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We've all run into this problem at one time or another. We build a layout in a square room with curves in the corners. Unless you build particularly tight radius curves, this usually leaves an awkward space between the track and the walls. In my case, one of the corners actually has multiple planes because of a ventilation pipe in the wall.

I solved my corner problems by filling them with industries. In this two-part article I will show you how I did that for two of the corners in the room. Part 1 deals with a factory I built to fill in the industrial corner of the railroad. So, let's begin.

The highlighted area in Figure 1 shows the corner in question. If you go to the O Scale Trains Magazine Blog and click on “Joe’s Projects”, you will see several entries under “We built this city...” These describe how I developed the industrial section on the Coal Creek Railway. After developing the lower section and the upper portion to the left of the corner, I was left with the corner itself. I decided that a large factory would be the perfect fit for this area.

I scoured the Internet for photos of factories. After viewing several real and model factories, I sketched out what I wanted my factory to look like. This rough plan is shown in Figure 2. It is approximately 37” across the front and 14” high at the peak.

After deciding on the basic shape of the building, I went online to the Grandt Line website and started picking out O Scale windows and doors that looked industrial. Some of the windows are enginehouse windows turned on their side.

Once my order arrived, I started building. Since this is an area of the layout without easy access, I wanted to build something that was removable so I could work on it at the bench, and when it was finished, I could just drop it into place. Therefore, the first thing I needed to do was build a shelf on which the final structure would sit. This is shown in Photo 1. The shelf is made from 3/8” plywood attached to wooden supports on the layout benchwork. Since the structure would be removable, there was no need to worry about under-layout access. Photo 2 shows the base for the factory. The front (trackside) is pointed up in the photo. The base is 1/8’’ tempered Masonite®. The 1x2s in the photo are hot glued to the base for support and rigidity. Those in the upper part of the photo define the front edge of the factory. I then hot glued Styrofoam to the front portion with the shelf in place to make sure the edges of the shelf would not be visible when viewed from the front (Photo 3).

I chose to make the main portion of the factory from black foam-core purchased at a craft store. All cutting was done...
with a hobby knife and a #11 blade. The front and rear walls are 14” wide by 14” tall with notches for the roofing. I fitted a Grandt Line baggage door to the left of the front wall and made a roll-up door on the right large enough to fit a boxcar. The roll-up door is corrugated styrene sheet in a framed opening with a piece of brass tubing at the top.

My original design had a bay across the front which was made from foam-core and hot glued to the front wall. I had to make sure the bay was high enough to clear any rolling stock and locomotives on the track. The front of the bay is filled with Grandt Line windows held together with styrene strips. In fact, I made the window assembly first and then fixed the length of the bay based on that. A sheet of plain styrene forms the roof of the bay.

When that was completed, I felt the front was lacking something; so I added another row of windows up a bit higher. This was not part of the original plan. I did the same as I did with the bay. I glued up the windows with styrene strip and then located them on the wall.

I didn’t worry about the depth of the unit as it would be hard to see once installed. I made up two window assemblies and fitted them into foam-core frames which were then hot glued between the front and back walls. (These are the enginehouse windows turned sideways.) The basic factory core is shown in Photo 4. The window assemblies are only press-fitted in place. They will get permanently attached once the siding is installed.

Next it was time to fill out the sides. Referring to my plan there are two wings to the factory. One is supposed to be made of masonry (right side) and the other is wooden. I built the wooden side first. More foam-core was cut and hot glued to the base in the shape of an “L”. The front wall is 6” high by 12” long. The side was cut to fit the width of the shelf at that point. The result is shown in Photo 5.

I made the actual walls from sheet styrene milled to look like board and batten siding. I cut openings in the front wall to fit the window castings and then added the strip styrene bracing. This assembly is shown in Photo 6. The backs of the windows were glazed with clear 5 mil styrene.

I hot glued the styrene walls over the foam-core wing and made a roof of plain styrene. I then made dormers for the section, using Grandt windows on their sides. I originally had the dormers at a right angle to the front wall. It was difficult to see the windows, so I reduced the number from three to two and angled the dormers. This looked more pleasing to my eye. Photo 7 shows the left side completed but unpainted with the right wing wall installed.
The right side of the factory was built up in exactly the same way except I used sheet styrene that looked like masonry walls. I altered my original plan by using eight smaller windows where I had planned for four larger ones at the outset (See Photo 8). The finished walls were hot glued to the foam-core wing.

I also kludged up the tower above the right factory wing. My original plan showed a lower, squatter, but larger building. I felt something a little taller and skinnier looked better.

My next step was to fill in the walls on the core above the wings. This was done by hot gluing more foam-core in place. Once that was done, the entire core was covered with corrugated aluminum siding hot glued in place. The aluminum was easy to trim around window openings with a hobby knife. With that done, I fitted the roofing to the core. I used styrene sheeting that looks like the metal roofing typically used on industrial buildings.

After that it was time to paint. I painted all the window assemblies first with Floquil Roof Brown. The factory core was painted a mid-tone gray with dark gray doors. Both wings were painted burnt umber and weathered. I used chalks for weathering. Once I got everything the way I wanted, I oversprayed it with Dullcote to set the weathering.

The final result, Photo 9 and the lead photo, shows the factory in place on the layout as it would be seen by a spectator.

I have deliberately left out a lot of detail (like a parts list) because the object isn't to have anyone build an exact copy of my factory. The object is to get you thinking about how to fill the needs of your own layout. In that vein, next issue I will show how Jaini and I built a small ore facility with off-the-shelf kits and parts to fit another corner of the layout. 

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A Trolley Snowplow for the CG&W

Martin Brechbiel

I have a penchant for maintenance of way equipment and find it even more fun when combined with traction, so I decided to do a snowplow.

Being a member of the Rockhill Trolley Museum [http://www.rockhilltrolley.org/] had already primed my interest in such car. They have in their collection Philadelphia & Western #10, a double-ended snowplow from 1915, which was perfect as inspiration for this project.

The Floor and Roof

I started with a piece of wooden roof section from an Ye Olde Huff’n’Puff 36 ft. boxcar kit which was perfect since I wanted a shop-built car as much as one that had some resemblance to the P&W snowplow. I found some basswood stock to use for flooring. Using some stripwood, I built it up in width to match the width of the roof. To get the angled front for the plows, both ends of this floor stock were cut at an angle to make a parallelogram shaped floor, with the car body being 36 feet long with a five foot extension along the left side on both ends (Figure 1, page 13). Working inwards from the location of both ends of the car body, I glued down some 1/8” Evergreen scribed siding (0.045” thick) to simulate the exposed flooring. I also did this on the interior of the roof with 3/32” spaced scribing (Photo 1).

I set the height between the floor and roof using a pair of Alumilite resin castings that I made with a two-part RTV mold based on the old Pittman trolley ends that are no longer in production (Photo 2). I used Testor’s Flat Gray spray paint as the mold release so the castings would come out primed and ready to paint. (Blue works, too.) After I cut off the floor base portions of the end castings with a band saw, the ends were rubber-banded between the roof and floor and looked perfect to me for this project. While I had these four parts dry-fitted together, I took the wooden end blocks from the Huff’n’Puff kit and cut them to fit between the floor and roof. I installed these blocks with some Elmer’s Carpenter’s ™ Glue two inches in from the end castings in order to create an illusion of interior depth. I rechecked the height of my two ends and shimmed them to fit snugly with scrap 0.005” styrene. Then I capped off the end grain of the roof stock with some 1/16” basswood that was cut to shape after being glued into place.

I wanted to have a freight door on each side, so I built two doors by laminating some Kappler 1x6 on top of 1/32” thick sheet stock to create paneled doors. The doors were seven feet wide and just high enough to fit snugly between the roof and floor. I added a hand railing of 0.022” brass wire to the right side of each door. While making the doors, I thought that it might be interesting if I made them so they would open and close. To that end, I installed some 3/32” square stock to the left of the door opening on the floor and roof that would
make a pocket for the door to slide into to behind the car siding. I also added some door stops to the right with some 1/8” square basswood (Photo 3).

Before I installed the ends, I pre-painted the exterior of the castings with Polly Scale Boxcar Red, while the interior was painted Polly Scale Engine Black. I glazed the windows with slipcover glass trimmed to size with a diamond tipped scribe.

I pulled two Wagner C-430 Controller sets from my parts bin, and after painting these parts with Polly Scale Sea Green, Signal Red, and Roof Brown, installed them either directly to the interior of the ends or onto the floor. I added a pair of painted levers to the floor (left over from a switch tower kit) for controlling the plow, and then secured the two ends into place with some CA flush to the edge and centered on the scribed flooring. The interior of both end compartments was then painted Polly Scale Roof Brown (Photo 4).

**The Carbody**

To close up the sides, I first built-up the edges of the end castings with pieces of 3/32” quarter round molding to bring the width of the ends close to being flush with the edge of the floor. A scale 1x6, 9-1/2’ high was set against the quarter round with the six inch dimension 90 degrees to the molding. The scribed siding of the car side will butt up to the back side of this 1x6. Working from the left end of the carbody, a 13’ wide by 9-1/2’ high section of 1/16” thick, 3/32” spaced scribed siding was set in place and secured with CA.

After that section was set, another 9-1/2’ long 1x6 was glued to the edge of the scribed siding in the same manner as the first. The door was then slid behind this piece of siding into its pocket. Working from the right end of the car, I followed the same procedure and installed a 12’-9” wide by 9-1/2’ high section of the same scribed siding, capped off with another 1x6 to frame the door opening. These sizes were just enough for the door to slide completely shut and stay pocketed behind the side. A headboard over the door was made from 1/16” x 5/32” basswood while 1/16” x 3/8” basswood was used for the footboard (Figure 2, page 13, Photo 5). At this point I went back, touched up the interior paint job, and added an Arttista engineer on a seat to the one end (it doesn’t matter which end) before closing up the other side (Photo 6). Before I did that though, I flipped the body over and added some 1/32” thick by 3/32” spaced scribed siding to the underbody and ran a 3/32” styrene angle in the corner along the length of the car, joining the sides to the flooring (Photo 7). With that completed, I closed up the other side following the same process, and added the 3/32” styrene angle to the other side of the underbody.

The 3/32” quarter round molding at the resin ends left a gap in the roof stock that was filled with another trim board cut from some 1/16” x 5/32” stock. Letterboard trim made from HO Scale 1x14, was applied to each of the four sections of scribed siding. The final touch was to add a length of 5/64” quarter round trim at the inside corners between those 1x6s and the siding to soften the transition of those joints just a bit (Figure 2, page 13).

**Snowplow Housing and Mechanism**

To get the ends ready for the plow mechanism housing, the exposed edges of the floor stock were closed up with sections of Evergreen 1/4” channel set flush with the top of the scribed styrene flooring that had been left exposed (Photo 8). The gap below those channel pieces was filled with some 3/16” channel and the beveled end of the exposed flooring was covered over with 0.040” styrene. All of these styrene
parts were attached to the wood with Walthers Goo and also to each other using plastic solvent glue, and then dressed up with some Grandt Line #81 nut-bolt-washer castings.

I built the plow mechanism housing from 0.010” styrene and 3/32” styrene angle. (See Figure 3 for dimensions of these pieces.) The top of this substructure slants forward and also slants to the left, when viewed from the front of the trolley, for drainage. I first made the top to fit the space and then cut the long right side to length and tapered it to get the slant I needed. I attached these two parts with solvent glue and used a section of 3/32” styrene angle for reinforcement and to ensure a right angle. I cut a second side section and after aligning it with the top I trimmed it to fit. This part was secured with another interior angle section and angle sections were added to the exterior bottom edge of the sides for mounting the housing. The front was made from an oversized sheet of styrene, glued into place with angles for reinforcement, then trimmed in place. Additional bracing was added to finish and strengthen this structure. I built a second housing for the opposite end of the trolley. I added some additional styrene scrap to simulate an access hatch hung on a piano hinge (0.010” brass wire between the hatch and a strip of styrene) to each housing unit (Photo 8).

I drilled four #55 holes in the top and used a scalpel to open up two slots connecting these holes (See Figure 3). Two pieces of 0.100” x 0.040” styrene stock were drilled at one end with a #55 drill and those ends were rounded over with a file. These pieces were inserted through the slots and secured at their base to a short section of 1/4” Evergreen channel and kept in alignment with a piece of 0.047” piano wire inserted through those holes above the slot in the top of the styrene housing.

On the triangular underbody sections, I added three pieces of 3/16” styrene angle with a series of holes drilled with a #55 bit. I backed those pieces of angle with another section of the same stock (Photo 9). These were all dressed up with Grandt Line #23 NBW castings. These three angles, along with the two pieces of 0.100” x 0.040” styrene stock protruding from the top of the plow mechanism housing, provide the mounting points for the plow blade (Photo 10).

I made the plow blades 8’-6” x 11’-1-1/2” from some 0.005” brass and soldered a strip of 1/32” by 1/8” brass to the top and bottom edges of each blade. To mount the blades to the ends of the car, I made five mounting brackets, two above and three below, for each blade from 5/32” brass angle each with a #55 hole drilled in it. These brackets were soldered to the back of the blade. The angle was adjusted with needle nosed pliers to permit connecting them to the mounting points using five strips of 0.100” x 0.040” styrene that were cut to their own unique lengths, and drilled at each end to accept a length of 0.050” Grandt Line styrene rod. Both blade mounting systems were fabricated, dry-fitted together, then taken apart for painting, then reassembled and installed (See Photos 9, 10).

Before putting the blades back on, everything else had to be completed, in part due to the complexity of getting a five point mounting system aligned, but also, the car really had to be painted before installation of the blades.

**Drive Train**

The drive system was an insulated Q-Car Company power truck & trailer with CS205 side frames. Wipers and electrical leads were installed for 8-wheel pickup that could also be switched over to an overhead power supply (Photo 11).
sideframes, body bolsters and as much as reasonable of the trucks were painted with Polly Scale Steam Black. The center of the body bolsters for the trucks was set to be 5'-3" in from the backing angle for the blade mounting bracket. The trailing truck bolster was directly mounted to the tapped body bolster that was provided. The power truck was mounted to its bolster with a lock nut which was recessed into the flooring above. The bolster was screwed to the floor with two #0 x 3/8" wood screws. Underbody details such as resistors (Q-Car CS033), a compressor (Wagner C-36), brake cylinder (Wagner C-83), a set of double rung under the floor ladders (Q-Car CS006), and some miscellaneous air tanks (the old parts bin) were installed (Photo 12).

Topside, I added some Walthers roofwalk supports and installed a roofwalk made from scale 2x6 basswood three boards wide. Precision Scale trolley pole mounts were installed 13 ft. from each end of the carbody, with pole hooks (Q-Car B149) added one foot in from each end. Trolley poles, 4-spring with roller, were mounted at each end and completed with surgical silk connecting down to Knudsen retrievers (Q-Car CS118) at each end. A pair of ladders (Walthers C481) were cut down in length and mounted outside each sliding door, leading up to a pair of roof mats (metal castings from the parts bin, origins unknown).

Painting

At this point I stopped to paint the body. After removing the poles and the trucks, the body was given three coats of Boxcar Red, sanding in between coats to remove the wood fuzz. The blade housing assemblies and door handles were painted Steam Black while the entire underbody was painted Grimy Black. The roof was “tar papered” with tissue and painted Roof Brown (Photo 13).

Final details like the whistle (Q-Car CS117) and a bell (origins unknown) were painted Brass and Steam Black; four marker lights (Q-Car CS303), Steam Black with jewels, were installed with Goo. Two Crouse Hind headlights (Q-Car B138) were painted Steam Black with bulbs and polycarbonate lenses installed. The whistle was installed into one of the resin ends. The bell was installed down low adjacent to the blade mechanism at the other end after the remaining exposed wood decking was covered over with some scrap 0.010” styrene. The marker lights were installed at both ends. The headlights were mounted onto the end fascia board (Photo 14). The wires for the bulbs were tightly twisted and passed through three small brass lift rings (Kemtron X-659) that were in turn mounted to the roof coming in from both ends towards the center. The ends of the wires were passed down through a small hole in the roof that was patched with Goo to resemble roofing tar, where they were all joined together respectively to be powered from the trucks. A grab iron (Precision Scale 5623) was added to the access hatch on each blade housing and painted bright yellow (Testors Model Master).

The blades themselves were painted with Floquil Platinum Mist. After drying, each blade was assembled together with its styrene hangers from top and bottom. Solvent cement joined the styrene to styrene ends, while a combination of Goo and CA was used at the metal to styrene joints. After both blades were mounted, the hangers were painted Polly Scale Steam Black.

I decided against making this a weatherbeaten piece of MoW equipment. I left it as painted to represent a freshly shopped car, ready for the oncoming season of snow (lead photo). I did letter it for the CG&W (Chambersburg, Green castle & Waynesboro) using Clover House dry transfers, since that permits me to run my trolleys and traction equipment along side my Cumberland Valley RR.
From PA Heritage
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• Shown above: a complete interior structure for the Corgi Birney with lights and reversing headlights. Includes the 2-rail power truck. $125.
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Measuring Up

As I write this in the middle of July, most of the layout’s scenery and other major construction aspects are finished. There’s one area above my workbench that is still bare, but the layout looks complete. This begs the question: What now? What does one do when there’s no more track to lay, wires to run or scenery to build? You either figure out a way to expand or focus on modeling rolling stock.

I’m a bit of a contrarian for an O Scaler. Many of you have closets and shelves full of cars and locos, that are completed or in various stages of construction, and no layout to run them on. I, on the other hand, have a layout, but little equipment to operate with. That’s beginning to change.

I’ve never really paid much attention to freight car modeling in the past. I’ve seen plenty of great examples that would make anyone’s mouth water, and always thought: “Someday.” Well, someday has arrived.

When I first started going over to visit Warner Clark’s layout he would always take me past a string of steam-era boxcars that belonged to the Indiana Transportation Museum. Even though I model a different era, I have a weakness for single-sheathed cars of this type, and I never thought I would see any first hand. Every time I’d visit, we would swing past these cars on the way to lunch. I finally took my camera and shot some photos one day, but they turned out dark. Warner told me last year that the cars were slated for demolition and if I wanted any more pictures to get them quick. That’s all it took.

I remembered an article from a past issue where the author used inkjet photo prints to record his field measurements on (Some More Thoughts on Finding Dimensions by Marty Iftody, OST #30 Jan/Feb ’07). I scanned the photos I had of the cars and printed them out from the computer. I didn’t need anything fancy since they were going to get marked up. I found a clipboard to put them on and with my camera, notepad and tape measure, I headed off in hopes the cars would still be there.

Folks, if you ever want to measure a piece of prototype equipment in the field, this is the way to do it. Before, I would make a crude sketch on paper and note the dimensions as best as I could. Invariably I would forget to measure something that would turn out to be critical, which would grind the project to a halt until I could get the missing piece of the puzzle. By having the photo prints right with me and marking the dimensions on them, I could tell at a glance if I had all of the measurements I needed or wanted (see photo). Since that time, I’ve started on the model’s construction and things are moving along nicely. I’ll never go back to my old way of doing it.

Best regards,
Mike
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Building a Portable End-of-Train Device
Ben Brown

Railroads of today have eliminated the need for a caboose, but there is still a need to define and maintain the end of a train in operation on the mainline. The railroads have developed what are known as EOT’s or End-of-Train devices (Photo 1). There are times when I want to operate my railroad outside of its normal era, which is 1950. That means I remove the usual equipment and replace it with more modern locomotives and rolling stock. Therefore I decided to experiment a bit to see if I could come up with a suitable miniature EOT device.

I wanted something portable that would work on almost any car because I felt it would be too constraining to use a specific car with a permanent EOT installed. I investigated a couple of different devices and settled on the Miniatronics circuit because it was small and is able to use track power.

I first modified the circuit board and changed out the factory installed wires which I decided were too large and stiff for my purposes. For the two input wires I used some #30 hookup wire which is also available from Miniatronics. I used even smaller wire for connecting the LED which was salvaged from some structure lighting.

I took the LED that comes in the package and cut the tip off until it protruded about 0.030”. I then removed the original wiring from the LED leads which stuck way out and was also quite stiff. After cutting off the leads and soldering on the new wires, I bent them down as close to the back of the LED as I could. Then I fashioned a styrene box around the LED. The box has an extension that fits down inside the coupler knuckle to keep it in place.

Then I took some bronze wiper stock and bent up four pieces. For my project I had some very nice wiper stock on hand made by Rod Miller. Two of the pieces are shaped to fit under the axle at the car end. They simply slide under the axle. The other two wipers are bent into a W shape so that they clip over the inboard axle to hold the wiper board assembly in place. Photos 2 & 3 shows the difference in wiper shape. Both pairs

Photo 2 -Components view: Circuit board is to the left. Wiper board is in the center, and the EOT flasher unit is to the right.

Photo 3 -This side view shows how the wipers are designed to fit over the axles of the truck.
are bonded to the styrene wiper board with my favorite
glue mixture, which is a thin coat of GOO followed
by a small drop of CA. The combination bonds quite
quickly and is very strong. Each pair of wipers that
contacts the same axle is connected electrically. The
wheelsets on the truck are reversed, meaning that the
insulated side of one axle is opposite the other. Each
wiper pair then picks up power from the opposite rail.
Each pair of wipers is connected to the circuit board
inputs. This system works because I use Weaver plastic
frame trucks with NWSL replacement metal wheels.
Reversing the wheelsets does not cause a short because
the truck frame itself is insulated. Once the wipers were
 glued in place, I laminated another styrene plate over
the wipers and wiring to secure everything in place.
The sandwich construction of the wiper board ensures
that the wiper position will stay secure. There is another
use for this arrangement and that is if a small resistor is
placed between the axles, the car can be detected by
my signal circuit. Normally my train lengths are short
so I have not found the need to add detection capa-
bility to my cars. However my cabooses are lighted
which serves as the normal end of train detection. It
turns out that the EOT circuit board draws enough cur-
rent to energize my signal detectors which therefore
detects the end of the train. The system offers enough
portability to satisfy me. I have not made every modern
car capable, but I still have enough to choose from. To
install the device, the flasher unit is placed into the
coupler from above. Then the wiper board is snapped
over the truck axles followed by the circuit board fas-
tened to the center sill with foam tape (Photo 4). The
car must be inverted to do this, but the operation is
done quickly, and removal is just as easy. Since some
of the HO systems are dedicated to the truck, if not to
the car, I think we O Scalers can have easier portabil-
ity. If any of you come up with different ideas, let’s
hear about them.

Photo 4 - Installation on a sample car with plastic trucks shows how the
bronze wipers contact the axles for electrical pickup. The insulated side of
each wheel must be opposite each other for the unit to work.

18 • O Scale Trains - Nov/Dec '08
Bachmann Trains is now known for its extensive and award-winning line of model railroading products, but the company started in 1833 as a producer of handcrafted ivory accessories, beginning a 175-year commitment to quality that continues to this day.

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What to do with your excess models when your interests change

At one point or another, even the most dedicated traction modeler may find their attention being drawn in different directions. Their attention may be moving in the direction of modeling narrow gauge layouts, shortlines, or even modeling a high-density, multi-track mainline.

In other cases, a move to a different home may mean dismantling a layout and placing one’s interest in trolley modeling aside. These moves may be job related, or may be caused by changes in health or family/financial circumstances.

In all cases, however, the question of “What to do with my collection of trolley models?” soon comes up. This leads to other questions, like: “Should I try to sell them, or give them away? If I choose to sell them, who will buy them? How much should I charge for them?”

Marketing considerations

Several considerations influence the marketability of your models. In many ways, the most desirable models are unpainted, but ready-to-run. This permits buyers to finish them with the details, painting, and lettering, associated with their favorite prototype road.

Next in the order of desirability are models that have already been painted and lettered for popular prototype railroads. A properly painted North Shore combine, for example, has high value. It will appeal to the many North Shore enthusiasts, allowing them to quickly build up their fleet with minimum effort.

The question becomes more complicated in the case of models painted and lettered for non-existent prototypes, i.e., the modeler’s own model railroad. This is especially true if the models have been customized with non-standard electronics or pick-up devices, like DCC or outside third rail pickup. No matter how well built they are, these models may require substantial modifications before they can be used on the new owner’s layout.

Some models, in fact, may only be purchased in order to obtain needed motors, trucks, or detail fittings that are no longer available. The care and fidelity the original builder invested in the model is not important to “parts” buyers. The cars are likely to be scrapped in order to recycle the parts. There are two disadvantages of this approach. Sellers, who have invested a lot of time in building their models, may resent the fact that the models are going to be scrapped for their parts. In addition, modelers buying for parts are unlikely to pay for the quality and craftsmanship of the models.

New homes for orphan cars

The situation doesn’t have to be as bleak as the above, of course. A glance at the history of the trolley industry in America reminds us that prototype trolley and interurban lines were chronically undercapitalized. Electric railroad’s income quickly dropped as automobile ownership spread. As a result, cars, locomotives, and work equipment built for one line were frequently sold to other lines during cash-short periods. In addition, equipment was often rented during periods of traffic peaks or special events.

Since the line obtaining the new rolling stock often was as cash-short as the seller, it can be assumed that, for a period of time, lines used equipment painted and lettered for a different trolley line! In addition, a luxury observation car purchased or rented for an upcoming summer season, for example, might not arrive until too late in the spring to be repainted and re-lettered before the line’s vacation travel season began.

As always in O Scale modeling, a little imagination goes a long way. My layout has multiple models painted for my Cape Ann Electric, with several Cape Ann cars painted in different colors to indicate different periods of ownership, and I am very pleased to have obtained a beautiful observation car painted and lettered for Gerald Brother’s Rapid City, Black Hills, and Western.

The color scheme and lettering are obviously different, yet I’m pleased as punch at being able to finally offer first-class service to Boston’s titans of finance as they make their way to their summer homes in Essex, Hamilton, Ipswich, Pride’s Crossing, and Rockport, Mass. Knowing that there’s a story behind my acquisition adds to my pleasure in seeing the cars coupled together. The back story to the reason an observation car from thousands of miles away is carrying commuters to Boston’s North Shore adds to the pleasure of running the cars.

Conclusion

Think outside the box when considering the purchase of a model that has been painted and lettered for a model railroad, instead of a prototype railroad. Before jumping to the conclusion that the cars would have to be repainted and re-lettered, explore a scenario that might explain the car’s presence on your line.

And, be sure to respect the feelings of anyone offering you models they have built. Be discreet in your comments and respect the previous owner’s connection with the cars—especially if you’re primarily interested in obtaining the cars for parts. Models are personal, and their value should be analyzed from more than a financial point of view. When it’s time to thin the Cape Ann Electric’s assets, I would rather share them with someone who will continue to enjoy them, rather than be guided strictly by a “highest bidder” mentality.

[Image of the author, Roger C. Parker, with the title “Traction Action”]

[Box containing the number 20 and the text “O Scale Trains - Nov/Dec '08”]
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There are a large number of stucco finished houses in Minnesota where we grew up. Building one of these houses is relatively easy since the wall detail is going on with a paint brush.

A number of years ago, Renee wanted to model a house in her neighborhood that was finished in concrete stucco. Several methods were experimented with, and after some trial and error, she settled on this method.

**Materials**

Several basic materials are used in this method. Durham’s Rock Hard Water Putty, available at Lowe’s, Home Depot and hardware stores, is the basic ingredient. Acrylic craft paint from the craft section of Wal-Mart, or any craft supply store, is used as a mixing ingredient (Photo 1). These craft paints come ready to use out of the bottle. Any color paint could be used; we have seen brown, green, tan, yellow, and gray stucco houses. The sandstone color Renee used makes a very natural looking color finish.

**Construction**

One has to first build a house. Renee uses 0.060” styrene almost exclusively for her scratchbuilt buildings. This material is available at plastic supply businesses in larger cities for about $30 for a 4x6 foot sheet. Evergreen sheet styrene is also available if you do not want to buy it in larger quantities but it gets expensive in the smaller lots.

Once the building is framed up, prime it with a color that is close to the finish color you want to use. We use an airbrush with Floquil paint because you can put on a lighter coat of stucco if you have the building primed. You do need to spray Floquil in a well ventilated area, outside if possible, and you do not necessarily need an airbrush; the spray cans work very nicely for this.

I suppose you could brush paint the primer on, but we have found that spraying is much faster. This step is not necessary, but it has proven effective in hiding the white styrene walls when the stucco does not cover every little pin hole. This method of applying stucco will work on any styrene structure whether it is a kit or scratchbuilt and is very appealing to the eye on the finished model. It would probably work on wood, cardboard, plaster, and any number of model building mediums, but she has done this only on styrene so far. (Since these craft paints are water based, you may want to thoroughly seal wood or cardboard surfaces to prevent warping.-Ed.)
Applying the Stucco

Mixing a teaspoon of each ingredient in a bowl will be sufficient to experiment with (Photo 2). You do not want to mix too much up because a teaspoon will do a quite a lot of wall surface. It has a fairly long life after mixing, so it is not a problem to make this amount and apply it in about 20 minutes.

Using a fairly stiff ½ inch, paint brush, begin by dabbing the mix on the wall (Photos 3, 4, 5). A rougher finish can be achieved by adding more putty and if you want a smoother finish, use more acrylic paint. Note: When mixing the putty with the acrylic paint, do not dilute it with water or any other solvent. It needs to be full strength. It will puff up on the wall and you will not be happy with the finish. It may also cure too quickly with water.

Once the stucco is applied, set the building aside for about an hour to let it dry. There is no odor to this method, so this can be done in the train room or on the kitchen table, providing you have approval from the head of the household. You can start and stop at any location on the model, and if you find that some areas are not well covered, you can dab on a little more. You can even change the color slightly if you desire to make an area that appears to have been repaired. This is a most interesting detail, and there are a lot of stucco buildings that have been repaired over the years because the exterior finish is extremely durable on the prototype.

Weathering a stucco building is really nice if you like chalks (Photo 6). The powered chalk goes on easily, and you can make it thin and hardly noticeable, or heavier. Places such as under the eaves on a north face could have some green mildew applied. Anyplace where moisture could be trapped will turn green, such as behind downspouts. Under window sills is another, and just above the foundation you will find it growing. If you are modeling a structure in a steam era city, some grime and soot also looks good. You do not need a lot of these darker colors, just enough to give it life.

You will be extremely pleased with the results of this stucco if you will give it a go. The ingredients are very inexpensive and experimentation is a simple matter of trying it out.
Baldwin Shark AA Diesel Sets

In 1949, Baldwin Locomotive Works put a new face on its DR-4-4-15 locomotive to create a look that would distinguish it from its competitors. With a “shark nose” design borrowed from the Pennsylvania T-1 Duplex steam locomotive, Baldwin introduced this new design with a striking red and white paint scheme on a set of A-B-B-A Demonstration units, numbering the lead unit "6000" to represent the total horsepower of the lash up. Baldwin continued using this body design into the early 1950s on the RF-16 locomotives. Williams by Bachmann® is pleased to distinguish itself from competitors by offering these exciting 3-rail O gauge models. Visit your favorite hobby retailer to purchase one of these handsome locomotive sets for your layout or collection.

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Back in the days when one train operated on a segment of track alone, there was not a need for traffic control. As the railroads grew and multiple trains operated over the same section at the same time, a safe means of operation was needed to prevent collisions.

In 1837 Samuel Morse invented and patented the telegraph. The railroad right-of-way saw the installation of telegraph lines and the railroads adopted this as a tool with operators in the depots along the line who now had the ability to track trains in real time. Timetable schedules and Track Warrant Control (TWC) was also developed and time zones were created where Standard time became an operating feature to insure safe and efficient railroad operations.

As time and progress marched on, traffic increased and new signaling appliances were created to aid in train traffic control. The Ball Signal, Banjo, Tilting Target, Semaphores, Position Light and Color Light were used in the railroad industry. In this modern day, Semaphores can still be found in use as well as the Position Light. Colored Lights such as the Type “G” Searchlight Signal and the newer Type “D” Signal are considered the norm used in Automatic Block System (ABS) and Centralized Traffic Control (CTC) signal systems across the railroad systems of this country.

Now with R.R. History #101 behind us, let’s get to the heart of the matter. I have operated as a prototype railroader my entire career on a CTC Signal System. This system was exclusively a Type “G” Searchlight signal system until several years ago when signal upgrades saw the installation of Type “D” Signals. This continues to be an ongoing process today.

My O Scale layout, the ALCO Belt is still in various stages of construction, but operational with two continuous loops and one stub main line route. Over the last several years the O Scale marketplace has seen the introduction of new scale signals and modular control boards that allow the modeler to design, install and operate a signal system that would rival the prototype. As with modeling any prototype, I have decided to signal my layout while modeling the prototype that I operate over each road trip.

We’re about to start a major project and you, the reader of OST, will be coming along with us from this point until the time the final screw terminal is tightened and this project is complete. We will be doing a feature article which should appear in OST around the first of the year in 2009. The article will be a progressive series and will take you through every step of the process.

The concept is to design and construct a three color, tumbler down operating signal system that covers bi-directional train operations on two continuous loops and one stub main line track as well as associated double ended siddings, main-line junctions, industry track turnouts; entrances on each end of a yard, and the signaling of one yard track and yard lead that doubles as a siding. Remote controlled mainline turnouts will have routing selection and signal operation for selected route. Operator control points will be optional.

Since we have a concept in place, let’s start with a plan. We’ve done some research and decided to use components from NCE and Custom Signals as the basis of this system. We’re in the process of doing design drawings of the mainline electrical blocks and the placement of governing signals for each of those blocks. Next will be the design of each individual signal head function and the control boards necessary to meet the concept requirements, as well as the location of the motherboard for the entire system. The third power district on the layout will require DCC Control to be installed in order to completely convert the layout to DCC. Research has shown that this project as estimated would cost between $3,000 to $5,000 total. So in order to continue work on other layout projects, I intend to stretch the construction time out from 18 to 24 months. With this time frame in mind, continuing articles will follow every few months until completion of the project. If you are considering the same project on your layout, or just curious as to how deep a hole I’ll be digging myself into, then follow along as we go.

I’m no electrical guru by any means, but with the assistance of our staff electrical expert Ted Byrne and recommendations from Terry Christopher of Custom Signals we should be well into the first phase of this project by the time you read this column.

Being a firm believer in “Murphy’s Law,” I trust we don’t find ourselves in the same predicament as the Hour of Service relief crew who after boarding their train and calling the dispatcher for a signal got this?

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There it sat. The brass GP35 shell sure didn't look like much. The dynamic brake blisters had come off, as had three of the four rooftop fans and the running gear was AWOL. The other problem was a matter of timing; I had bought it five minutes into the Timonium Md. show, spending almost my entire budget. (Don’t you hate it when that happens?)

What was it that P.T. Barnum said about a sucker? Seems the brass bug had bitten over the summer. A Kemtron RS-3 had migrated to the roster of the Stonycreek Valley Railway, whetting the appetite for more of the yellow metal. I was to meet Martin Brechbiel at the show and trade some items. In a way, it was Martin’s fault. He sold me that RS-3, and now, here I was with another brass project. So, I’m the proud owner of a few pounds of yellow brass. What to do? Fix it.

Here’s how I did that with a minimal number of tools, or for that matter, local hobby shop support. Living in the wilds of Somerset County Pa. (think Sand Patch) there’s not much in the way of well stocked O Scale dealers. By no means is this a detailed blow-by-blow account, just a narrative proving if a news writer can fix and paint a brass locomotive on a budget so can you.

Now, one of my other hobbies is off-road driving. I have fabricated skid plates, rock rails, and other off-road armor for my jeeps; just how tough can a brass Geep be to fix? Here’s hint number one: Full-sized air tools, although usable, are a little bit of overkill for this project; so I used them anyway. The die-grinder was fitted with a Scotchbrite wheel to clean the brass. This is an industrial grade unit, so I kept the air pressure down to a sane level (30 to 40 psi.). The torch was straight out of the plumbing kit, and the files were out of the toolbox in the Garage of Doom. (The Garage of Doom acquired this moniker after several jeeps drove in, and were pushed out.)

First on the list of things to do was clean off all the globs of solder from the baggie of pieces that came with the project. Small (and not so small) files were the weapons of choice here. Soon the attachment points were as clean as the day they were cast. Clamping the dynamic brake blisters in place proved to be a challenge, as household C clamps were too big. A trip (the first of many) to the hardware store produced a pair of spring clamps that were perfect for the job.

Next up was the long hood roof, which had come loose at the radiator end of the dynamic brake section. A quick heating reattached this sheet of brass to the hood, as well as the blisters. Then came the missing fan towers. Again, and I can’t stress this enough, brass needs to be almost surgically clean to get a good solder joint; hence the die-grinder and Scotchbrite wheel. I have a tendency to go a little overboard with the flux, and here’s where this had habit came back to haunt me. The dynamic brake fan skittered around on its mounting plate once the heat caused the flux to boil. Calling the children in on a project is a handy way to get that extra pair of hands that were not issued to most modelers. Matt, my son, held the fan in place with a piece of rod as I soldered it.
Being that I model Chessie/B&O in the mid ’70s to early ’80s, the low nose headlight had to go. I unsoldered it and filled in the opening with auto body filler. Shaping was done with a modeling knife while the putty was setting up. Final sanding was done with wet/dry sandpaper, going up to 1200 grit. Had I to do this again, I would have soldered in a piece of brass and used a skim coat of putty for the final contour. Live and learn. I prefer auto body filler to Squadron Green for several reasons. Squadron Green can shrink and I hate to do later touch ups to that darned B&O capitol dome logo.

The fuel tank was also missing. A pattern was made from an Atlas SD35 casting, and was the most worrisome part of the project. The fuel tank was fabricated using various diameter sections of steel pipe nipples and copper water pipe as “bucks” for bending the tank. The air tanks were not modeled, as this tank will be replaced with a diecast part from an AtlasO GP35. A Weaver GP38-2 tank could also be used. A couple of e-mails to AtlasO informed me that the diecast GP35 fuel tank is available from them. The fabricated brass one is now a stopgap to be replaced when the extra cash is available for the purchase of the AtlasO tank.

Once the shell was back into more-or-less one piece, the next challenge was a drive line. Initially, the plan was to use a Weaver drive salvaged from a Dead on Arrival FB-2 that I had acquired several years ago. I say D.O.A. simply because it had that cracked top sprocket that the early Weavers are infamous for having. I had the entire drive, minus that pesky top installed, and was running it as a dummy pulled behind an Atlas SD35, or pushed by same. The only problem with this was the Alco sideframes from the organ donor FB-2. If one models the Ann Arbor, the Alco sideframes are prototypical, but B&O units came from LaGrange with EMD’s Blomberg trucks. Much later in the project (two years to be exact), I had acquired an All Nation drive, along with the correct trucks. This is where patience was a virtue. I re-engineered the frame to accept the All Nation trucks, and in the process insulated the cast truck frames from the brass chassis. A piece of styrene from the scrapbox was epoxied to the frame and a handy piece of plastic, in this case a paintbrush, was used to fill the hole and provide an insulated pivot point for the trucks. After mocking up the drive and checking for shorts between the trucks, I placed a motor from an old printer in the locomotive. Here was a mistake waiting to happen.

What I had failed to notice is that said motor was 24 volts. Putting 12 volts to a 24 volt motor is a sure fire way to get a really slow unit! I also wired it backwards. I was about to live with this little bugaboo when Scace came to my rescue. An operating session on his CTRRA was the occasion for the rescue. After a conversation with him, he dug out a Pittman motor that fit in the long hood perfectly. The blue silicone rubber mounting of the Weaver/Pittman motor can be seen here.

The nose of the GP-35 was filled in using automotive body filler. Shaping was done with a modeling knife.

The fabricated frame, and Weaver end tower drive are seen in this photo. The NWSL scale wheelsets, and new Weaver Blomberg sideframes had not arrived when this photo was taken.

After a few years, all the parts had come together and it was ready for paint. I prefer Scalecoat, and their B&O blue is an excellent choice for ease of painting. I used automotive primer first, and then put on the yellow sill stripe and drop steps. After this dried, I painted on the B&O blue, putting it on in several thin coats. I applied the decals in the standard way, so there's no need to elaborate on this.

The total cost:
$50 for the brass shell.
$30 for the 3-Rail FB-2
$30 for the NWSL 2-Rail Weaver wheelsets.
$40 for a used All-Nation drive with EMD Blomberg sideframes.
$20 for sheet brass and shapes from Lincoln Supply (a local farm and hardware supplier.)
$10 Weaver Blomberg sideframes
$10 for Microscale decals.

The fabricated frame was sprayed on the frame, prior to the yellow sill stripe. The footboards that were originally on the locomotive were removed, fitting the model's time period of the early 1970s.
<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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<tbody>
<tr>
<td>OMI UP ALCO U-50-C UP New</td>
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<tr>
<td>OMI UP ALCO C-855-A UP New, OMI 0201</td>
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<tr>
<td>OMI UP ALCO C-855-B UP New, OMI 0204</td>
<td>$1,195</td>
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<tr>
<td>OMI UP ALCO FA-1 UP New, OMI 0222, w/Dynamic Brakes (2 Available)</td>
<td>$850</td>
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### Rolling Stock

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<td>Amer. Std. C&amp;O 12-1 Pullman, George Washington, CP L/N, Ken Anz Custom Built, Interior (2 Available)</td>
<td>$599</td>
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<tr>
<td>Amer. Std. &amp; Observation, George Washington, CP L/N, Ken Anz Custom Built, &quot;Commander in Chief&quot;</td>
<td>$599</td>
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<tr>
<td>OMI Harriman Common Std. 72' Coach CP L/N, Two Different Versions Available</td>
<td>$375</td>
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<tr>
<td>OMI PRR B60 Baggage Car UP L/N, CNJ No. 702-0, Porthole Doors</td>
<td>$300</td>
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<tr>
<td>OMI PRR B60 Baggage Car CP L/N, Pro Paint, Porthole Doors</td>
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<tr>
<td>Calumet PRR P70 Coach CP New, Custom Built Walthers Kit (3 Available)</td>
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<tr>
<td>Sunset 3rd PRR P70 Coach FP New, w/Air, Different Road Nos. (3 Available)</td>
<td>$250</td>
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<tr>
<td>Sunnyside PRR P85Br Streamlined Coach FP L/N, Tuscan w/Dulux Gold Stripes</td>
<td>$395</td>
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<tr>
<td>Sunset 3rd SP 70' Harriman Passenger Cars FP New, SP Lines, Baggage, Coach, &amp; RPO Available</td>
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<tr>
<td>Sunset 3rd UP 70' Harriman Passenger Cars FP New, TT Gray, Baggage, Coach, &amp; RPO Available</td>
<td>$325</td>
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### Steam

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<th>Model</th>
<th>Description</th>
<th>Price</th>
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<td>OMI&amp;HP 2-10-2 UP New, OMI 0147, Road Pilot, Overfire Jets</td>
<td>$1,350</td>
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<tr>
<td>C&amp;LS&amp;H 2-6-6-4 FP L/N, 16 VC Tender, Road No. 1411</td>
<td>$2,450</td>
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<tr>
<td>USH&amp;H 2-6-6-6 Allegheny CP L/N, Pro Paint, Late Version, Road No. 1605</td>
<td>$1,350</td>
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<tr>
<td>OMI C&amp;O J2-4 8-4 CP EX, Jerry White Drive, Road No. 543</td>
<td>$1,095</td>
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<tr>
<td>Max Gray C&amp;O K4 2-8-4 CP EX, Can Motor, Lights, Road No. 2761</td>
<td>$895</td>
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<tr>
<td>USH&amp;K C&amp;O 2-8-4 UP L/N, Can Motor, New Gearbox</td>
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<tr>
<td>OMI C&amp;O L2a 4-6-6 FP L/N, Poppet Valves, Road No. 314</td>
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<td>C&amp;SC&amp;B 54a-4-6-4 FP L/N, C&amp;P1716-1, Road No. 4002</td>
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<tr>
<td>Sofue C&amp;NW H1 4-8-4 UP Mint, Handbuilt, New No. 174, Very Rare</td>
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<tr>
<td>PFM GN ES 6-6-0 FP L/N, Glacier Park Scheme, Road No. 930, Samhongsaa</td>
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<tr>
<td>Oriental GN 02 8-8-2 CP L/N, Open Cab, Glacier Park Scheme, Road No. 3388</td>
<td>$1,750</td>
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<tr>
<td>Oriental GN N2 2-8-2-2 FP L/N, Vestibule Cab, FP Black, Road No. 2502</td>
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<tr>
<td>Sunset GN S2 4-8-4 CP EX, Glacier Park, Open Cab, Jerry White Drive</td>
<td>$1,795</td>
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<tr>
<td>PSC&amp;NW A2 6-4-6-4 CP EX, Crown Model, Aux. Tender, Road No. 1238</td>
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<tr>
<td>OMI&amp;NW Class J4 4-8-4 FP L/N, Excursion Version, OMI 0928.1, Road No. 611</td>
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<tr>
<td>Max Gray NWY 8-8-8-8-w/T &amp; w/Chimney L/N, 1 of a Kind - Custom Expensive</td>
<td>$5,495</td>
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<tr>
<td>OMI NP A5 4-8-4 FP L/N, Gray Scheme, OMI No. 0152.2, Road No. 2687</td>
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<tr>
<td>OMI NP ZB 2-6-6-4 UP New, Coal Version, Road Nos. 5130-5149</td>
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<tr>
<td>Key PRRR 12-10-4 FP L/N, w/Antenna, Road No. 6498</td>
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<td>PSC&amp;PRRR K4 4-6-2 FP L/N, Standard Prewar Version - 130P75 Tender</td>
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<td>OMI PRRR Milb 4-8-2 UP Mint, 210P75 Tender with/Antenna</td>
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<td>OMI PRRR Milb 4-8-2 FP L/N, 210P75 Tender w/Antenna, Road No. 6753</td>
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<tr>
<td>Max Gray PRRR N15 2-10-2 CP New, McCafferty Paint and Weathering</td>
<td>$1,695</td>
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<tr>
<td>Sunnyside PRRR T1 4-4-4-4 FP L/N, As Built Porthole Version</td>
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<tr>
<td>Sunnyside PRRR T1 4-4-4-4 FP Mint, Never Assembled, Modified Version</td>
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<td>OMI RDG T1 4-8-4 UP Mint, w/Decals, OMI 0105</td>
<td>$3,695</td>
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<tr>
<td>WSM&amp;PR&amp;RPi Governor 4-8-4 CP L/N, Black and Gray Scheme, &quot;Gov. Fitzhugh&quot;</td>
<td>$1,695</td>
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<td>PSC&amp;PRR SC 12-12-8 FP L/N, Crown, Road No. 4292, Samhongsaa</td>
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<tr>
<td>Sunset 3rd SP F3 2-10-2 FP L/N, 2 Rail, Road No. 3661</td>
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<tr>
<td>PSC&amp;PRR GS 4-8-4 FP New, PSC No. 17347-1, Black, Road No. 4436</td>
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<tr>
<td>PSC&amp;PRR GS 4-8-4 FP New, PSC No. 17349-1, Daylight, Road No. 4415</td>
<td>$2,795</td>
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<tr>
<td>Sunset 3rd SP P8 4-6-2 FP New, 2 Rail, Postwar Scheme, Road No. 2472</td>
<td>$1,395</td>
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<tr>
<td>Sunset 3rd SP&amp;S E4 1-8-8-4 FP New, 2 Rail, Road No. 700</td>
<td>$1,295</td>
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<tr>
<td>USH&amp;UP Challenger 4-6-6-4 CP L/N, Pro Paint, Coal Version, Can Motor</td>
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<tr>
<td>Key UP Challenger 4-6-6-4 CP L/N, Oil Version, TT Gray, Silver Stripes, No. 3977</td>
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<tr>
<td>Sunset UP &quot;9000&quot; Class 4-12-2 UP New, Postwar Version</td>
<td>$1,350</td>
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<tr>
<td>Overland UP EF6 1-4-8-4, Oil, CP L/N, OMI 0130, TT Gray, Silver Stripes, #818</td>
<td>$1,795</td>
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<tr>
<td>Overland UP EF6 3-4-8-4 FP L/N, OMI 0913, TT Gray, Yellow Stripes, #840</td>
<td>$2,395</td>
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### Diesel

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<tr>
<th>Model</th>
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<tr>
<td>OMI ALCO FA-1 UP New</td>
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<tr>
<td>OMI ALCO FB-1 UP New</td>
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<tr>
<td>OMI ALCO RC-11 High Hood UP New</td>
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<tr>
<td>OMI ALCO JS-11 High Hood UP New, OMI 0206, w/Dynamic Brakes</td>
<td>$695</td>
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<tr>
<td>Key ATSF F3 Phase I - B-12 A-B FP L/N, Warbonnet, 1st Run, Samhongsaa, Road #171</td>
<td>$5,795</td>
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<tr>
<td>B&amp;AC SW-1 Phase 1 CP L/N, Low Stack, Black w/Red Nose Stripes</td>
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<td>OMI EMQ SD-9 Phase 1 UP New, OMI 0306, w/Dynamic Brakes</td>
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<td>OMI FM H-10-44 w/Cab Overhang UP Mint, OMI No. 0433, NYC/NKP/PRR/Frisco Interior (2 Available)</td>
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<td>Sunset FM Trainmaster Phase IB UP Mint, Samhongsaa</td>
<td>$850</td>
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<td>OMI PRRR ALCO DL-600B High Hood UP New, w/Antennas, OMI 0210A</td>
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<tr>
<td>OMI PRRR ALCO FA-2A-B Units CP New, w/Antennas, OMI 0393-0397, Tower Drive</td>
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<tr>
<td>OMI PRRR ALCO FA-2A-B Units UP New, w/Antennas, OMI 0393-0397, Tower Drive</td>
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<tr>
<td>OMI PRRR BLW RF-16 Shark Noses A-B A-B UP L/N</td>
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<tr>
<td>Key PRR F3M F3 A-B A-B Units FP Mint, Porthole Doors, ZZ6 Car Bodies, Brunswick SS</td>
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<tr>
<td>Key PRR F7M F7 A-B Units FP New, Tuscan 5 Stripe Scheme</td>
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<tr>
<td>Key PRR F7M F7 A-B Units New, Single Stripe Scheme</td>
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<tr>
<td>Key PRR EDM B8 A A Units FP New, Tuscan 5 Stripe Scheme</td>
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<tr>
<td>OMI PRRR Fa Electric - Box Cab UP Mint, OMI No. 0219, Last Run</td>
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<td>OMI PRRR Fa Electric - Modified UP New, OMI 0237</td>
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<td>Key SP EMDF F7P A-B Units FP New, Black Widow, Last Run, Nos. 6458A/8303B</td>
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<tr>
<td>Key SP EMDF E9 A-A Units FP New, Daylight Scheme, Last Run, Road Nos. 6050/51</td>
<td>$2,895</td>
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</tbody>
</table>

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Nov/Dec '08 - O Scale Trains • 29
They Like What We’re Doing

Mike, congratulations on the #40 cover. It has that ‘blah’ season look so rarely modeled. You have done it well. In looking at the cover photo again, I would make a suggestion. I think it would be good for you to add more rail joint bars and slot the rail in the middle of each. It’s a detail that is easy to go back and add when convenient, or as a ‘fill-in’ project. I only see two joint bars in the photo, but the age and condition of the track cries out for more to go along with the exquisite tie modeling. Be sure and put them on both sides of the rail, because you never know when the camera may be placed on the other side of the track for an unusual shot.

#40 was a good issue and I appreciate the modeling emphasis for sure. Keep up the good work.

Ben Brown (via e-mail)

Mike replies: You’re right Ben, the track in that area needs more joint bars. I ran out and simply haven’t gotten around to putting them in yet.

I really am enjoying the magazine. I’m a thorough convert to P48 standards. I think more scratchbuilding articles would be very helpful. P48 is exciting if one could find someone to guide them. I’d really like to “get after it” (scratchbuilding locos and rolling stock), but am frustrated for lack of information, etc. I’m not going to wait around for a manufacturer to put out any Stillwell coaches…I’d like to make them myself. The Erie and Susquehanna are my roads of choice. So far all I get is a vacant stare when I mention P48. I’m raring to go and most modelers don’t seem to want to be bothered with anything “finescale”. So O Scale Trains is a great resource.

Keep up the good work, and thanks for a great magazine.

I’m eagerly awaiting the Nov. issue.

Bill Dougherty via e-mail

Mike replies: Glad you’re enjoying the magazine Bill. Good online resources to know about are the P48 Yahoo group [http://groups.yahoo.com/group/p48_modeler/] along with the Proto48 Modeler magazine [http://www.proto48.org/]. The Yahoo group has some of the best talent working in P48 today. They’re very helpful with modeling and prototype questions. The online magazine is a good place to find sources for P48 supplies.

About Those Woodside Cars...

The permutations of using these excellent cars are endless. First, in the South, Jim Crow segregated cars were required up through the mid 1950s. The modeler merely adds the appropriate partitions and rest rooms. Second, some, if not all railroads, had women only sections. Here again the modeler adds the partitions. Third, these cars make great gas electric trailers. Such cars did not have steam heat. Moreover, some of these trailers were rebuilt with steel center and side sills, doing away with attendant truss rods and king posts. The Espee used such trailers in Texas. By the way, the orientation of the zee-section side sills was with the top flange pointing toward the center sill.

There are two problems with the cars as they come. First, the flat piece of mild steel used to retain the journal-drop equalizer molding is mounted with CA at the mating pin points. These are easily dislodged. The first of three cars I bought after reading the article had one of these loose in the car when I opened the box. Great care must be taken when converting the truck. I drilled out the pin holes and removed the springs from the sideframe sub-assembly before rebonding with gap-filling CA. Second, the passengers supplied were not well painted. Golden Gate has great people at a reasonable price. I think I will replace mine.

Jim Nance (via e-mail)

Sweeper Suggestions

I have a couple of suggestions for the construction of the Trolley Sweeper, described in the article from the May/June 2008 issue of O Scale Trains. I am old enough to remember seeing the snow sweepers operating during winter on the Third Avenue Railway System in New York City - under the EL. The brooms on these sweepers were mounted with their axles at an angle off the perpendicular, and not at a right angle to the track, so that their spinning would fling the snow off to one side of the track, and not onto the track in front of the sweeper. The direction of their spinning was also against the movement of the sweeper, opposite to what it is with the cleaning rollers simply rolling on the track.

Mounting the cleaning rollers on the model at an angle to the perpendicular would improve their cleaning action. The contact of the rollers with the track would then be a combination of rubbing and rolling instead of simply rolling, which tends to spread the dirt on the track as much as it cleans.

On the prototype, the brooms were driven by sprocket chains at one end of each broom axle. The chains disappeared up into the body of the sweeper and were powered by motors up inside. Powering the cleaning rollers on the model with separate motors, directionally controlled -- now that would be a model!

Myron Levitsky, NY (via e-mail)

Mike replies: Myron with DCC and some extra decoders, you could probably power such rollers independent of the car itself and that would be cool.

Check That Check Gauge

Joe, I certainly enjoyed your observations on NMRA Standards that some importers are failing to follow. Correcting wheels, other than the drivers, is not a big challenge. Correcting drivers presents a whole different set of problems. The drivers can be damaged and replacements maybe difficult if not impossible to obtain, and let’s not forget quartering. The cost to regauge drivers can be up to $500 per model depending on its complexity. This will affect both the collectors and the runners. For those who only display their models, the time will come when this shelf queen will some day go up for sale and the customer maybe an operator or a savvy buyer that will demand a lower price for this non-runner.

I believe most importers or dealers will permit you to return the out of gauge model if done in a reasonable amount of time. There is no excuse for an importer to accept this failure of his builder, nor should the customer. Assuming your current purchase is in gauge, especially the models produced in the last 7-10 years, is a big mistake. When attending O Scale meets, carry your NMRA wheel gauge. Any out of gauge locomotive automatically receives a substantially
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More on Standards

Thanks for your focus on Standards and Recommended Practices.

I have drafted the following concerning the performance of O Scale couplers and locomotive operation for your consideration. I have also sent similar information to the NMRA Standards and Conformance Manager for consideration.

I agree the emphasis on standards and standards compliance is very important to the hobby. The NMRA has provided standards over the years as a great service to the hobby. I feel the NMRA Standards approach is sound and some of the recent work in Scale Rails to review HO turnouts is adding additional emphasis to this topic. Full compliance with equipment and track standards as well as recommended practices provides very reliable operation. However, some manufacturers are not complying with the standards or recommend practices for the hobby.

In addition to the current NMRA Standards and Recommended Practices there are two topics I feel need additional attention in O Scale.

The first is couplers. The magnetic knuckle coupler is a great addition to the hobby. However, there are substantial differences in the performance of couplers from different manufacturers. The following criteria could be used for comparison of couplers based on actual performance:

1. Longitudinal force required for two couplers to couple when pushed together at a very slow speed. The purpose of this test is to document the ease of coupling.
2. The maximum horizontal parallel alignment offset with successful coupling. This requires a separate test for both left and right offsets. The longitudinal force required to couple at each of the maximum offset should also be measured.
3. The maximum horizontal angle with successful coupling.
These two tests are intended to measure the ability of the couplers to couple in curves and other offset alignment situations.

4. Force required at the end of the lever at right angle to the track required to open the knuckle.
5. Force required at the end of the lever at right angle to the track required to shift the coupler to the horizontal limits of the draft gear box to permit the bypass of the knuckles and pushing a car to final position without recoupling. This force is also very important to reduce derailments due to horizontal forces from the coupler due to movement through curves and turnouts.
6. The maximum horizontal alignment offset of two coupled couplers permitted by the draft gear.
7. Does the knuckle close when released?
8. Does the coupler return to the center position when released from the horizontal limits of the draft gear both right and left?

The second topic is locomotive performance. Good control at slow speeds and lower high speeds are needed for prototypical operation. The following are possible tests to indicate the locomotive performance. The objective of this series of tests is to highlight specific characteristics of model locomotives that have an impact on prototype model operation. Current magazine reviews provide very limited performance information.

1. Speed at starting voltage. Once started, what is the operating speed of the locomotive at the starting throttle setting (measured in both directions)? The type of throttle may also have an impact on this measurement. A traditional resistance throttle should be used for these measurements. A traditional resistance throttle would permit the voltage to increase after the initial starting current drops. An electronic throttle may have a constant voltage, constant current, or other control pattern approach to regulation of the output to the track.

2. Last continuous speed before stopping as throttle setting is reduced (measured in both directions).

3. Speed at 12 volts on tangent level track. As an alternative this could be measured using a roller fixture for all wheels (measured for both directions). The measurements may not be comparable between the running on track and roller fixture test.

4. Graph speed, voltage and current from 0 to 12 volts.
5. Current and drawbar pull at wheel slip or stall condition at 12 volt when coupled to a stationary object (measured for both directions).
6. Current, drawbar pull and voltage prior to wheel slip when coupled to a stationary object (measured for both directions).

There has been some discussion of improved performance using DCC control systems. My feeling is good basic locomotive mechanical and electrical operations are important. DCC may further improve any locomotive operation but not overcome poor mechanical and electrical engineering and operation. Lubrication and maintenance are also a significant variable.

I have tried to outline my thoughts for some detailed measurements that could be used to first compare existing products and also be useful to manufacturers modifying or developing new products. Considerable work would be required to obtain the force and speed measurements outlined above. However, once established and measured, additional measurements would be easier. Actual measurements would require procedures that assure repeatability and multiple measurements would be required to identify variability. Multiple measurements would also help identify additional variables. Individual products would have to have the measurement made with multiple sample couplers to identify variations.

When I first started going to O Scale meetings in the early ’70s there were gray haired experienced modelers that complained at times about drive train quality and other topics expressing a bias for higher quality and performance. Almost 40 years later I have become one of them.

Eric G. Peterson, Jacksonville, FL (via email)
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$55-$62

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$50-$60

53’...Evans $35-$50
50’...Modern...Rbox, CSX, more...

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A K-Line Bombardier Commuter Car 2-Rail Conversion

Gene Clements

The Prototype

My expertise with commuter service consists of a trip on the MART line in Atlanta, so researching the prototype of these cars was in order. Originally designed by GO Transit and Hawker Siddeley, Canada in the 1970s, Bombardier now owns the design and has produced more than 700 cars to date at its Thunder Bay Plant. The cars are easily identified by their elongated octagonal shape measuring 85’ long, 15’-11” high and 9’-10” wide. Equipped with two pairs of doors on each side to allow for quick boarding and exit, each car was designed to carry in excess of 300 passengers with seating provided for 136 to 162 people, with the remainder as standing patrons.

The cab-coach, with its full control cab built into the end of the car, is placed at the end of the train and allows the engineer to operate the train’s locomotive via remote control. This Push-Pull (swapping ends) maneuver allows the train to operate in either direction without having to be turned around or make a run-around move with the locomotive. Most coaches use a 480-volt head end power (HEP) system for heating, lighting, and air conditioning and require a locomotive or power car with the appropriate HEP electrical supply.

The Model

A couple of years ago K-Line produced a four-car set of 21” Bombardier commuter cars, which were available in various road names, as 3-Rail models only. Each set consisted of three coaches and a cab-coach car with an MSRP of $ 599.95. These sets can still be found on auction sites such as eBay and occasionally advertised in the various magazines catering to the O Scale market (Photo 1).

By a twist of fate, I came into possession of K-Line set #K4636K, VRE – Northern Virginia Bombardier cars. Being a scale 84 feet long, these cars are extremely close to 1:48 scale. While some variation is possible, it is not conspicuous in the model’s appearance (Photo 2).

Details from the factory include body grab irons, end diaphragms, HEP cables and connections, operating doors, interior lighting and passengers are included on each level. The cabin car is equipped with operator, air horn, bell, headlight and ditch lights. Also a switch is installed in the frame of the car, which allows the owner to switch between headlights for push operation and red marker lights for pull operation (Photo 3).

The Conversion Plan

To convert the cars to 2-Rail, the wheels will be changed to scale 36” insulated sets. To utilize the lighting system, a new wiper for electrical pick-up will be fabricated for the insulated wheels since the car frame, trucks and uninsulated wheels provided power for one side of the circuit. The tinplate couplers will be replaced. The factory pilots will be modified and re-attached to the ends of the car body. This covers the necessary parts of the conversion (Photo 4). Figure 1 (Page 43) shows the fabrication and dimensions for the coupler mount, electrical pick-up and new pilot plates. Optional ideas include the addition of more passengers, updating and...
repainting of the mauve interior color and installing Keil-Line diaphragms and details in the vestibule areas such as drink, snack and newspaper machines.

**Disassembly**

The car body, upper deck and truck assemblies are held together with screws, bolts and or nuts and locking key rings. The average modeler should have no problem with the disassembly of these cars. Electrical connections are made with two pin plugs. The body and upper deck need to be removed in order to do any interior detail work or add additional passengers (Photo 5).

I recommend the total disassembly of the trucks in order to separate the pilot and 3-Rail coupler from each unit. The coupler assembly has a couple of brass rivets that will need to be removed. Two metal tabs on the truck frame will need to be carefully bent open to allow the inside axle assembly to drop out. With the wheel and axle assemblies out, (Photo 6) I used a NWSL wheel puller to remove the wheel and disk brake rotor from each axle. Save these bearings and all screws, washers, nuts and bolts as you will need them to re-assemble the car (Photos 7-8).

Once the 3-Rail couplers are removed, you will find “T” and “V” shaped coupler brackets still attached to the truck frame. These serve no further function and can be left in place or removed by drilling out the small brass rivet holding them to the frame. Discard the third rail rollers, couplers and wheelsets (Photo 9).

**2-Rail Conversion**

**Step One: Wheelsets.**

I experimented a bit here. On one car I used 2-Rail wheel sets from K-Line; on the others I used NWSL, all of which were 36” wheels. The bronze bearings will need to be installed on the 2-Rail axles. I used the NWSL wheel puller to remove the insulated wheel from each 2-wheel axle (Photo 10).

The bearings slide on the K-Line sets as the 2- and 3-Rail axles are the same size. The NWSL axles are a bit larger and the axle opening in the bearing had to be enlarged. I accomplished this by using a round needle file in the chuck of an electric drill running in reverse. A bit of sanding with 220 grit sandpaper smoothed the enlarged opening. I installed a #6 nylon washer between each wheel and bearing to reduce lateral motion. I lubricated and installed two bearings on each axle with the tabs, or ears, to the inside, checked for free
rotation of the axle in the bearings, re-installed the wheel and checked its gauge.

Next is the installation of the disc brake rotors. The axle opening will need to be enlarged also if you are using parts other than K-Line. I used the round file and drill for this as well. On each car, the discs will go on the uninsulated side of two axles and on the insulated side of the remaining two axles. The insulated side requires the disc to be insulated from the axle. I accomplished this by epoxying a fiber washer to the wheel face and installing a small piece of heat shrink tubing to the axle. I then attached the rotor to the wheel face with epoxy. Check to insure there is no short circuit on these two wheelsets. The last step in preparing the 2-Rail wheelset is to trim the axle ends flush to the face of the wheel or brake rotor, I used a cut-off disk in a Dremel tool to accomplish this.

**Step Two: Re-assemble the Trucks.**

I pre-painted the side frames and wheelsets prior to assembly to give the trucks a weathered look. When installing the wheelsets, all insulated wheels will have to contact the same rail like the electrical set-up on most 2-Rail locomotives. Once the wheelsets are installed, check and test to insure the insulated wheels do not contact the side frames in any way that creates a short circuit.

**Step Three: Fabricate and Install Pick-up for Insulated Wheels**

I used thin sheet brass to fabricate a two-piece pick-up similar to the type used on Atlas and Weaver locomotives (Photo 11). These were soldered together and installed in place of the rollers. The base of the plate will need to be notched to fit the tab for the old roller and two holes will need to be punched for the mounting screws. Paint the areas of the pick-up that are visible from the side of the truck. Check to insure the wiper arms contact the back of both insulated wheels. Check and test to insure there is no short circuit. The trucks are now complete and will be installed later.

**Step Four: Fabricate and Install Coupler mounts.**

I used Kadee #805 couplers and boxes but any type 2-Rail coupler can be used. I built my coupler mounts from Evergreen 0.060” styrene sheet and structural shapes (Photo 12). Styrene insulates the couplers from the car frame and prevents a short circuit when coupled to another car. From the top of the car frame on each end, mark the centerline and drill two holes 1/4” and 1/4” - 3/8” apart that will allow 2-56 screws to secure the coupler mounts to the frame (Photo 13).

Line-up the end of the mount with the end of the car frame, mark the top of the mount to correspond with the new holes in the end of the frame, and on the bottom of the mount mark the holes for the Kadee coupler box. Drill and tap these holes for 2-56 screws. Pre-paint and install the coupler mounts, the Kadees will be installed later.

**Step Five: Re-assemble the Car.**

Having completed the interior detail work and added passengers to your satisfaction, now is the time to install the upper and end partitions and reconnect the electrical plugs. Be sure the black and red wires are pulled through the frame of the car far enough to allow connection to the trucks. Attach the black wire to the truck’s metal frame with the bolt and nut that you originally removed. Remove one of the screws holding the wiper assembly to the truck and attach the red wire to the wiper with this screw. Remount each truck to
its frame bracket and attach the assembly to the frame.

With the trucks attached to the frame, check and test the frame assembly for any electrical short circuits. We can now connect the electrical system, attach the frame to the car body and install the couplers.

**Step Six: The End Pilots**

I used the cut-off disk in the Dremel tool to remove the mounting bracket arm from the back of the pilots (Photo 14). Make a flush cut and sand it smooth. To attach the pilots to the ends of the car, I fabricated two plates 1’10” by 1’6” for each pilot. These mount to the recessed area on either side of the coupler opening in the pilot. On the first car, I made these from brass sheet, and then drilled and tapped the pilot and car end for small screws. I decided this was too much work. On the last three cars, the plates were fabricated from 0.060” styrene sheet and attached to the back of the pilot with epoxy. When set, epoxy was then applied to the plates and the assembly was mounted into the recess on the end of the car and held in place until the epoxy cured (Photo 15). The final assembly was to install the Kadee couplers and boxes with 2-56 screws. Be sure the coupler screws do not touch the screws that hold the mount to the frame.

**Conclusion**

Once all four cars are completed, you will discover you have a long and impressive commuter train (Photos 16 and 17). What I have covered is the basics for a 2-Rail conversion. There is much more you can do that’s not included in this article. The amount of detail work you put into these cars is your option.

Experience with 2-Rail electrical systems is helpful and all the work was accomplished with basic modelers’ tools, including the Dremel tool and a 3/8” power drill. I would recommend converting a single car first to get a feel for the project, how the car is assembled, and how to do the conversion. When you complete the first car, operate it on the layout and use it as a reference for converting the others.

I worked with parts that I had on hand. Feel free to improve on this idea. You can contact me on the Authors page of the OST Blog [www.oscalemag.com/wordpress] if you have questions concerning this conversion.

Until the next time, “Roll-em”.

**Parts List**

- K-Line Wheel Conversion Kits or NWSL 8266-4 – 36” 0.145 pointed axle sets for MTH trucks
- K&S 0.005” Brass or Copper Sheet
- Kadee #805 Coupler Sets
- Evergreen styrene sheets #9060 – 6 x 12 x .060
- Evergreen I-Beam #277, 1/4”
- Machine Screws, 2-56 x 1/4”

**Tool List**

- 3/8” Drill & various small drill bits
- Dremel rotary tool
- Soldering gun, solder
- NWSL wheel puller
- 2-56 Tap and drills

Parts List

K-Line Wheel Conversion Kits or NWSL 8266-4 – 36” 0.145 pointed axle sets for MTH trucks
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2-56 Tap and drills
Kadee Coupler Mount

6-S.F. 2-S.F.

#277 1/4" I-Beam

Approx. 18 SI
Kadee #805 Coupler Box

Side View

5-S.F.

Front View

2-56x.25 Screws

CL

Bottom View

Pilot Mounting Plates

18 SI

22 SI

All Plates Evergreen .060 Sheet Styrene

Electrical Pick-up Assembly

Side View

9 SI

42 SI Long

84 SI Overall

Solder

Top View

27 SI Wide

15 SI Tall

End View

Note: SI = Scale Inches
SF = Scale Feet

Construct from .005 or .010 Brass or Copper Sheet

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Scratchbuilding can be a scary word for many modelers. Like anything that is new or untried, it doesn’t have to be if you approach it in a systematic way. The first step is to gather information on the subject matter. The next is to plan out the job. This article will touch upon some basic tools to design the model you want to build.

The most complex structure can be broken down into a series of basic forms to which the final details are added. To illustrate this point, you can look at the photo below of an express reefer that started as a simple core of 0.040” and 0.060” sheet styrene. The model was built around a plain box that was sized to account for the overlays of details. I wanted to build a PFE BR-1 class express reefer. The car is large, being 50’ in length but it is still a simple box with scale siding applied to the box (Photo 1).

**Planning and Design**

Before you start to build the basic car shape, you need to do some sketching to determine the size of the inner core and the various materials that will be applied to it in order to achieve the scale dimensions. Gathering together some prototype information is the first step in building the model. This can be in the form of a photo or two, drawings or sketches based upon the prototype. You will need to create a working drawing with the basic dimensions in a scale such as 1:32 or 1:48. Try to avoid using too small a drawing since it is very easy to make measurement errors. You can find good scale drawings in older issues of *Model Railroader, Mainline Modeler* and *Railroad Model Craftsman*. It is a good idea to also have a photo or two to check these drawings against. There has been an error or two published over the years. I found a very useful tool in making a scale/working drawing. It is called *Scale Print Utility* and is sold by P.J. Engineering. [http://www.raildriver.com/products/cyclopedias/scale.print.php](http://www.raildriver.com/products/cyclopedias/scale.print.php)

It comes bundled with their electronic reprints of the *Locomotive, Maintenance, and Car Builders Cyclopedias*. These documents are very good sources of prototype plans and information on railroad practices. It is an application that runs on *Windows XP* and earlier. The software allows you to size a drawing or photograph to a popular modeling scale like 1:48, 1:87.1 or 1:32 that you can print out and use directly to build your model. I have used it to take drawings out of the *Car Builder Cyclopedias* as shown in Photo 2 below. I am building a Texas and Pacific 40’ steel gondola based upon a couple of photos and a drawing in the 1931 *Car Builders Cyclopedia* (Photo 3).

You will need to scan the drawing to create a JPEG or TIFF photo file. Open the file with the *Scale Print Utility*. Select a scale and enter a dimension directly from the drawing, such as the length of the running board. Click “OK” and print the drawing out. In many cases your drawing will be larger than a standard paper size. The software generates registration marks to aid in aligning the pages. Tape them together and you have a great working drawing. I will usually make notes and figure out the basic dimensions of the body right on the margins of the drawing.

The basic design process takes place now that you have a scale drawing. Start by making a rough sketch of the car and how you might build it up (Photo 4, page 46). The sketch breaks down the car into various thicknesses of material. The design will depend upon the chosen material. I am using styrene so the side thickness assumes a back-to-back 0.015” thick styrene lamination that has multiple rivet impressions made into it (Photo 5, page 46).

The combined thickness of the two car sides needs to be factored into the width of the floor to keep the model within the prototype's overall width dimension. The width across the side sheets on the prototype is 9’5”. I allow for 3”, to compensate for thicker walls on the model. So your floor ends being 9’2”. I would caution you on making the wall too thin. Your model may end up warping badly over time if the walls are too thin. It may also be difficult to handle the model as well.
Working from Photos

Scale Print Utility can work on a photo that is taken broadside or a direct end view. If you have the basic dimension of the car length or width, you can set the size in the dialog box and pointers to this dimension.

You can sometimes skew a photo to compensate for the fact that the camera wasn’t perpendicular to the side or end. Adobe Photoshop has a tool that allows you to skew or distort the image creating a more uniform shape rather than a wedge. I used an image of a Soo Line stock car from the Mid Continent Museum website (Photos 6-7). You can see that the adjusted image in Photo 7 does allow you to use it to scale the basic dimensions.

I have outlined a few tips on scratchbuilding. You need to keep in mind that it does take time and effort to learn how to do it. Building kits is a good starting point before moving on to scratchbuilding. I have found that practicing on structure models is a good way to learn. A building is more tolerant than something that has to run down the track. Don’t be afraid to discard a model if mistakes are made.
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SMR is proud to announce that the next project, the Virginia & Truckee Baldwin mogul engines, V&T ore cars and caboose/combine #9 is moving forward. Prototype models have been received recently and delivery is expected this winter. Photographs of these models are posted on the company website, [www.smrtrains.com] and in many major hobby publications. Quantities will be very limited and reservations are now being taken.

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Reviewed by Mike Cougill

We model railroaders can be an odd lot in that we often won’t look outside our own hobby for ideas and inspiration. At the extreme, some of us won’t even look beyond our own modeling scale. I go against the grain because I look for modeling ideas, techniques and materials wherever I can find them. When I came across this book at my local library, I checked it out immediately and settled in for a fun read.

Richard Windrow is a British diorama and military modeler. While the differences in modeling scale (1/32) and subject matter (military and historical scenes) will turn some off, there’s much to learn from someone who is just as dedicated to his hobby as we are to ours.

Advanced Terrain Modelling is Richard’s second book on the subject. His first: Terrain Modelling covered many of the basic techniques used by folks working in this genre. This new book also covers many of these basic techniques, since the author couldn’t be certain readers would be familiar with the first volume. The book includes a variety of modeling subjects, from First and Second World War battle scenes to a walled English garden, and what is most impressive: a forest scene. Richard outlines the tools and materials used to construct his dioramas in the first chapter. Many of these will be familiar to model railroaders, such as modeling knives, razor saws, various sized brushes, hot glue guns and the like. Gatorfoam sheets and Celluclay are also well known to many of us and form the foundation of his dioramas. He makes extensive use of Woodland Scenics products along with those from European makers like Noch; as well as some items commonly available in Britain like etched metal branches and leaves. There’s a resource section in the back of the book with full contact information on how you can get some of these materials.

The 192 page hardcover book has a spiral binding that allows it to lay flat when open, which is a real convenience at the workbench. The page layout and photography are excellent and pleasing to the eyes. The chapters are thorough in their coverage (The WWI trench diorama chapter runs 34 pages.) of each project with in-depth text and plenty of full color, fully captioned, step-by-step photos. The depth of coverage and the amount of information presented is something I appreciated. Too often books of this type gloss over the subject matter in order to cram in a variety of topics. Not here.

So what will you find that’s applicable to American model railroading? A great deal. Diorama modelers tend to use prototype source material, such as photos, more extensively in modeling their scenes than we do. They have a much smaller platform to work on than the typical model railroad. They have to compose a scene that not only showcases the main object or model but also one that conveys a mood or tells a story in a space that’s often less than one or two square feet. Model railroaders often seem to use an ad-hoc style when laying out a model scene. (“Hey this’ll look good here.”) Composition techniques such as framing a view, forced perspective and using color and texture effectively are ones we can put to good use. Scattered throughout the chapters are techniques for modeling every kind of surface or material imaginable, from wood, metal and masonry, to natural forms such as groundcover, soils and trees.

Chapter Four: Fall in the Forest was especially interesting to me. I have a wooded hillside on the layout that looks okay in person, but lousy in photos. Richard’s forest scene features extensive groundcover and litter for the forest floor with an amazing variety of textures. An uprooted tree shows a rootball with the exposed roots still covered in dirt with embedded rocks. The starring element is a decaying log made from hair curlers (Yes, you read that right.) covered with plaster for bark. It’s covered in moss made of green chalk dust, and lichen made of bits of ground foam and has mushrooms and toadstools growing inside! Based on the info in this chapter, I’ll be rethinking that hillside soon.

Structure modelers aren’t left out either. Chapter Seven covers the construction of a WW II vintage street covered in building debris from a bombing raid. This chapter is a PhD course in masonry modeling and weathering. The methods outlined are fully applicable to modeling functional building details and textures. My favorite tip from the chapter is rubbing a simple pencil or solid graphite stick (available from an art supply store) over a painted casting of a manhole cover to simulate the semi-polished finish of a worn metal surface. Are any of you car and locomotive modelers interested in that one?

While you likely won’t use every idea and product presented here, I thought this was an excellent and useful book. You shouldn’t get hung up by the non-railroad subject matter or the unusual modeling scales. The ideas and techniques are the real gold here and they’re readily transferrable to O Scale. The book can be found on Amazon.com along with his first book: Terrain Modelling, and that’s probably the easiest way to obtain them. Together they will make a valuable addition to anyone’s modeling library.
REVIEW: Typhoon Track Cleaning Car; MSRP: $234.95
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Reviewed by Joe Giannovario

Keeping the track clean on an operating layout is one of those unpleasant but necessary chores required for smooth operations. So, when John Claudino of Aztec Manufacturing offered to lend me one of his Typhoon track cleaning cars I jumped at the offer.

The Car

The Typhoon is made from a standard Weaver 2-bay plastic hopper car (Photo 1). Aztec machines out the center section of the car and installs a hard anodized aluminum chassis that holds two free-wheeling canvas covered rollers and a bar magnet. Above the rollers is a reservoir that will hold a cleaning fluid of your choice. The reservoir has a 0.5 ounce capacity and a clear acrylic cover so you can see when the cleaning fluid needs to be refilled (Photo 2).

The rollers are mounted at a slight angle to the track so that they perform a scrubbing motion as the car rolls around the layout. One roller is run wet with solvent while the other is run dry. The car can be run in either direction but Aztec recommends the bar magnet be kept at the rear. The wet canvas roller can be replaced with a Cratex® abrasive roller, but to do so would make the car equivalent to Aztec’s Marauder track cleaning car which sells for $60 less. You can’t run the Cratex roller wet. The car is very well made and heavy which is what you need to get a good scrubbing action.

The Test

I put generic rubbing alcohol in the fluid reservoir. Rubbing alcohol is 30% water and 70% isopropyl alcohol. This is what I typically use to clean my track dabbed on a shop cloth.

I did not have a funnel small enough to fit the reservoir opening so I used a trick from my chemistry lab days. I pulled a length of brass rod from my parts bin and laid it over the open top of the alcohol bottle held in place with my finger. I put the other end of the rod in the reservoir and very slowly tilted the bottle until the alcohol ran down the rod and into the reservoir.

Once filled, I opened the valve a quarter turn to wet the first roller. I manually spun the roller to make sure the entire surface was wet. Aztec says to close the valve when cleaning track. If you run the car with the valve open it will eventually loosen the canvas from the roller.

I put the car in front of a locomotive and ran it around the layout twice. I then inspected the rollers. As you can see in Photo 3, the wet roller (to the right) loosened up some grime and the dry roller scrubbed it up. What really surprised me the most was the debris caught by the magnet.

The Results

Aztec says to run the car for 10 to 15 minutes or until the rails are clean. Based on my test, a good 15 minute scrubbing left the rails completely clean. Running the car regularly will keep them clean.

The downside is that this car is not cheap. Aztec track cleaning cars start at $99.95. The Typhoon is the most expensive and most sophisticated of the group. Aztec has not skimped on materials and it is reflected in the price. Another aspect of the Typhoon that differs from other Aztec track cleaning cars is that the cleaning mechanism can be disguised to be nearly unnoticeable while on the layout. Aztec provides a template to make a side cover for the rollers.

John also told me he is presently testing a Typhoon with a DCC-operated valve which he hopes to have on the market soon. Check with him for more details.

If you have a large layout with lots of hard-to-reach trackage, the Typhoon (or one of the other Aztec cars) may just be the solution you need for cleaning dirty track.
What to do on your next trip to Pennsylvania

Railroads of Pennsylvania is a traveler’s companion to the state of Pennsylvania, worthy of interest from any O-Scale modeler planning to visit the state for business or pleasure. Its 160 pages provide a wealth of information about railroading past and present. It combines a full color portrait of Pennsylvania railroading today, with enough background and historical data to provide a meaningful context for any travel to the state.

Like all Voyageur Press books, Railroads of Pennsylvania is beautifully laid out and produced. The large, full-color pages provide a setting for hundreds of photographs, both black and white and color. Left-hand and right-hand pages were obviously designed as two-page spreads, visually balancing each other. The title pages of each chapter are especially attractive, with a single, large contemporary photograph filling the left-hand page, balanced by an informative, text-filled page on the right that sets the stage for the chapter’s content.

Organization

One of the things that immediately appealed to me was the way the contents are organized. Railroads of Pennsylvania is divided into 16 chapters, organized into four parts. Each traces a theme from past to present.

Part 1, Anthracite Country, contains five chapters. These begin with a look at the role of coal in Pennsylvania’s history and the railroads that moved it, and moves on to describe the origins and present operations of Scranton’s Steamtown museum.

Part 2, Philadelphia and Pennsylvania Country, contains four chapters, and illustrates the challenges that Brian Solomon and the staff at Voyageur Books had to face—and how well they faced it. The challenge was to provide a concise history of railroading in one of the most colorful and often photographed areas of the country, yet provide a photographically interesting survey of what visitors will encounter when they visit today. The challenge was also to accurately display the range of railroading, from the urban density of Philadelphia to the numerous museums in the area. Yet, it all comes together in a blend of classic railroad photography and contemporary documentation.

Part 3, Through the Mountains via the Horseshoe Curve, contains two chapters, with the emphasis on several great photographs showing just what it will be like when a reader visits Horseshoe Curve.

Part 4, Railways Large and Small, is a slight departure from the above regionally-oriented past-to-present organization. Part 4 profiles the state’s traditional railroads, i.e., the New York Central, East Broad Top, Erie Railroad, the Baltimore & Ohio, etc. As always, there is a pleasing blend of contemporary color photography with vintage black and white examples from Jim Shaughnessy and various railroad museum collections.

Photographs

Brian Solomon’s opening photograph of Philadelphia’s 30th Street Station during October, on page 66, is one of my favorites. Philadelphia’s 30th Street Station is the third busiest Amtrak station. Only New York’s Penn Station and Washington’s Union Station serve more riders. The large, detailed photograph of the renovated waiting room is one of the most positive and accurately atmospheric photographs of American railroading during the Amtrak years. Note the pumpkins and dried flowers in front of the information kiosk.

The 30th Street station photograph reflects what I consider to be the book’s major accomplishment, outside of providing a helpful guide to any railroad lover visiting the state of Pennsylvania. Simply put, Brian Solomon’s most important accomplishment in this book is to take meaningful photographs of contemporary railroading in an age when, to be blunt, many railroading subjects just aren’t photogenic.

For example, it is often very difficult to take interesting or atmospheric photographs of railroad equipment in museum settings. There’s often a Coca-Cola machine or distracting signage in the background. Yet, at numerous points in the book, Brian Solomon shows that it is indeed possible to breathe photographic life into a static museum display, revealing the beauty of the underlying form and technology. His large photograph of a static steam engine, stained glass window, and flag on page 10, facing the book’s Foreword, is a beautifully composed and atmospheric photograph as any I’ve ever seen in a museum. Likewise, the photograph of the Pennsylvania E-7, number 5901, on display at the Railroad Museum of Pennsylvania, is as satisfying a photograph as any action shot taken during the diesel era.

The full page sunrise photograph of the Pennsylvania railroad signal tower now on display at the Strasburg Railroad is yet another example of Solomon’s unique ability to find stunning beauty in contemporary museum settings.

Conclusion

Railroads of Pennsylvania is a worthwhile investment for both railroad lovers contemplating a trip to Pennsylvania who are looking for a preview of the treats available for them, as well as a worthy purchase for any modeler looking for a photographic tour of railroading through the areas in one of the country’s most diverse states.
Review: AtlasO 2-Rail Gold Series F2/F3 powered A-B;
MSRP: $479.95 ea.
AtlasO, LLC 348 Florence Ave., Hillside, NJ 07205
908-687-9590 • www.atlasto.com

Reviewed by Joe Giannovario

The Prototype

The history of Electro-Motive Division’s F-units reads like a genealogy from the Book of Genesis: The FT begat the F2 which begat the F3 which begat the F7 which begat the F9 which begs the question what happened to F4, F5, F6 and F8? (See, I really don’t know much about Diesels!) For a detailed history of F-units see General Motors’ F-UNITS, The Locomotive That Revolutionized Railroading by Daniel J. Mulhearn and John R. Taibi, ISBN-0-915276-39-9, Quadrant Press, Inc., Room 707, 19 West 44th St., New York, NY 10036, USA.

EMD started producing F2 and F3 units in 1945 and continued through 1949 when the F7 was introduced. The main difference between the F2 and F3 was the horsepower rating. There was no significant difference in the exterior carbody that indicated whether a unit was a 2 or 3. There were many mechanical differences but for our purposes the F2 and F3 are identical in outward appearance. In fact, many F2s were upgraded to F3 without any exterior changes.

F-units could be equipped with either a freight or passenger pilot. The passenger pilot had a drop coupler which could be hidden behind doors to make the front end look more streamlined. The freight pilot had a fixed coupler which protruded from a rectangular hole in the pilot.

The Model

Atlas has produced an F-unit model they call F2/F3 Phase 1. The body is injection molded plastic based on the molds Atlas purchased from P&D Hobbies not long ago. The detail is sharp and crisp. As this is a 2-Rail model, the pilot is fixed and does not pivot with the front power truck. The model is equipped with a freight pilot.

The mechanism inside the carbody is what has come to be called a China Drive, i.e., each truck is powered by a small can motor mounted vertically over the truck, driving the axles through a series of spur gears. The model is powered by a QSI Dual Mode DCC receiver. Dual Mode means the unit will run on either straight DC or DCC command control. The QSI system also provides sound in either mode of operation. The sample sent for review is painted and lettered for the Lackawanna. The paint is nicely applied and the lettering is crisp.

Fidelity

The twin-motored drive system has been criticized in the past for two characteristics: poor slow speed performance and a carbody that sits higher than would be prototypically. We will deal with the speed issue later. As for the ride height of the carbody, it checks out perfectly against not one, but two different sets of plans. I used plans from the Jan.-Feb. 1982 Mainline Modeler and from the October 1970 Model Railroader to examine the model.

The carbody should sit between 4’ and 4’ 2” according to these plans. I measured the model at exactly 4’. On one of the online bulletin boards Glenn Fresch posted a composite photo of a real F-unit superimposed over the Atlas model showing that the model is correct (See Photo 2). In fact, every dimension I checked was spot-on with the plans. I am sure there may be some minor details that are not quite correct but all the basic details are correct.

I am no expert on Diesel sounds; so I cannot judge the fidelity of the sound package in the F-units. In my opinion, they do sound good.

Compatibility

The model checked out on the NMRA O Scale Standards gage. The Atlas couplers mate with Kadees but not always with success. As this is a Gold Series locomotive, it is operable on both straight DC as well as DCC. However, because of the electronics involved, running this locomotive in DC mode with any non-electronic equipped DC locomotive would be problematic because of the high starting voltage. This would be true for any command control locomotive that has dual mode operation.

Performance

I ran all the performance tests with both the powered A and B units coupled. In DC mode the models began making startup and Diesel sounds at about 8.5 Volts. At 9.2 Volts the models ran slowly and smoothly drawing...
600 mA. This was the equivalent of 2.2 scale mph. Under load, i.e., pulling 12 average O Scale freight cars, the units drew 900 mA on level track and 1200 mA on my 3+ percent grade. The running speed was 25 scale mph. In DCC mode the slowest running speed I obtained was 2 scale mph using 128 speed steps. In both modes slow speed performance was excellent. I have no doubt I could have loaded every freight car I own behind these two units and they would have marched them around the layout with no problem.

I had an amusing situation arise while testing these units. Not being very Diesel-savvy, I coupled the B unit to the A unit without regard for which end of the B unit was the front. When I first powered up the pair, they just sat there with their wheels spinning. It took a moment for me to realize the wheels on the A unit were turning in the opposite direction from the wheels of the B unit. If these had been straight DC models it would not have mattered which end of the B unit was facing, but because these are DCC models the B unit can be going in reverse while the A unit is going forward resulting in going nowhere but polishing the wheels nicely! I now know that a B unit has a front and back just like the A unit.

**Conclusions**

These are very nicely made models of a ubiquitous Diesel locomotive. There are some who will swear that only a horizontal P&D/Weaver drive will do them justice. Since I have little experience with Diesels, all I can say is these models ran very well during testing. The sound and DCC control add an extra dimension to the enjoyment of operation. If your favorite railroad owned F-units, you will probably want a set of these Atlas units.

My thanks to Glenn Fresch for his permission to reprint the composite photo.

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**Book Review: Practical Guide to Digital Command Control**

**MSRP: $24.95**

*Carstens Publications, PO Box 700, Newton NJ 07860 973-383-3355 • www.carstens-publications.com*

**Reviewed by Joe Giannovario**

Digital Command Control (DCC) is making significant inroads in O Scale, finally. After years of being relegated to the smaller scales because of O Scale's power requirements, DCC is now offered factory-installed in many AtlasO models and sound decoders are currently available for the self-installer.

One of the downsides of early DCC systems was the need to have a good understanding of digital electronics, and hexadecimal coding. (For those of you not familiar with counting in base 16, “FF” is equal to 255 in base 10. It’s a kind of geek speak.) That has all changed with the most modern DCC systems. So, if you are interested in adding DCC to your O Scale layout where do you start? Carstens’ new book Practical Guide to Digital Command Control is a great place to start.

Author Larry Puckett has taken an approach that will help even the most electronically-challenged among us make sense of what DCC systems will and will not do. There is a concise but not overly technical explanation of how DCC works and a great chapter on selecting the right systems for your layout. The chapter on decoder installations won’t be of much use to O Scalers as all of the examples are either N or HO Scale models. The general guidelines, however, are applicable regardless of scale.

The chapters I found most useful were those on sound decoders and stationary decoders. It’s sound that fascinates me and I’m eager to add DCC with sound to all my locomotives. I’ve read a little about stationary decoders but really did not pay them much attention. Puckett goes over all the possible uses including signal and turnout operation. He also mentions software programming of decoders and here it does get technical so if you’re not a big fan of computer programming and interfacing you might get a bit glassy-eyed. What caught my interest was the mention of DecoderPro, a Java-based program that will run on nearly any computer, including my Macintosh! This software and a Windows commercial product called TrainProgrammer, allow you to program the decoder in your locomotive by entering numerical values into a computer screen or move sliders and then upload these settings to the decoder. The importance here is that a rather complicated set of values developed for any given locomotive can be saved to the computer and reloaded later, either to a new locomotive or the original if it needs resetting.

The book concludes with a list of DCC sources and several examples of programming and planning log sheets, all of which are quite useful.

Overall, if you are just curious about getting into DCC or have already taken the plunge, there is much material of interest in this book, so get yourself a copy.
REVIEW: “Russian” Decapod 2-10-0; MSRP: $999.95
M.T.H. Electric Trains, 7020 Columbia Gateway Drive,
Columbia MD 21046
410-381-2580 • www.mth-railking.com

Reviewed by Joe Giannovario

The Prototype

Just prior to World War I the Russian Imperial Government placed an order for over 1200 small-driven (52”), wide-gauge (five feet) 2-10-0s (decapods) with both Baldwin and Alco. With only an 18’ 4” wheelbase and 183,500 lbs. on its drivers, the light axle loading was what made this wheel arrangement very popular in Europe and Asia.

Funny thing how history can intervene with a government's best intentions. In 1917 the Bolshevik Revolution overthrew the Russian Monarchy and left the engine builders with about 200 undelivered locomotives. The United States Railway Administration (USRA) adopted the orphaned locos, regauged them to American standards and sent them off to various U.S. railroads with the Erie getting the majority, 75. Other roads that owned them were: St. Louis-San Francisco, 21; Western Maryland, 10; Gulf, Mobile & Northern, 12, and the Seaboard Air Line, 40.

The Model

The MTH model is a typical modern die-cast locomotive. The basic boiler is a one-piece casting with added details, most of which are brass investment castings. The tender is die-cast as well, giving this diminutive locomotive good heft.

The model is painted and lettered for the Western Maryland with the speedball herald. The paint finish is smooth and semi-gloss black. The lettering is sharp and crisp.

The model operates in dual mode under both DC and MTH’s proprietary DCS system and is powered by a large Pittman can motor. Sound and lights operate in both modes.

Fidelity

The engine scales out exactly with the drawings in the Model Railroader Locomotive Cyclopedia, Vol. 1. However, the model is not without a major fault. Refer to Photo 2 for a look at the end beam of the tender. In online discussions this was dubbed “the porch” and there were several suggestions for suitable picnic paraphernalia to be placed on it. To be sure, the Russian Decapods were delivered with unusually wide end beams, about 18” based on available photos. The MTH model has a rear deck over four scale feet wide. A spokesman for MTH told OST that their outside expert advisor for this project gave them incorrect information about the rear deck and did not correct it until the dies were already made and it was too late.

Compatibility

I checked all the wheels and drivers with the NMRA O Scale standards gage. All the wheelsets passed except the drivers which all had tight check gauge, although not enough to affect operation. Coupler mounts for Kadée® style boxes are provided on the tender along with mounting screws and, once installed, the scale couplers were at the correct height without the need for shimming.

Performance

All performance tests are done with the smoke unit turned off. In DC mode the slowest smooth speed attainable was 3.8 scale mph which is okay but could be better. The power draw at this speed was 9.3 Volts and 400 mA. Under a full train load of 12 standard O Scale freight cars the locomotive drew 800 mA at 12 Volts on grade moving at 10 scale mph. In DCS mode the slowest smooth speed attainable was 1.1 scale mph. This is excellent slow speed operation.

The 5 axle wheelbase with all the drivers flanged does have its limitations. The box says this locomotive requires a 48” minimum radius and I can confirm that fact, having derailed the locomotive on a 44” radius curve several times. It also had some difficulty with an Old Pullman curved turnout where it literally squeaked down the 48”
radius leg. Otherwise, there were no problems anywhere else on the layout.

**Conclusions**

The MTH Russian Decapod is a very nice model although it does have one major flaw with the tender deck. However, the rear deck is a separate casting held in place with two screws (See Photo 3). In addition, the coupler mounting is separate from the deck mounting.

So, one could make a new rear deck easily from styrene since it does not have to handle the coupler load. The coupler mounting bracket would need to be modified so the coupler will fit the new shortened deck. You will have to decide if you can live with the deck as-is, build a new one, or skip the model altogether. It’s an important decision in light of this model’s list price.

**NEWS: Micro-Mark #84263 Bottomside Creeper; MSRP: $104.95**

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2009 O Scale Convention

Mark your calendars for June 18-20, 2009 and get ready for a very unusual O Scale event. The Baltimore O Scale Society (BOSS) and the Baltimore Society of Model Engineers (BSME) are pleased to invite you to the 2009 O Scale Convention to be held near Baltimore, Maryland, the birthplace of American railroading, and home to the world class B&O Transportation Museum.

The convention will be held in the Student Union Building on the campus of Towson University with the adjacent dormitories and dining facility available for our attendees. With the rising cost of transportation and accommodations, we are pleased to be able to offer room and board packages that start at $83.00/night including three meals a day. Since this is a college campus, all areas of the convention are handicap accessible. Secure, multi-level parking is connected to the Student Union Building and dormitories. For those staying on campus, parking fees are included in your lodging package. For those not interested in staying on campus, there are several large motels and hotels in the vicinity of the campus offering special room rates.

In addition to several large areas for vendors and portable display layouts, the Student Union building's classrooms offer A/V projection capabilities that we will use for clinic presentations.

The convention site will be open, for dealer setup on Wednesday afternoon June 17th. The trading halls have room for approximately 400 tables and they will be open on Thursday and Friday from 9:00 AM until 5:00 PM and on Saturday from 9:00 AM to 1:00 PM.

We have arranged for a dealer reception Wednesday evening in the Student Union Lounge thanks to a generous donation from O Scale Trains Magazine to help us defray the cost of the reception. Thank you, OST!

In lieu of a banquet on Friday evening, we will be having a cocktail reception, awards ceremony and presentations by representatives of future O Scale National Conventions starting around 6:30 PM. Soft drinks and finger food will be provided. A cash bar will also be available. This will be a no cost affair for anyone staying in the dormitories with the meal plan. Folks wishing to come to the reception who are not staying in the dorms can purchase a ticket for an additional $22.00.

As a special feature, the Baltimore Streetcar Museum will be open exclusively for our use on Thursday evening from 7:00 PM to 9:00 PM. A $5.00 donation to the BSM will allow you to ride on all of their operating cars. The same evening, The Baltimore Society of Model Engineers will be open for convention attendees from 7:00 PM until 11:00 PM. The BSME is located about ten minutes from the Streetcar Museum in downtown Baltimore. We will be offering discount coupons for visits to the B&O Museum and other area attractions both rail and non-rail.

We will be offering shuttle bus service for the ladies (and anyone else who wants to go) from the University to various shopping and cultural points of interest in the Baltimore area on both Thursday and Friday.

There are many fine O Scale layouts in the Baltimore area and surrounding counties. Layout tours will be available on Thursday and Friday evenings as well as Saturday afternoon when the convention trading halls close. Maps to the home layouts will be provided to those attending the convention. Additional information pertaining to the home layouts will be detailed in a later article.

The convention web site also has information regarding our 2009 Convention Cars, the Weaver Troop Sleeper Baggage cars lettered for B&O and Railway Express Agency with the Red Diamond Herald. These cars are available in three road numbers and can be ordered for operation with two or three rail equipment. A limited quantity of each car has been produced exclusively for this convention, so don't miss out! Get your order in as soon as possible. The anticipated delivery date for the cars is fall 2008. If you have placed an order, your cars will be shipped to you as soon as they arrive.

You can register for the convention, reserve on-campus accommodations, search for nearby hotels/motels (mention that you are attending a Towson University function), learn more about area attractions (both railroad and non-railroad), order convention cars and get contact information on the individual members of BOSS and BSME by visiting the convention web site at [www.OscaleEast.com].

We hope to see you in Baltimore next year!
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November 2008

8: Kirtland, OH
2008 Western Reserve “O” Scale train show and Lakeland Community College, 190 and State Rt. 306. Admission: $6. Tables (6’): $37. Show hours 9:00 am to 2:00 pm. Contact Bob Frieden, 440-256-8141.

8: Orlando, FL
Fla. O Scale’s 9th Annual O Scale 2-Rail Meet held at the Airport Holiday Inn, 5750 T.G. Lee Blvd which is just off SR-436 (Semoran Blvd) and the Beach Line Expressway (SR-528). Room rate is $99 per night, ask for code SLR when making your reservation. The swap session will be from 9:00 am to noon. Set up will start at 8:00 am. Table rental will be $15.00 ea., (6’ x 30”). There is only space for 20 tables so get your reservations in early. Clinics will start about 1:30 pm. Registration for the meet is $20 in advance or $25 at the door. Wives and children free. Contact: R. W. Dettmer, 2756 Connie Circle, Orange Park, FL 32065, 904-269-2445, roscaler@bellsouth.net

28: North Haledon, NJ
Model Engineers Railroad Club of North Jersey - Annual Open House will be held November 28 - 30th, December 5-7, and December 12-14th, at 569 High Mountain Road. Hours will be from 7:00 pm to 10:00 pm on Fridays; and from 1:00 pm to 5:00 pm on Saturdays and Sundays. Admission: $5, adults; children admitted free with adult. For more information, contact: Paul Harbord, (973) 427-4905 before 9:00 p.m.; or visit: [www.angelfire.com/nj4/merrcnj].

December 2008

5-14: Merchantville, NJ
Cherry Valley Model RR Club Xmas open house at 7 Maple Ave., Merchantville. Friday nights, 12/5 & 12/12, 6 to 9 PM; Saturdays, 12/6 & 12/13, Noon to 8 PM; Sundays, 12/7 & 12/14, Noon to 6 PM. No admission but donations accepted. Info: John P. Dunn, Sr., 609-484-8125, email: jdunn8888@hotmail.com.

January 2009

29-31: Santa Clara, CA
19th Annual O Scale West at the Hyatt Regency Santa Clara, 5101 Great America Parkway, Santa Clara, CA. Three day O Scale meet with 200 vendor tables, clinics, contests, door prizes, videos, modular layouts and over 30 home layouts to visit. Admission: $25 prior to 1/31; $30 after. Tables are $35 prior to 1/31; $45 after. For more info see [www.oscalewest.com] or contact Rod Miller, 650-329-0424. Hotel reservations, call 408-200-1234.

March 2009

7: Wind Gap, PA
Eastern O Scalers 2-Rail Swap Meet at the Plainfield Fire Hall, 6480 Sullivan Trail, 9AM to 1PM. Admission $5; (spouses & children under 14 are free), $16 for the first table (includes one admission) and $12 for each additional table. Dealer’s set-up Friday evening 6PM to 9PM and Saturday morning 7AM to 9AM. Info/reservations, SASE – EOS, PO Box 1781, Ben- salem PA 19020; (215) 264-9623. Bring an index card with your name, address etc., for $1 off your admission. Contact [eostrain@comcast.net]

20-22, Arlington Hts, IL
Chicago O Scale meet at the Sheraton Chicago Northwest Hotel in Arlington Heights, IL, (847) 394-2000. Room rates are $89 per night if reserved under the Chicago O Scale Meet. Admission is $20 for one or both days. Tables are $55 each until 1/31/09. After that date tables are $60 each. For more information go to [www.marchmeet.net] or call Judy, (847) 401-4333.

June 2009

18-20: Townsend, MD
2009 O Scale National Convention to be held on the campus of Towson University just north of Baltimore, Maryland. Event sponsored by Baltimore O Scalers and the Baltimore Society of Model Engineers. In addition to very comfortable trading halls (about 400 tables), convention features clinics, layout tours (June 17 through June 21), model contests and Friday (June 19th) banquet. Early set-up for dealers on June 17. Visits to B&O Transportation Museum, Baltimore Streetcar Museum and much more. Check [www.oscaleeast.com] often. More information available by email: [info@oscaleast.com]

August 2009

8: Denver Pennsylvania
Eastern O Scalers 2-Rail Swap Meet at the Denver Fire Hall, 4th and Locust –9AM – 1PM. Admission $3; (spouses & children under 14 are free), $16 for the first table (includes one admission) and $12 for each additional table. Dealer’s set-up Friday evening 6PM to 9PM and Saturday morning 7AM to 9AM. Info/reservations, SASE – EOS, PO Box 1781, Ben- salem PA 19020; (215) 264-9623. Bring an index card with your name, address etc., for $1 off your admission. Contact [eostrain@comcast.net]
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I Get It!

Okay, so it took a while but I think I get it now. I’ve been puzzled in the past by the people who say they model in 3-Rail O Scale. I see their layouts and fantastic modeling work that rival anything I’ve seen in 2-Rail (and surpasses some) but they cling (if I may use that word guardedly) to the use of 3-Rail track. I just didn’t understand that.

Over the last few months I have been able to review several Atlas Diesels equipped with QSI DCC and sound. As soon as I started up the Atlas MP15DC I fell in love with the sound of a Diesel burbling at idle. It then dawned on me this is what the 3-Rail guys have been playing with since the 1990s! I realized they’ve had factory-installed command control and sound for over 20 years and 2-Rail O Scale is just getting it now.

I imagine that if I had invested a good deal of money in 3-Rail trains with command control and sound I’d be reluctant to make the switch to 2-Rail. Both Lionel’s TMCC and MTH’s DCS can be used to operate 2-Rail locomotives but the cost of converting engines to 2-Rail operation would be high. There are maybe two or three people knowledgeable enough to convert 3-Rail locomotives to 2-Rail and keep the original command control system.

Both the Lionel and MTH systems are proprietary. It’s not impossible to add either one to an existing non-command engine but it ain’t exactly easy either. Sources for receiver boards are very limited. That’s why I prefer open DCC systems. The sources for base stations and accessories are plentiful. Sources for sound decoders with enough “oomph” for O Scale are few but that’s changing every day.

Factory-installed DCC with sound is an important milestone for O Scale 2-Rail. O Scale 2-Rail is now functionally competitive with 3-Rail O Scale when it comes to command control and sound. It literally has all the bells and whistles.

MTH set the first stake in the ground by offering O Scale 2-Rail steam and Diesels with DCS command control and sound. Atlas has responded with QSI-equipped DCC and sound. MTH will have DCC-compatible locomotives out next year. Sunset is considering DCC-ready brass and I have strongly urged them to consider factory-installed DCC with sound. With all this competition, the O Scale modeler (2- or 3-Rail) is the winner.

Projects Coming Down the Road

Many people have asked me about our publication A Guide to Modern O Scale. The Guide has been out of print for a while and the cost to reprint the book is prohibitive in this economic climate. So, I did an experiment for the 2008 O Scale National and created an electronic version of the Guide on CD. I updated the source listings and changed out all the B&W photos for color photos. It sold well enough that we’re moving forward with a complete rewrite of the book. A lot has changed in the 5 years since the Guide first came out. Several vendor sources have closed down. A few new ones have started up. As noted above, DCC with sound has become more important in O Scale.

With all that in mind, I’ve assembled a team to rewrite the book from scratch and we will be offering it on CD. Look for the new Guide to be available by March of 2009.

Mike and I have discussed several other e-book projects. Mike is working on a several projects which will turn into a series of e-books. I always planned to reprint Mike Culham’s Building a Small O Scale Layout series and now we’ll make that an e-book. Finally, I’ve been sitting on a pile of articles by Tom Houle that deserve to be in book form and that will become an e-book project as well.

Nothing happens overnight (even with computers and the Net to help) and our first priority is always to get the magazine out on schedule. Look for these projects to start appearing mid-to-late 2009.

I Am Honored

You may have noticed last issue that one of the people inducted into the O Scale Hall of Fame for 2008 was moi. I was really surprised to see my name on the ballot. My first thought was: I’m not old enough. My second was: I’m not dead yet. (Then I remembered that several of the ‘Farmers are still with us and breathed a slight sigh of relief.) My third thought was: I don’t deserve this.

I am deeply honored to have been voted into the O Scale Hall of Fame. While I don’t think I did anything special to deserve that honor, many of you did think that and I bow to your collective will. Thank you so much!

O Scale Trains Magazine was my idea but I didn’t build this alone. My wife and business partner, Jaini, is the creative artist for OST. If it weren’t for her design flair, OST would be more like a technical journal. She makes you guys look good! I want to thank the editors (past and present) who contributed their time and energy into building OST into a serious modeler’s magazine. Brian Scace was invaluable in setting standards and policies in our early years. Mike Cougill has taken up the challenge of helping me make OST even better than before. I can’t thank Jeb Kriigel enough for taking the burden of selling advertising off my shoulders.

Finally, a thank you to all of the authors who have trusted us with their material in order to share it with the rest of O Scale. There would be no OST without you guys.

About Issue #40

We had a major hiccup at the printer’s shop last issue. About 60 copies of the magazine were assembled incorrectly and mailed to subscribers. The easiest way to tell is to look for the centerspread. If it’s not there you have a bad copy. Contact me and I will replace it for free.

Keep Highballin’
Dash-8 Diesel Arrives

- **1:48** Scale Modern Diesel
- Equipped With **Proto-Sound 2.0** Digital Sound
- Variable Intensity **Operating Smoke**
- Locomotive **Speed Control** In Scale MPH Increments
- Flashing **Ditch Lights** & Operating **Horn & Bell**
- Operates On **AC or DC** Power
- Available With **Hi-Rail or Scale Wheels**

Chicago NorthWestern Dash-8 40C Narrow Nose Diesel Engine With Proto-Sound 2.0
20-2641-1 Hi-Rail Wheels
20-2641-2 Scale Wheels w/ Fixed Pilot
20-2641-3 Non-Powered

Norfolk Southern Dash-8 40C Narrow Nose Diesel Engine With Proto-Sound 2.0
20-2644-1 Hi-Rail Wheels
20-2644-2 Scale Wheels w/ Fixed Pilot
20-2644-3 Non-Powered

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[www.mthtrains.com/PMdiesel](http://www.mthtrains.com/PMdiesel)
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GGD is making the 20th Century 12 Car Set in 1938 or 1940 Striping. Coming in Early 2009. Order from Sunset Models or GGD. Fully detailed interiors with lighting and figures. Get ready for a really special set of cars.