroughly pragmatic. It’s large enough to be a layout centerpiece, but not so large that it will never be completed.

Looking inside the trainshed at the four inside tracks and platform, though, and *The Flyer’s* views of the station’s utilitarian graphics and signage, you really get a feel for era. This station would definitely create the focal point of a layout or module, allowing three, possibly four, trains to be stored, while other trains snake their way through the building and exit through the front. Properly illuminated, a model of the station would create a definite show-stopping scene for a layout.
Adaptations

Several modifications were made in adapting the station’s layout to accommodate present and future layouts. In particular, in place of the Illinois Terminal’s single direction of inbound and outbound trains access to the station, Carey Hinch and I decided to offer four alternative routes in and out of the station. This complicated the trackwork, but offers far more flexibility in setting up the station in future homes or temporary displays.

Although we tried to fit the station on a standard 4’ x 8’ plywood platform, in order to accommodate the added track work, the module comes in at 6’ x 10’. Part of the width, however, is for the block of buildings along East Wood Street, which could, if necessary, be eliminated. What’s nice about the block of buildings along the top of the drawing, of course, is that it creates an “alley” for trolleys to pass through, adding depth when viewing the module from the bottom, left, or right sides.

An Invitation

Since it’s basically a one-story station on a flat landscape, the IT’s Wood Street Station in Decatur creates an ambitious, but not daunting, construction project. If any reader decides to attempt it, I hope they will provide “in progress” construction photographs and updates, as this could make a truly fine article series for O Scale Trains!

Resources

Illinois Terminal: The Route of Friendly Service

Order: http://illinoistructionsociety.org/Books/Jenkins/JenkinsPromo.html

The Flyer, Illinois Traction Society
http://illinoistructionsociety.org/Home.html

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Steam Locomotives

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Diesel Locomotives

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Rolling Stock

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For more information, visit the Allegheny Scale Models website at www.alleghenyscale.com.
Observations

When you think of track, what comes to mind? Perhaps a pristine, glass-smooth mainline, a meandering branch or secondary, or a complex junction? With our individual modeling preferences, everyone has a different image. Most modelers wouldn’t think of starting a car or structure project without adequate research of the prototype involved, yet will routinely plop down some flextrack or a #6 turnout just to get something running. Modeling prototypically accurate trackwork is a special interest of mine. Using Proto48 standards is a natural progression towards that goal.

My Indiana & Whitewater depicts an industrial switching district serving a variety of customers. I want the track to help tell the story of this freelanced railroad, therefore I’m giving careful attention to its appearance. I handlay my track using Code 125 and 100 rail on basswood ties, Right-O-Way tieplates, joint bars and other details. My track has a rusty brown base color to which I add various weathering effects.

Photo 1 shows the materials used to create the weathering effects outlined in this article. You’ll need a razor saw and utility knife blade, some Minwax Golden Oak wood stain, and acrylic craft paints in various shades of gray and brown, pastel chalks in brown, gray and rust colors (both available from Wal-Mart or art/craft supply stores). Also needed are some Rail Brown and Grumpy Black Floquil paint, and your favorite brands of ballast and scenery materials.

I start things off with some 3/16” square basswood ties glued to the roadbed and sanded flat. At this point, most people would stain the ties and then lay rail. However, I scrape the ties with a razor saw to impart some wood grain texture. How far you carry this step depends on how rough and deteriorated you want the finished track to look. For this demonstration, I’m representing a branchline with light rail and deferred maintenance (Photos 2 and 3).

Color

Once the ties are textured, apply a coat of the Minwax Golden Oak stain. You can use a brush or a paper towel, as I’ve done here. Simply wipe this on as it comes from the can. If it looks too dark, you can rub it in with a paper towel. While the stain is still wet, I brush a coat of Floquil Rail Brown onto randomly selected ties. I don’t use the paint full strength; I simply shake the bottle until it’s partially mixed. What you want is a wash coat that will let the Minwax stain show through (Photos 4 and 5).
To further age some ties, drybrush on some gray acrylic craft paint and rub it into the wood grain. Again, you just want a thin coating that highlights the texture and wood grain. If the craft paint is applied too heavily, a water-soaked brush or towel will tone it down (Photos 6 and 7). Photo 8 shows the finished ties ready for rail. What I wanted were ties that have an overall color tone with subtle variations in color between individual ties. The wood grain effects show up nicely now.

Finally, we can lay some rail. There’s nothing new here, just standard techniques that have been covered before. Since this is going to be a branchline, I’ve used Code 100 rail and Right-O-Way details (Photo 9). Along with proper attention to color and texture, adding extra details (such as joint bars, rail braces, and nut-and-bolt details) lifts model track out of the ordinary. They are nice to see, especially in foreground areas. The principle to keep in mind is to give the eye something to linger over in a scene before moving on to the next one. This creates the illusion that the layout is much larger than it really is. Since my layout is small in size (an L-shape, 10’ x 24’) and about 57 inches off the floor, I use such details throughout.

Another element often missing from model track is texture. Prototype track has that dry, gritty, yet oily texture that is hard to describe. Areas around switches and engine terminals have that mixture of Diesel fuel, oil and dirt known as crud. There is also mud that forms around rails and ties near grade crossings and in poorly ballasted areas. This texture is one more layer to consider if you really want to model track in all its glory.

Once the rail is spiked in place, I give it and the tieplates a coat of full strength Rail Brown (Photo 10). Here’s where the fun begins. While the Rail Brown is still wet, take the pastel stick (I’m using a light brown color) and scrape it with a utility knife blade so that the dust falls onto the wet rails (Photo 11). Yes, it’s messy. You can use a soft brush to work the chalk dust into the track. You have to go easy near switches, however, and take care not to foul up the movement of the points. The chalk gives the track a nice aged dry texture that paint, alone, never will (Photo 12). Notice that, even unballasted, the track has weight and mass.
I like to use a dark color of chalk, such as black or burnt umber, mixed with Grimy Black or Rail Brown to represent oil soaked dirt. Using burnt sienna (rust) chalk along the sides of the rails gives a nice textured gritty effect that’s hard to achieve with just paint alone. Colors that match the base color of your modeled terrain can be sprinkled along the outer edges of ties and ballast, and blended in with a soft brush. As with any type of fine dust, there may be some health concerns for those with allergies or other respiratory sensitivities. Common sense might dictate the use of a dust mask. Even though the amounts may be small, use good judgment.

Ballasting begins with a layer of ordinary sawdust along the edges of the roadbed. This is unsifted, although I do pick out any wood chips or splinters. The sawdust acts as filler to save on the use of the more expensive commercial ballast material (Photo 13). Woodland Scenics’ cinder material is poured on and worked around the ties using a soft brush or your fingers. Be sure and get it off the sides of the rails and off the spikeheads (Photo 14).

To bond the loose ballast materials in place, spray some isopropyl alcohol from a spray bottle (Photo 15). Go lightly with the spray at first, so you don’t disturb the placement of the ballast (I’m holding the spray bottle much closer than normal for the camera.) Once things are slightly misted, really soak the ballast to be certain it is completely wet. The alcohol acts as a wetting agent, and allows the diluted glue and water mixture to soak right in. I just use regular Elmer’s White Glue, thinned fifty-fifty with water plus a little dish soap (Photo 16).

While this layer is still wet, I sprinkle on some groundcover materials to cover the remaining sawdust (Photo 17). You could also do this before wetting everything down. Layer on as much or as little as you want, and ensure that it is well saturated with the white glue mixture. This soggy mess will take forever to dry (certainly overnight, if not longer), especially if it is fairly thick.

Finally, here’s the end result of all our labors (Photo 18). No doubt about it, the light rail, encroaching weeds, deteriorating ties, sparse ballast and low rail joints will keep speeds down on this branch. At this point, you can add some weeds and taller...
vegetation along with as much detailing as you want. Photos 19 and 20 show another section of track I built, using these same techniques, with Code 125 rail. Here I added some taller weeds made from Sisal twine and a pile of rusty tieplates. I also tried a different way to fill in the ballast shoulders, using some blue foam insulation. You could also just cut a bevel on each side of the roadbed material.

Next time you are near the tracks, make some observations and take notes. Ask yourself what stands out about this stretch of track? What color are the ties and rail? How about the ballast? How do they relate to each other? How’s the alignment? Is it smooth and flowing or crooked and unkempt? Deliberate analysis like this is one key to better modeling in general. These types of questions are designed to focus your powers of observation, helping you break from stereotypical thinking (Not all track is a uniform rail brown.) This type of focus isn’t hard to learn and, after a while, becomes second nature. Although my track is handlaid, these weathering techniques will work wonders on commercial flex track too.
Reader Feedback

ROT: Handles

Hey, Mister Editor, I've got a tip you can publish without paying me thousands in royalties. Go ahead—use it as my guest. Here's the deal: Making and Painting Small Parts... put a handle on it! Lots easier to form and fashion little pieces using big hands if you make or paint a piece on something like a stick. This could be an untrimmed piece of styrene which is part of the piece you're making or painting. When you're all done working the piece, simply trim off the extended section and do any touch-up as needed. Example: When I scoured the box containing my baggage car kit, I couldn't find the eighth roof vent no matter how many times I turned the box over. So I duplicated one on a "stick" of 3/16" square styrene. When I got done adding and gluing pieces and filing some radii, I just cut off the piece and filed the end square. When I had to make those tiny curved strips at the ends of the clerestory roof, I only filed the inside radius of 3/4", glued it on, and when the glue was dry, I sanded it to the roof contour. It was easier to handle this piece of 1/16" basswood instead of trying to make four tiny pieces. There are lots of pieces that are easier to make if you leave a handle on them until you're ready to make the final cut. The same goes for multiple pieces of, let's say, side pieces for cabooses. I just trim 'em all on one piece of stock and plan to leave a place to make the final cuts into little separate pieces.

Okay, it's all yours. You can beat the hell out of it or we'll split the fame and fortune. It's probably not a new idea—but obvious. I've been doing stuff like this for a long time. It's an old patternmaker's trick!

Phil Opieleski, Mass.

VINEGAR CAR INFO

Regarding the vinegar tank car in OST #22, there is a similar car at the Strasburg, Va., railroad station and museum. The car is painted silver with black lettering. The reporting marks are NFPX (National Fruit Products Co., Inc., Winchester, Va.). There were 22 such cars with a capacity of 8170 gallons and a max weight of 100,000 lbs. The Official Railway Equipment Register from Jan of 1943 shows five cars in service. The ORER from 1950 lists three and the ORER from 1960 lists only two. The car at the museum is in need of much TLC.

John Peterson, Va.

CHEAPER POWER

I note on page 53 the article for building a power supply for command equipment! I thought it might be of interest to note to your readers, for less then the cost of the listed materials you can purchase a Lionel 180-Watt PowerHouseSM power supply, 18 volts AC 10 amps, which would be safer and cheaper than building something that will do the exact same thing as per the article! Trainworld and others have them for reduced prices and, instead of waiting a month for ordering the transformer in the article to build up, you can order from most train shops and have the Lionel transformer within a week! You also might consider that most model train manufactures do not recommend or warrant the use of their model train products with home built transformers! Something to consider if you will be running a fleet of delicate electronic equipped engines!

The Lionel 180 Watt PowerHouse comes with an automatic circuit breaker but personally I prefer when using this much power, to add in an extra breaker with any power supply at less then the maximum output power rating for extra safety. In other words, for the transformer in the article and the Lionel 180 Watt PowerHouse (both of which will produce the same power output of 10 amps) add in a 8 Amp push button breaker. When you draw over 8 amps of power this will trip and not automatically reset till you push the button to reset. This ensures that you do not have any huge power spikes and are not over using your power supply. It also ensures you clear the short before physically resetting it. I recently did not notice a derailed train and burnt out the transformer auto reset breaker that kept trying to reset while the train was derailed. A simple additional push button breaker added to the transformer would have prevented this problem!

Gordon Hall

SHORTS—ELECTRICAL—NOT UNDERWEAR

After reading Bob Turner's umpteenth complaint about problems with steam engine brake shoes shorting on drivers I am compelled to reply since I have applied an easy, fool-proof fix to all 26 of my C&O steamers. Separate the metal brake shoe hanger from the chassis with an insulating washer and mount the hanger with a nylon screw (needed on the left side only). Washers can be purchased or easily made by drilling a clearance hole for the screw in 0.010" or 0.015" styrene and using a paper punch to create a washer. Small diameter punches are available at office supply stores. It's much easier to drill the hole before punching out the washer!

On metal cars with non-insulated body bolsters, insulate the Kadec metal coupler box from the metal car (I use black photo album paper) and mount the box with nylon screws. Nylon screws in all common American threads that we use are available from North West Short Line. These screws are remarkably tough; I have never had one break and I run long trains on 3% grades. If you're paranoid about plastic screws use four in each box.

I agree with Bob that equipment must be “tuned” to the railroad. I don't pick up my equipment unless it is absolutely necessary because when engines are picked up they get nervous and it takes them a while to settle down. This principle also explains why glitches only occur when visitors are present. When electrons see strangers in the room they get nervous and start acting up.

Jim EuDaly, Kansas City, Mo.

SACRAMENTO NORTHERN INFO

The article by Roger C. Parker on the Sacramento Northern Railway (OST #23) was really good. Another source of model cars for this railway was Ken Kidder who offered the classic 1000 series Holman combine many years ago. Although a wood car, they had steel underframes. You will occasionally see one of the Kidder models for sale on eBay.

The prototype car #1005, the only one saved, “lives” at the Western Railway Museum in Rio Vista, Calif., along with a control trailer made by Hall-Scott, MOW #302. Another item to see at Rio Vista is Sacramento Northern Binney #62, ex-San Diego Railway, which last ran in Yuba City to Marysville service.

Happy Holidays, Roger Jenkins, Calif.

SMALLER IS BETTER

By the way, another great issue—your editorial asking for small engines really hits the spot since the biggest steam that I can run is my Sierra RR 2-8-0 and that has the middle drivers blinded. I’d also like to see these as reasonably priced out, but that’s a whole other issue itself.

Years ago you could get a “generic” drive of lengthy list of vari-
ous wheel arrangements from Locomotive Workshop and build up from there, but there does not seem to be any replacement for these. I find the mechanism to be the most challenging aspect.

Martin Brechbiel, Va.

**SARAN WRAP ADVENTURES**

I am new to O Scale and a recent subscriber, having been in HO for 50 years. I was also a dealer in HO brass steam locomotives. In the past I had accounts with Sunset (at their inception), Key (at their inception), Westside, NJ Custom Brass, Soho, Lambert, PFM and Hallmark. I would venture to say that over 1,000 locomotives have passed through my hands over the years.

I would like to relate a story to you. We were getting new carpeting many years ago and I had approximately 50 locomotives displayed in a wall unit which had to be moved, therefore I had to box up about 20 or 30 painted engines. As luck would have it about ten of them were missing the plastic in the original boxes. So I decided to wrap them in Reynolds “Extra Cling” Plastic wrap. The box even pronounced its hobby use.

The locomotives remained boxed for several weeks until I could once again return them to the wall unit. Upon opening the boxes I was horrified to learn that the plastic wrap had peeled off the Dullcote topcoat on seven units. They looked like zebra stripes. In trying to save the paint jobs, I tried everything. Respraying the Dullcote didn’t work as the stripes still showed. I tried leathering the edges, so to speak, by hand rubbing with, first Bon Ami (lightly) and then a paste of talcum powder and oil. Nothing worked. The paint jobs were ruined.

I then contacted Reynolds since I felt it was their fault. Remember the box said for “hobby use”. They sent an insurance adjuster who asked if $1,000 would cover the damage. At that time paint jobs in HO were running about $150 per, so I settled for the $1,000.

Bottom line, I would never, never repeat, never recommend wrapping a painted locomotive, tender, passenger car, etc., in plastic wrap. It’s just not worth the risk. I always use the bags that my newspaper is delivered in. They have a greasy feel to them and of course I’ve never since have had a problem. Therefore, I would like you to either print my story of woe or print some sort of a retraction or qualification, for instance stating that only unpainted items could be wrapped in the stuff.

Stan Schwartz

**Brian replies:** Good catch, Stan. I actually had that happen once myself, back when I was custom painting. The issue was that the Dullcoat was fresh, and the outgassed solvents dissolved a thin layer of plastic. I was able to save the paint by re-shooting Glosscote first, then re-dulling.

I should have mentioned that I never wrap any solvent-painted item that isn’t completely, thoroughly cured in any plastic. Any remaining solvents can certainly have a bad effect on plastic bags, wrap, or box foam. If you can smell any trace whiff of paint, it ain’t cured. Unbaked clearcoats can take months to cure in air, by the way.

Though I’ve never had an issue since, read over Stan’s experience and make your own decisions. Any other thoughts?

**Errata #24**

Regarding the photos from the 2005 Indy O Scale Meet: The open-air car shop (page 60) was built by Johnnie Reid. The steam dummy (page 61) was built by Andy Sunderland. Our thanks to Andy for providing us with the correct info.

The last two photos on page 20 are from Mike Culham’s current layout being discussed in multi-parts. We said they were from his old layout.
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Modern Utilities
Welcome everyone. It’s great to be back writing again, after taking off for an issue. Let’s jump right into some modeling details that can help bring your layout into more modern years. Aside from obvious details, like recent makes of automobiles scattered about the layout, I would like to point out a few “everyday” things that may not be too obvious. In the real world, when you get in your car and drive, do you see power lines? Not the big yellow stripe in the middle of the road. Do you see any power poles? Today the power wires share a pole with telephone wires and cable services. How many lines are there on a pole? Some poles may have numerous lines and some may have just one. There is a line you won’t see in all that hanging mess, fiber optic cable. Fiber optic is a medium for high-speed light-transmission of data. Your model locomotives use it (sort of) to get the LED light to the front lens and number boards. The real fiber optic stuff is a polymer glass tube used for digital phone communications and high-speed Internet access. It’s becoming the installation standard for new construction.

Fiber optic lines are run underground, and surface at intervals inside junction boxes. These boxes contain the hardware to convert the light pulses to digital signals and send them to your house. The real subject to model here is the box outside the home or business, like Illustration 1. A simple model made of Styrene or balsa that resembles the box in the photo is all you need. These boxes are typically painted an earth color in an attempt to blend them with the surroundings. A pine green color, and sometimes a bare aluminum color, are the most prevalent in my area. Now you can forget about tasking yourself with telephone wires on poles. You might also want to forget about the power lines as well. Many newly constructed neighborhoods are being built with underground utilities, so pull up those telephone poles, fill in the holes with spackle, and place some of these boxes across your model landscape. I admit it’s easier said than done. The telephone pole is an everyday icon we tend to look straight through. Take it away and you might feel like the scene is incomplete.

Do you want a modern scene on a rural road or something for the corner of your business district? Put in a filling station (A what? Oh, I mean a gas station.) Actually I mean a convenience store. To be modern, don’t model a gas station. Those haven’t existed for some time now, and the old filling station disappeared in the 1960s. The modern convenience store put an end to “full-service”, and gone are the “self-service” signs. I admit I never knew the Texaco Star Service, offered in the 1950s, where three to five men would rush to each car checking oil, filling wiper fluid, cleaning the windshield and topping off the gas tank while the customer sat comfortably inside the car. Two towering gas pumps were all the station needed. Oh, and gas was 5¢ a gallon.

In 2006, a modern “filling station” could have as few as two and as many as twelve islands to fuel cars from both sides. Use any model you want for the building, but a sleek, square, well-lit structure would be the most modern. The area to really focus on would be the gas pump. The pumps of today are compact rectangle structures housing the three grades of gas (regular, super, and supreme) on both sides. Place them beneath a very well lit and covered area. The cover should resemble prefab metal with steel supports. Typically, very high output lighting is used to bring daylight to the night. A great starting point for the store would be the Walthers Cornerstone Gas Station. Scratchbuild the pumps from Styrene. Illustration 2 shows how simple they are, flat with not too many curves. Add a new awning overhead and the Walthers model is a nice representation of a “modern” convenience store.

For the next “Modern Image” we’ll take a look at some modern paperwork. Railroads have added new operating forms and procedures to combat crew errors out on the rails. These new rules promise to add a new dimension to your operating sessions. ☞

![Image of a modern convenience store](image-url)
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Nothing is more important to a steam locomotive’s operation than an abundant and readily available supply of water. Consequently, every steam-era model railroad needs to be outfitted with a number of water tanks.

My first reaction to this need, as I made the conversion from narrow- to standard-gauge a few years back, was evasion. Via a consignment dealer, I acquired a 60,000 gallon steel tank that was imported several years back by Precision Scale. A home for this beautiful brass model was created on my layout in the division point yard at Skagit. I thought this tank looked pretty good. Sadly, I heard essentially the same comment from nearly every knowledgeable model railroader who visited, “What are you doing with that UP prototype water tank on your railroad?” At some point I grew tired of hearing this comment and decided it was time to strike out on my own.

Engineering Standards for the Cascade Northern

Since I knew that this would be the first of several water tanks that I would need to build, I decided that the design should be based on at least a loose set of engineering standards. Mainly, I wanted my tanks to have a family appearance. This approach is consistent with what the prototype railroads did. They worked hard to standardize the design of their support facilities. Their primary goal was to save money. Mine was to achieve visual consistency and identify a process for turning out a number of structures that would look both believable and related, all without being unduly complicated to construct.

Since the Cascade Northern maintains friendly relations with its neighbor to the south, the Great Northern, their engineering department’s design records were consulted in search of inspiration. In the Great Northern Railway Historical Society’s Reference Sheet Number 239, from March 1996, I found a nifty plan for a 50,000 gallon wooden tank. Plans were provided, showing it sitting on top of both 20’ and 30’ tall towers. I decided this was the tank for me, and set about building it. Here’s how I approached the project.

In considering the construction of water tanks, I saw them consisting of three basic components, the support structure, the tank itself, and the roof. Each model would require all three elements. To test my approach I actually built two models of essentially the same tank, each one sitting on a different height base. The first tank sits on a 30’ tall base. Engines will be serviced via a trackside hydrant. The second is a lineside structure with a 20’ tall base and a spout.

Support Structure

The vertical support members, for both of my tanks, were cut from scale 12” square stripwood. On the tall tank, there are four of these uprights, surrounding the frost box, which stand vertically. Eight more are located further out, toed in slightly from their base. On the shorter tank base, every support is vertical. I built a jig for each tank to ensure that all these vertical members would be in proper alignment and correctly spaced. The jig was also an aid in accurately sanding the angle at the top and bottom of the leaning supports on the tall tank.

My approach to the assembly of the base was to completely build up one axis, including all the 3” x 12” cross-bracing. Once this was done, I threaded the perpendicular members through and completed the other axis. This sounds simple enough to say, but takes a while to accomplish in practice. Next I applied Grandt Line nut-bolt-washer (NBW) castings wherever a cross brace met a vertical beam.

Before moving on, let me say a few words about how I finished all the wood parts prior to assembly. Color photos of the prototype that I consulted suggest that the support structures of water tanks were generally left unfinished and, therefore, weathered naturally. Even if a preservative was applied, by the time most railfan photos were taken the supports had a well-aged look. This was duplicated as follows. First I dragged a razor saw over each beam and cross support in order to add some definition to the wood grain. Then I liberally applied Builders in Scale Silver Wood Stain. An application of India ink diluted in denatured rubbing alcohol will also achieve this look.

Concrete footings were constructed by gluing together two strips of Evergreen styrene, each 1/8” thick and 5/8” wide. This strip was then cut into 5/8” squares. Each square was then filed to form a truncated pyramid with a top that measured one scale foot square. The 12 that each tower requires were all painted with Floquil’s Concrete color.

GN’s plans show the horizontal supports for the tank body, at the top of the tower, to be built from I-beams. None were handy at the point in time when I reached this phase of the project, so I simply substituted 4” x 12” and 6” x 12” timbers. As I started on the second layer of this support, a bag of six-inch Northeastern Scale Models I-beams turned up, so I put them to use. I cut a floor for the tank itself from Northeastern scribed siding and glued the I-beams to it. To get the correct length for each beam and their spacing, I prepared a scale drawing and used it as a...
guide. The boards that make up the floor of the tank are a scale six inches apart.

All that remained at this point, to finish the base, was to build the frost box. This was made from scribed siding material with 90-degree angle pieces applied at the corners. A Grandt Line door was installed near the base.

**Tank**

Builders of wooden tanks have a major asset available to them, the mailing tube (Photo 1). Every time I passed a trash receptacle at work and noticed a stout mailing tube being discarded, I hauled it out and took it home with me. Over time, I accumulated quite a variety of tube, err... tank diameters, putting my sainted wife’s patience to the test as I hauled a newly found treasure into the house.

There is one very important thing to remember if you plan to use a mailing tube as the understructure of a tank. Let the diameter of the mailing tube dictate the size of the top of the tank support structure, rather than the plans you are following. For example, the GN structure, serving as the basis for my model, has a tank measuring 24’ in diameter. The closest mailing tube diameter I could find in my inventory was 25’, which was close enough for my purposes. As a result, the size of my support base was adjusted slightly to accommodate the extra 12” my mailing tube’s diameter dictated.

I applied 1” x 6” stripwood to the exterior of the mailing tube (Photo 2). This sheathing had been scraped and stained as described previously. In addition, a coat of Boxcar Red (treated with a dab of black, of white, then diluted with thinner) was wiped on. All painting and staining was done in advance of application so as to get a variety of hues on the tank side.

Bands on the tank were made from nylon fishing line. A number of pieces, of sufficient length to go completely around the tank, were cut. Each piece included several inches of extra length. All were spray painted Grimy Black. I put several slits in each side of a sheet of foamcore artist’s board, stretched the line across between them, and fired away with the spraycan. By the way, I discovered that the trashcan in the graphics division at work was a great place to find sheets of discarded foamcore. My wife, already coping with the growing inventory of mailing tubes, just rolled her eyes whenever I arrived home from work with yet another batch of model making treasures.

The GN tank has 13 bands. The question at hand was how to install them so they would be approximately parallel. Here’s what I did. The precision height gage in my metalworking shop was dusted off and set up on the workbench. Its measuring head was set at the same height as the bottom band of the tank. I then slowly rotated the tank and let the tip of the measuring head score a line around the tank. Repeated 13 times, I had a set of slight grooves into which the fishing line could slip.

On each side of 26 vertical sideboards, I drilled two holes of sufficient diameter to accept the fishing line. Their placement was determined from the GN drawings. The line was fed into one hole and then knotted so that it could be pulled tight and not slip out. A large drop of CA cement was applied and allowed to dry. This line was then wrapped tightly around the tank and fed back into the hole adjacent to the one where it had originated. While holding the line taut, I applied a liberal amount of CA. I continued to hold the line taut until the glue took hold. For the fasteners, I selected a Grandt Line product. These fasteners completely covered nearly three of the vertical boards and hid the entry and exit point for the fishing line.

**Roof**

With the tank complete, I moved on to the roof. Somewhere between geometry, trigonometry, and mechanical drawing, I’m sure I once learned how to draw a circle, cut a slice out of it and then join the sliced edges to produce a cone of a desired height and diameter. Alas, I now can’t remember how, so I just experi-
mented. With apologies to all the teachers who labored with me in vain, on my second attempt I had a winner (Photo 3). For material to build the cone, I selected a sheet of the cardboard that the laundry uses as a stiffener when I order my shirts to be returned folded. This had enough flexibility to fold easily but, once folded, maintained its structural integrity. To be on the safe side, however, I did construct a wooden inner frame to guarantee sturdiness (Photo 4).

Roofing material was then applied to the finished cone. Wood shingles were selected for my tower, although tarpaper would be an equally appropriate choice. A tarpaper roof has the advantage that it doesn’t require anywhere near the extent of anal-compulsiveness that goes hand-in-hand with the application of individual wood shingles.

If you elect to do shingles, remember that they must become increasingly tapered as you reach the top of the tank. To keep them straight on my roof, I used a compass to scribe equally spaced lines around the cone. This was accomplished by putting the point at the peak of the roof and scribing lines of the correct diameter. Knowing that I would want a roof hatch on my tank, I framed one from 1” x 3” material and butted my shingles up against it. My shingles were cut from my favorite material, cedar cigar wrappers. I steam and press them to achieve a flat sheet, then cut each shingle individually. Absent access to this material, Builders in Scale offers an excellent substitute product.

To my wood shingles, I applied a coat of the previously mentioned Builders in Scale wood stain. This caused them to assume a handsome gray color. I’m still looking for a finial that will appeal to me. Someday I’ll be at a swap meet and find just the one I want. At the moment, even the most severe of my critics hasn’t yet mentioned that my tank is without one.

Details And Finishing Touches

Ladders add interest to structures, so I decided my tower should have one. Personally I’m pretty confident that OSHA would take a dim view of my ladder but, for me, it adds the lacy visual interest I was seeking. My technique for building ladders is to lay piece of stripwood down on the workbench that is the same width as the ladder itself, minus its side rails. On each side, I place a scale 2x4 and hold it in place with a toolmaker’s angle plate. Then, 1”x 3” rungs are then glued in place. The tank height obviously determines the ladder length.

My roof hatch is nothing more than a piece of scribed wood with a frame glued to it. It fits the box I installed prior to applying the shingles. Building the spout for the lineside tank was a relatively simple task, because a Grandt Line casting set for this item is available. I just followed the GN drawings and scaled things to fit the Grandt Line casting.

Someday I’ll get around to building a pump house for each of these towers. For the moment my tanks are dry, That’s okay, I guess, mainly because I haven’t gotten the new house (where the new Cascade Northern will be located) under construction yet.
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One of the most requested modern-era freight cars, this all new AtlasO Gunderson Twin-Stack model is sure to impress. Based upon the Gunderson prototype of the mid-1980s, these cars helped usher in the “stack train” era of intermodal service. Designed to hold a combination of 40’ and 45’ containers, these cars run in 5-unit articulated sets.

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Two road numbers are available per road name which include: BN, Santa Fe, Sea Land, TTX, and undecorated. MSRP 2-Rail (A & B Set): $142.95; MSRP 2-Rail (C, D & E Set): $182.95. Estimated delivery is May 2006.

Chooch/Ultra Scale has announced a new O Scale Pullman 53’6” flat car kit. Kit #674 is for one car while kit #674A is for two cars. The Chooch/Ultra Scale II flat cars come with all details less trucks and couplers. Cast in two resin pieces, the highly detailed floor is separate from the one-piece body. Created by master car builder, Gene Deimling, the kit features brand new tooling for the brake wheel and stake pockets. The kit is in limited production kit and available now.

This nice switch tower is made of heavy gauge brass with scribed wood grain detail. The tower weighs over seven ounces. It has a nicely detailed interior complete with window glass inserts and a pot belly stove. The tower is offered in three different paint schemes; dark brown trim over yellow wood; green trim over tan wood; or dark grey trim over light grey wood. The dimensions of the base are 2-1/2” by 2-1/8” and it stands just over 6-1/4” high.
REVIEW: DM&IR Yellowstone with Matching Caboose

MSRP, DM&IR M4 $1799 and DM&IR Caboose $199.95
Sunset 3rd Rail, 37 S 4th St, Campbell, CA 95008
www.3rdrail.com

Reviewed by Brian Scace and Joe Giannovario

The Duluth, Missabe & Iron Range Yellowstone was a modern articulated steam engine designed for one thing. This locomotive was an ore hauler, created to bring large quantities of iron ore from the stripmines in the Missabe Range down to the shore of Lake Superior. Here, ore was pushed out on huge docks to be loaded on the fleet of Great Lake ore boats, bound for the steel mills in the belt from Gary, Indiana to Pittsburgh.

Baldwin built these monsters in two groups, the first group (M3) in 1941 and the M4’s in 1943. These were some of the largest and most powerful steam locomotives in the world. A quick troll through Westcott’s Steam Cyclopaedia yields some big numbers, as the M4 developed some 140,000 pounds of tractive effort and weighed in at just under 350 tons. They were designed to handle 18,000 ton trains, and reflected that in size and design.

Sunset’s model of the Yellowstone came to us in the hand-some gray scheme worn by the prototype, neatly and evenly applied. Assembly was clean and tight, and these are the most detailed Sunset pieces I’ve seen since the 3rd Rail moniker appeared. There are enough opening turret covers and cab vents to satisfy the hatch-flippers among us.

I have to do something, here, that borders on the one thing we try to avoid in reviews. I’m going to insert a personal opinion. The DM&IR is hardly a mainstream choice of prototype for O Scale modelers. That being said, I applaud the caboose, even more than what is a fine locomotive model. Since Sunset’s locomotives are intended to be operated, rather than being mantel-queens, it strikes me as an incredibly sane idea to make a prototypically appropriate caboose to compliment the locomotive, especially when the railroad represented doesn’t have a wide variety of previously offered buggies in O Scale. I’d really encourage the consideration of this as the next step in the refinement of the “operator’s brass” niche for future projects (as well as some of the recent ones, such as a buggy to go with all those B&M Berks and Mountains). All you need, in the Yellowstone’s case, is a bazillion old Atlas/Roco ore cars, and you’re in the iron business.

The locomotive is a smooth and capable runner, handling 60” radii with ease. It will probably handle sharper radii, but would look seriously silly doing it. Instructions are provided, explaining how to adjust the flexibility of the front engine. This bruiser started up at four volts drawing 0.8 amps. On Joe’s layout pulling up a three-plus-percent grade it took an average of eight volts at 1.0 amps and drew slightly over 1.3 amps on the steepest portion. I still wish that there was one of the slide switches from the three-rail version left in place and wired up so we 2-Rail neurotics can turn those “section-following” green class-lights off!

As a bit of an aside, in case you need a little bitty nudge to justify one of these big guys, the Lake ore traffic was seasonal. Once the ice closed off the ore boat traffic, these engines went booming for the winter, some as far afield as the Rio Grande. All said and done, it’s big, strong, well-behaved, and up to snuff. Best of all, you don’t need to go crazy searching for an appropriate caboose on Ebay!
NYC S-Motor Conversion
Call or email for quotes, based on your requirements.
Baldwin Forge and Machine, Box 5, Baldwin MD 21013
410-592-5275 evenings 7-9 PM • rrjjf@aol.com

Reviewed by Brian Scace

I love doing these sorts of things, because it re-enforces my contention (I am a contentious so-and-so, aren't I?) that there is a lot of useful stuff in the Three-Rail World, as long as we keep our eyes open.

I was visiting Ron Cerise, of Engine House Hobbies, the other week (Ron carries OST, so all you Marylanders can pick up your copy. That's a hint, troops!), and he plied me with a devilish grin and a Lionel New York Central S-motor. I actually intended for my son to have this solid chunk-o-white devilish grin and a Lionel New York Central S-motor. I actually intended for my son to have this solid chunk-o-white metal (Really!), but it struck me as a worthy candidate for Joe Foehrkolb's tender attentions. It is, after all, a nice model of a ubiquitous prototype. The S-motor may have had the longest continuous service life of any major class of locomotives in the country, some 80-odd years.

Anyway, I tickled Joe Foehrkolb (of Baldwin Forge and Machine) after some musing about the fate of our newfound candidate. “Sure, send it”, he said. Joe was kind enough to send the electronics package that is waiting inside this devil. The second shot shows the frame and mechanism disassembled with the electronics removed.

“Next, the wheels were removed from the drive assembly. The axles are 3/16” diameter. I drilled (11/64”) and reamed (3/16”) four 42” NWSL 145 wheel tread wheels, and pressed them on the drive side of the mechanism (the side that has the spur gears). Then I drilled and reamed four more wheels to 7/32”, machined Micarta plugs, and pressed them into the wheels with Loctite retaining compound. Next I centered drilled the Micarta plugs, then drilled 11/64” and reamed 3/16”. These insulated wheels can then be pressed onto the other side of the axles until they are in gauge. A 3/16” fiber washer is installed on the axle behind each insulated wheel to take up side play and prevent the insulated wheels from shorting against the brass bearing inserts in the drive frame. That pretty much finishes up the drive assembly.”

“Next, we convert the pilot truck assemblies to 2-Rail. The insulated wheelsets go on the same side of the engine as the non-insulated power truck wheels (spur gear side). These trucks will be wired to pick up power from the other running rail, so no pickup wipers are required on this conversion project. The trucks will be insulated from the loco frame by installing heatshrink tubing on the truck mounting stubs and using some large non-metallic flat washers (American Flyer tender truck insulating washers). The conical springs that keep pressure on the pilot trucks will be shortened a bit to accommodate the larger (33”) wheels now installed in the pilot truck frames.”

“It is also necessary to cut the brake shoes off of the lost wax brass third rail collector brackets. The back of the brake shoes can be filed down and then the shoes can be soldered back on the third rail shoe bracket at a location that clears the larger scale wheels. Getting the brake shoe castings back in a reasonable position is the most tedious part of the 2-Rail conversion!”

“In the next step, a Kadee 806 coupler and adapter pad is made to fit the S-motor frame. The adapter is made from 1/8” x 3/4” brass bar stock. It is machined to fit over the base of the original Hi-Rail coupler mount. The large hole that fits over the original mount is approximately 0.340” in diameter. I drilled it at a point centered in the brass so that approximately 1/16” of metal remains at the rear of the pad behind the 0.340” hole. This locks the adapter pad in place on the engine frame. The pad is attached, with two 0-80 x 1/4” screws, to the diecast crossbar that supports the original coupler mount. The screws are located about 3/16” in from the back of the adapter pad and are centered on the pad 1/2” apart at that location. Drill two clearance holes (#52) at this location. You will also notice that the pad is machined at the rear. I removed about 0.050” from the 1/8” thick brass bar, 9/32” in from the rear of the pad. This put the bottom of the mounting pad at the right height for a Kadee coupler per my height gage. If you machined or filed everything correctly, you can slip the adapter pad over the old coupler mount stub and the cutout in the rear of the pad will fit snugly against the diecast crossbar. Using the clearance holes I drilled in the pad, I drilled the diecast crossbar with a #55 drill and tapped the holes 0-80. I know that the standard tap drill for a 0-80 is a #56, but you are reducing the risk of breaking a tap in the diecast crossbar by using a slightly larger drill. The original diecast coupler mounting base is filed down so as to be flush with the bottom of the brass adapter plate. After all this is done, the Kadee box can be clamped on center to the adapter and the adapter drilled and tapped for 0-80 screws. For appearance, I removed a 1/8” square section out of the electronics removed.”

“Next, the wheels were removed from the drive assembly. The axles are 3/16” diameter. I drilled (11/64”) and reamed (3/16”) four 42” NWSL 145 wheel tread wheels, and pressed them on the drive side of the mechanism (the side that has the spur gears). Then I drilled and reamed four more wheels to 7/32”, machined Micarta plugs, and pressed them into the wheels with Loctite retaining compound. Next I centered drilled the Micarta plugs, then drilled 11/64” and reamed 3/16”. These insulated wheels can then be pressed onto the other side of the axles until they are in gauge. A 3/16” fiber washer is installed on the axle behind each insulated wheel to take up side play and prevent the insulated wheels from shorting against the brass bearing inserts in the drive frame. That pretty much finishes up the drive assembly.”

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of the front corners on the adapter plate. The round corners at the rear of the adapter serve no purpose. They just look
ticer than square corners to me.”

“Strangely the most difficult part of the conversion is get-
ting the brake shoe/third rail shoe assemblies reoriented.
Lionel used very small pilot wheels on their trucks. When
you increase the diameter of the wheels to 33”, the brake
shoe/third rail shoe castings require repositioning and modi-
cation. The third rail shoes hit the frame unless they are low-
ered about 0.040”. I did this by machining 0.200” diameter
0.040” thick washers that were installed between the pilot
truck frames and the third rail shoe castings. Even then, I had
to file off a small amount of brass from the rear of the third
rail shoes to keep them from shorting out to the frame of the
engine. Anyone attempting this conversion will see what I am
talking about when they get to this point in the job. It is a cut
and fit process.

One thing I forgot to mention, in order to install NWSL
wheelsets in the pilot truck frames, the axle holes must be
opened up to clear a 1/8” diameter axle. I use a #30 drill (0.128”). This leaves a little clearance for lubrication. That’s
about it.”

Now, Joe is in the business of conversions, yet he is freely
telling you how to do this yourself. Draw your own conclu-
sions about that one. Meanwhile, the locomotive was back
in my hands ahead of promised schedule and even a little
under-budget. That’s a good way to do business, too. Joe has
also done some very nice driver machining and mechanism
work for me over the last year or odd. If you have a conver-
sion project near and dear to your heart, contact Baldwin
Forge and Machine and talk to the man. He can probably
help you, too.

REVIEW: 60’ Berwick Hy-cube Boxcar
2-Rail MSRP $74.95, 3-Rail MSRP $69.95
AtlasO, LLC, 378 Florence Avenue, Hillside, NJ 07205
908-687-9590 • www.atlaso.com

Reviewed by Carey Hinch

Available since July 2005, the AtlasO 60’ Berwick Hy-cube
boxcar is available in both 2-Rail and 3-Rail. The Hy-cube
boxcar was built in the 1970s by Berwick Forge and Fabricat-
ing, now Berwick Freight Car. They are in service on most
every large railroad today. The Atlas model of the Berwick
Hy-cube is just that, a high-capacity double door extra height
boxcar. It matched the scale dimensions on all sides and the
wheels fit the NMRA gage perfectly. The car weighed just shy
of the NMRA recommended weight, but it wasn’t enough to
worry over. The car has plenty of girth. The AtlasO Hy-
cube features some extensive detailing. The printed
lettering is

sharp and clear right down to the lube plates. Our model was
painted and lettered for Conrail and even featured the paint
overspray on the roof. All grab irons are separately attached.
The end details on the car feature a coupler cut bar, etched
metal safety platforms, and airhose. The trucks are sprung
and die-cast with 36” wheels. The wheels are the new rotat-
ing end-cap style and it is a very nice effect on the car. Atlas
couplers are also installed. The underframe is highly detailed
die-cast metal.

Atlas has produced a fine model of a very common mod-
ern-day boxcar. Available road names include Conrail, Mil-
waukee Road, Norfolk and Western, Rio Grande, Santa Fe, as
well as undecorated. Four road numbers are available per road
name.

Highlands Station Inc., 2600 S Parker Rd, Ste 1-211, Aurora
CO 80015
At your local hobby shop or by phone: 888-338-1700

Reviewed by Joe Giannovario

There is no doubt that On30 has made a huge impact on the O
Scale marketplace. Created years ago by a few modelers looking for
an inexpensive way to model narrow-gauge railroading and pulled
into the limelight by Bachmann recently, On30 is a great mix of
scale and gauge that will allow anyone to model in O Scale.

Once thought of as a niche
for scratchbuilders only, more and more commercial On30
product has become available of late. Highlands Station has
sought to capitalize on On30’s popularity by publishing their
first On30 Annual. It’s 84 pages of nothing but On30 material
intended to inspire and inform potential On30 modelers.

Now you might think this book would be one big ad for
Bachmann and you’d be wrong. There is wealth of information
here about who carries/makes On30 parts and kits. There are
also a couple plans for you scratchbuilders out there, and there
are plenty of articles that showcase what can be done in On30.
Even if you’re not interested in modeling in On30, the photos
alone are gorgeous enough to inspire any O Scale modeler.

Highlands Station has already announced the 2007 On30
Annual and the 2006 edition is in limited supply so act quickly if
you want one. The 2006 On30 Annual is “required reading” for
anyone interested in this exciting niche of O Scale.
Bear in mind also that these are production samples, so a couple things may be a little different by the time these hit the beach in quantity. Let’s look at a couple things I (a non-Pennsy guy) noticed.

Those steps are an odd shape. I cracked open my copy of the PRRRHS passenger car book, and saw straight-side steps and steps with a gentle flair in the sides. If the steps on Golden Gate’s P70 bug you, you unscrew without hosing the finish. Just unscrew ‘em, and replace them with ones from John Keil, for example, or whoever else’s steps may appeal.

The same book leads me to believe that the number font is pre-VWII, the stripping pattern and lettering arrangement is postwar, and the bronze color is early postwar. That’s easy enough to deal with, by re-numbering the cars. I would also imagine that you transition-era guys will be relettering them in Dulux. Keep an eye on when PRR changed lettering colors, stripping patterns, “two numbers per side” versus “one number per side”, lettering fonts, and paint colors. They all changed at different times, so bizarre combinations are quite possible. If you can find this book, get it. There’s a really useful chart in it that spells out these paint/stripe/lettering combinations for the era-specific modeler.

These are ice-air cars, so there should (typically) be some vestibule vents. Laminate them up in Styrene, if this bugs you.

**Conclusion**

These are very nice cars for the money, and will be worth looking at for those needing Pennsy passenger cars at a “I’m building a layout with my train budget, too” price. Run ‘em as they are, or change a casting or two and some decals to assuage the Neurotic-o-Meter. We’ve needed the prototypical passenger car niche filled for quite a while, and I hope that Golden Gate will continue to add to their line, especially with some non-Pennsy cars for the rest of us. How about that ubiquitous 60’ 6” double-door baggage that ACF and Pullman Standard have done for just about everyone? Please?

**Notes for the Neurotic**

Before we get any further, look at the price again. That’s right, we’re talking about $100 passenger cars here, so don’t get too frothy about my nits, here.
REVIEW: Southern Railway 41’6” Composite Gondola Kit
#48G1 Complete kit with trucks, couplers and decals, MSRP: $89.00
#48G1x less trucks and couplers MSRP: $75.00
Smoky Mountain Model Works, 35 Springwood Drive,
Asheville, NC 28803-1626
828-298-5923 • www.smokymountainmodelworks.com
reviewed by Don McFall

The prototype Southern Railway composite gondola is the type of car most modelers will find interesting. These cars were built in 1928, and lasted in quantity until the mid-1950s with one car staying on the roster until 1973. This is a car that could be seen on almost any railroad. Its size and interesting details make it a car modelers will want to own. (See photo of Southern car 117644 at Bradenton, Fla., in February 1953, Photo credit: Howard Ameling Collection)

In the Official Railway Equipment Register (ORER) for August, 1944, this car is described as, “Gondola, Steel Underframe, Low Side, Fixed Ends, Wood Floor”. At that time, there were 176 of the 500 original cars still in interchange service as gondolas. These cars were numbered 117500-117999, and had a capacity of 552 cubic feet and 100,000 pounds. The model car dimensions are accurate or extremely close to those of the prototype car. The July, 1930, ORER states that the prototype measured 41’-6” while the model measured 41’-8”. There was also a slight discrepancy in the inside length. Oddly enough, this car is shown as having an outside length of 42’-4” in a 1944 ORER.

An eight-page set of step-by-step instructions that includes car data, photos and plans is provided with the kit. Read the instructions. Carefully. A one-piece cast polyurethane car frame is the starting point for the kit. There was almost no flash to be removed and the cast-on details are crisp and accurate. The molded stake pockets were the only pieces to have excessive flash, and care is required in its removal. Of course, the stake pockets are the first details to be installed. Removing the flash is tedious but, once this step is complete, the car goes together quickly. I worked an hour here and an hour there during the week, and had the car ready to paint in about ten hours.

The first important item is that Steps 4, 5 and 6 of the instructions ask the modeler to install all the underbody brake detail, stirrup steps and other delicate parts. Later, in Step 7 you mount whichever trucks you choose and adjust the car height accordingly. I feel that Step 7 should be done first, as the truck mounting process might adversely affect the installed brake detail or stirrups if the bolster height needs to be adjusted. For this car, Athearn Bettendorf trucks were selected, and it was necessary to use a large file to remove the elevated mounting ring at the center of the bolster.

With the car now sitting at the proper height, the AB brake system was installed, following the instructions. The brake system is the only area of the kit that was a disappointment. The instructions are quite clear up to the point where the final air lines are to be installed. The instructions state, “The remaining holes [in the AB valve] can also be enlarged and have wires added but these are minor airlines and will clutter the assembly.” Of the two remaining lines, one line goes from the AB valve through the center sill of the car to the brake cylinder. Half of this line was already installed at the end of Step 4. The other line runs from the AB valve to the retainer valve. The prototype drawings included do not show this line, so some 0.015” wire was selected from the parts bin and the line was located similar to other prototype AB brake installations. The location of the brake release rod was also overlooked. At this point, Brian Scace would probably comment that my Neurotic-O-Meter needle is off the scale [Bless you, my son. –ed].
I admit that this is really nitpicking, but it is difficult to place details on the model if you do not know where they belong. After talking with Jim King of Smoky Mountain, he indicated that these small items would be addressed in future instructions.

The cars were built in the SRR company shops, and many of the prototype cars did not have a dirt collector between the AB valve and the train line. The car modeled is one without a dirt collector, however this part is supplied in the kit on one of the brake part sprues. The modeler can decide whether or not to install this piece. For those interested in AB brakes, the Internet site for steam-era freight cars [www.steamfreightcars.com] has a great PDF file on “Modeling AB Brakes” by Ted Culotta.

While speaking about parts, there were lots of useful parts left over as the Smoky Mountain kit contains an amazing number of extras. As the instructions state, parts “have a tendency to shoot across the workbench into oblivion!”

When the time came to work with the one-piece laser etched deck, rather than cut the deck into individual planks as recommended in the instructions, drafting tape was sliced into strips the width of a single board and placed on boards randomly along the deck. I carefully stained the uncovered deck, removed some of the tape strips, stained the newly uncovered deck with another color stain, also staining over some of the previously stained boards. The remaining tape was removed, leaving a few of the boards unstained. The back of the wood floor was covered with double sticky tape and placed on the car frame.

The gondola has nicely detailed cast stakes and other pieces to support the wood strips that make up the sides and ends of the car. On the inside, these wood strips lack detail; this is especially noticeable when compared with the detail level of the laser etched floor. A simple solution is to put four small holes behind each stake (two on each horizontal board) to represent some form of fastener. This detail really improves the “look” of the interior of the car. On the wood end of the gondola, both grabriors require a nut-bolt-washer (NBW) casting to be placed above one end of each grab. I thought the supplied NBW, while acceptable, was too large. I substituted MacLeod Western Grabiron NBW N-46.

After the car was painted, it was time to look at the decal sheet and lettering guide for placement. A word about the ALPS decals, they are delicate. On the smooth car sides this was not an issue, but on the rougher wood gondola sides the individual letters that make up SOUTHERN must be placed accurately. The decals do not like to be slid into position on the wood surface. Don’t worry if you mess up, which I did. The decals contain a number of extras. The car was completed with San Juan E-Type couplers, Bragdon Enterprises weathering powders and, after some thought about the type of load, a load of crates that were scratchbuilt based on a photo from Bob’s Photo. It shows a PRR class GRA gondola in Los Angeles, on August 20, 1956, loaded with large crates.

This is a well thought-out kit, great for either an experienced model builder or for someone wanting to move from a shake-the-box kit to something more complicated. The builder can work to a detail level that they find comfortable and still produce an attention getting model. Contact Smoky Mountain, or order through your local hobby dealer.
Bruce Dombey sent in this photo of his On30 models in response to Bobber Gibbs request (OST #21) to share their narrow gauge modeling. Bruce says after 30 years of “armchair” modeling On30 got him active.

Jay Duke sent some photos of his layout. Here’s a shot of a Lionel 700E, scale Hudson, done up for B&A. Power distribution on Jay’s layout is outside third-rail (seen in the foreground) and overhead catenary.

This Sunoco gas station was scratchbuilt by Ron Gribler.
This Reading B7 0-6-0 was built by Harry Hieke, Jr., using Precision Scale Co. parts and mostly scratchbuilt parts. The loco pilot and tender beams are machined walnut. The smokebox has working dogs. Just about every hatch, window, or thing that should open... does. The scene was designed and built by Harry for the Cherry Valley Railroad Club in New Jersey.

Ron Gribler scratchbuilt this Erie gondola using the techniques he described in OST #24.

Bob Turner, of California, built this Espee Mike from a Scalecraft boiler, Lobaugh mechanism and a scratchbuilt tender.
To the right and below are photos of Myron Levitsky’s version of the Long Island RR done in 3-Rail. Right: The arch-roofed “ping-pong” cars were scratchbuilt from a variety of commercial parts. The cafe-observation is a modified LaBelle kit. Below: The cafe-observation is on the tail-end of the Cannonball Express, the LIRR’s one-time crack train between NYC and Montauk Point. Here it passes DIVIDE tower.

Here are two photos of another Diesel conversion by Roland Marx whose articles have graced many pages of OST in the past. This particular model is a conversion, just like the prototype, of a Central Locomotive Works GP40 to a GP38-3.
This gas station kit (left and below) was built, detailed, painted and weathered by Ashe Rawls. Ashe has a Hi-Rail layout and lives in Virginia.

We haven’t heard from him in a while, but Marshall Vine (Kent, UK) sent these photos of a diorama he built called the Vine Street Mine.
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Right: Francis Winters recognized the tank car Tom Houle rebuilt in OST #23. He built one from a Lobaugh kit back before WWII and still has it, along with a number of other older kits including the CRISCO reefer. Francis says when he switched to Proto48 standards he replaced all the wheelsets.

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FOR SALE: KOHS UP 4-12-2 #9051, mint, never run; Sunset C&O 2-10-4, new in box; Sunset UP early Challenger, coal version, new in box; Overland UP 4-6-2, coal version, custom painted and detailed by Harry Hieke; Overland UP FE-1, 4-8-4, coal version, custom painted an detailed by Harry Hieke; UPH UP FE-3, 4-8-4, mint, unpainted. Call Harry Bender at 410-488-4259 between 6 and 9 pm Eastern time.

WANTED - Joe Fischer cars. American Standard hwywt baggage and pullmans, PSC 10 sect. pullmans w/AC. Mail only, please. Jim Seacrest, PO Box 6397, Lincoln, NE 68506-0397

WANTED - Lobaugh WWII era. Westbrook boxcars only. Ortl Ltd/AN Pullmans. PSC 10 sect. pullmans w/AC. Mail only, please. Jim Seacrest, PO Box 6397, Lincoln, NE 68506-0397

WANTED - PSC PRR X29 boxcar #15467 and similar #15453, Pac Ltd 32 ARA boxcar #5000A, CN cabooses, Crown B&M ob boxcar, Reynolds


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FREE O SCALE MEET LIST: List of O Scale shows for 2006. Send LSSAE to Bob Retallack, Dept OST06, 2224 Adner Ct, Columbus, OH 43220.

BUY-SELL-TRADE

EVENTS

March 2006

4: Wind Gap, Pennsylvania

Eastern O Scale - 2-Rail Swap Meet at the Plainfield Fire Hall, 6480 Sullivan Trail – 9:00 am – 1:00 pm Adm. $5; spouses & children under 14 are free), $16.00 for the first table (includes one admission) and $12.00 for each additional table. Dealer’s set-up Friday evening 6:00 pm to 9:00 pm and Saturday morning 7:00 am to 9:00 am Info/reservations, SASE – EOS, PO Box 1781, Bensalem PA 19020; (215) 639-3864. Bring an index card with your name, address etc., for a $1.00 off your admission. Contact: eostrains@comcast.net

18-19: Chicago, Illinois

Chicago Midwest O Scale Meet at the Arlington Park Sheraton Conference Ctr, 3400 W Euclid Ave (hotel 847-394-2000; reserve by 2/15/06 for $85 room rate). Sales, display layouts, tours, and model contest. Registration (1 or 2 days) $15, spouse and under-18 free. Badge required, no exceptions. Vendor (O scale only) tables $45 until 12/31/2005, $50 after that date if available. Electricity free, subject to availability. Info: send SASE for dealer confirmation. March Meet, PO Box 333, Park Ridge, IL 60068; or call the message center 847-823-1719.

18-19: Fairhope, Alabama

14th Annual Fairhope Train Model Show. Hours: Sat 9 am - 5 pm, Sun: 10 am - 4 pm. Location: Fairhope Kindergarten Center, 100 S Church St., Fairhope. Admission: $2 adults, children FREE (No Age Limit: Oldest child admitted last year was 6!). Military, fire and police personnel are FREE. Contact Herb Kern, 251-660-1659. Contact dkndkern@aol.com

24 & 25: Harrisburg, Pennsylvania

JOHN ARMSTRONG Estate Sale; auction of the model railroad collections of John Armstrong including the motive power, rolling stock and buildings from his Canadagua Southern railroad. All motive power, rolling stock and buildings from the CSRR will be accompanied by a Certificate of Authenticity to the winning bidder. Preview at 8:00 AM, auction starts at 9:00 AM. Absentee and Internet bids will be accepted. Sale will be conducted by Robert W Charles, Auctioneer, PA AU-003303L, 717-763-1848. Contact bob@bobcharlesauctions.com

April 2006

1-2: Lockport, New York, USA

RAILROAD SHOWCASE 2006 Niagara Orleans Model Railroad Engineers and Niagara Frontier Chapter NHRHS present the Railroad Showcase-Sat, 4/1-10-5, Sun, 4/2 10-4 at Kenan Arena, 195 Beattie Ave. $5, under 12-free, family $9. Bob Fogle, 26 Cherry St, Lockport 14044, 716-434-0213, bnfogle@aol.com. Model & toy train sales, modular club layouts, operation layouts, railroad crafts, historical displays, RR industry displays, railroadiana sales, books & videos, live steam display, door prizes. Refreshments available. Contact rtemp35128@aol.com


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May 2006

6: Merchantville, New Jersey

The Cherry Valley Model RR Club will hold its Spring Train Meet at Grace Episcopal Church, Maple Ave and Center St, Merchantville, NJ, on Saturday, May 6th, from 9:30 am to 1:00 pm. The Cherry Valley model railroad will be open after the meet. Admission is $4, kids under 12 are free. For more info contact CVMRR, PO Box 192, Maple Shade NJ 08052 or call Harry Hieke, 856-625-5506. Contact harrys_trains@comcast.net

July 2006

2-8: Philadelphia, Pennsylvania


19-22: Parsippany, New Jersey

2006 O Scale National Convention sponsored by the New York Society of Model Engineers, celebrating their 80th anniversary as the oldest club in America. Convention held at the Hilton Hotel, One Hilton Ct, Parsippany NJ 07054. Special room rate: $119 per night single or double occp. Call 1-800-hiltons or register at the hilton website http://www.parsippany.hilton.com. Full convention registration is $40 per person. Tables are $40 each. See the convention website for more details. Call 201-939-9212, or email. Contact 06escalenat@comcast.net
Welcome to the start of our fifth year publishing *O Scale Trains Magazine*. The very first issue of OST featured the Bay Ridge Harbor Railroad of Neville Ros-siter from Perth, Australia. (Neville writes our feature “The Workshop” each issue.) So, we thought it might be interesting to go back and take a look at the changes Neville has made over the last four years on the BRHRR. That’s our feature for this issue. If you missed OST #1, it is available as a PDF free download from our website [http://www.oscalemag.com].

You may have noticed there is a new member of the staff pictured on our masthead. We’d like to introduce to you our new Customer Service rep, Spike Beagle. He’s just three months old now but he’s been a big help keeping irate customers off our backs while we layout the magazine (Grin).

Speaking of spikes, work on the OST layout pretty much came to a halt. I’ve had an operating loop for about six months and had started laying in Old Pullman curved switches on the main. But as neat as I felt the plan was, the more I worked on it the more I realized there was no room for any operations. Zip! Nadda! Zilch! Not good.

Also, I noticed that the lead track out of the service facilities entered the yard area in a very awkward place and any loco trying to hook up to an outbound train had to foul the main to do so. Very not good. The more I brooded over this, the less I felt like working on the layout.

Here’s where being a part of a club or modeler’s group would be helpful. Unfortunately, there is not a club or group close by me. Fortunately, editor Brian Scace just moved into Pennsylvania and I asked him to come by so he could see what I’d done and why I was stuck. Brian was “trained” at the knee of John Armstrong and mentored by Mr. Armstrong’s colleague and close friend Ted Stepek. I figured Brian would see what was “wrong” and help me figure out how to fix it.

I was correct in my presumptions. We went over the plan and I told Brian of my misgivings about operations. He suggested a change of “flavor” for the layout. Instead of mainline, I should think branchline. Instead of Y6b’s and Class A’s, I should concentrate on 4-8-0s, 2-8-0s and the occasional 4-8-2. Where once stood a large engine service facility, replete with 36” turntable and six stall roundhouse, now sits a coal mine; it’s now the reason the railroad exists.

We then adjusted the yard trackage to facilitate servicing the mine and what were once a pair of tail tracks are now a small branchline service facility. An AtlasO #5-1/2 turnout on the main has given way to a #7 for a smoother transition into the yard. I’m repurposing those Old Pullman curved switches on the main to make the new yard ladder.

We also did a little bit of demolition and other “civil engineering” on the benchwork to make the steepest grade flow better and I still have a bit more adjusting of roadbed here and there.

But I am re-energized and excited again about the plan. I hope to share with you the new design soon. Meanwhile, I’ve got to get moving on the new trackage because we just received another locomotive for review.

My last Observations (OST #24) generated some mail about small steam locomotives. Dave Larson in California faxed me about 10 pages of letters from a number of 1993 editions of *48/ft O Scale News*. To summarize, not much has changed in 13 years. Many people wrote to OSN saying there needed to be more/smaller steam engines, and preferably in kit form (I guess to keep costs down). A couple guys mentioned that O Scale (i.e., 2-Rail) was too small a market for anyone but the biggest manufacturer to risk making such kits. I don’t think a kit is the way to go today. Not only is scratchbuilding a lost art, so is kit-building. Several people pointed out there is no such thing as a “generic” steam engine. That was certainly borne out with the Weaver 2-8-0. Many people complained because it had no specific prototype. Sheesh! Sometimes you just can’t win.

Some of the kits mention back then are still around. The Babbitt/All Nation B&O 4-6-0 is still in production and it’s about as nice a 4-6-0 as you’ll find anywhere. However, it is a kit and requires some skill with metalworking tools. The Smith-era Central Locomotive Works PRR H10 2-8-0 pops up on eBay and at auctions all the time. Again, be prepared for major soldering and metalwork to make this a piece built to today’s standards.

Given all that, I still believe there is a robust market for a modest 2-8-0 or 4-6-0 at a reasonable price, say around $800, painted without any fancy electronics. The nicest small loco I had in my hands last year was the M.T.H. WM H9 2-8-0. In fact, I’m looking for one to add to my stable now.

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