O Scale Has Never Been This Much Fun!

Modern Features
In 2 or 3-Rail O Scale Locomotives

Who says 2-rail O Scale trains can't be fun? At M.T.H. Electric Trains, we've reintroduced 2-rail locomotives to our Premier Line product mix with the same features, sounds and fun long found in our 3-rail models. The 2-rail world may never be the same.

For 25 years, M.T.H. has been producing true-to-scale reproductions of classic model trains, affordable, traditional-sized O Gauge engines, well detailed, die-cast O Scale steam locomotives and 1:32 No. 1 Gauge locomotives in a variety and pace unmatched by any other manufacturer.

Our 2005 Premier Line steam locomotives can be ordered with hi-rail or scale flanged wheels and configured in just minutes to run on 2-rail or 3-rail track with just a screwdriver. Each M.T.H. locomotive comes fully outfitted with the power and performance of Proto-Sound® 2.0. Steam engines include synchronized puffing smoke and all models feature Proto-Speed Control™ for incredible slow speed action and the industry's most realistic digital sound system. Operate 'em on either DC or AC power and access hundreds of additional features with our state-of-the-art DCS™ Digital Command System.

You'll find all of our Premier Line steam locomotive offerings in exciting full-color catalogs at your local M.T.H. Authorized Retailer or see them online the next time you visit www.mthtrains.com. You'll see firsthand what makes M.T.H. Electric Trains the industry's most innovative and exciting model railroad manufacturer.

Find your Nearest Dealer at www.mthtrains.com

© 2005 M.T.H. Electric Trains
Features

4  Scratchbuilding an N&W Steam-Era Caboose
   Joe Giannovario built this classic caboose in styrene.

12  N&W Diesel-Era Class CF Cabs
    Variations on a theme. Photos of Richard Howard's CF cabs.

17  Building a Small O Scale Layout — Part 3
    Mike Culham starts handlaying track on the new GCR.

24  Painting and Lettering a B&O Baggage Car
    Tips and techniques for a fancy paint job by Ed Bommer.

28  Traingate
    Need to get into the layout? Phil Opielowski may have the answer.

43  A Mountain Climbing Railroad in O Scale
    A design for a large layout by George Muller.

46  Some of the Best from O Scale West
    Photos from OSW by Jim Ferreira.

50  OST 2K5 Digital Photo Contest
    Get all the rules and see the prizes.

53  Overhauling the Atlas 89' Flatcar
    Gene Clemens and Carey Hinch team up to modify these cars for more
to-scale appearance and “Twin 45” operation.

Departments

13  Easements for the Learning Curve – Brian Scace

14  The Modern Image – Carey Hinch

21  The Workshop – Neville Rossiter

22  Narrow Minded – Bobber Gibbs

34  Traction Action – Roger C. Parker

36  Product News & Reviews

40  Fine Scale Modeling – Gene Deimling

48  The Good Old Days – Jace Kahn

51  Reader Feedback – Letters to the Editor

57  Confessions of a HiRailer – Hobo D. Hirailer

59  Advertiser Index

60  Buy-Sell-Trade Ads

60  Events Listing

62  Observations – Joe Giannovario
Introduction

There are a lot of Norfolk & Western steam engines floating around in O Scale, both in 2- and 3-Rail, yet no one has mass-produced an economical steam-era N&W caboose to go with these engines. There have been several brass imports (Sunset, and Division Point, and two forthcoming from Kohs and Weaver) as well as a kit (offered first by Quality Craft, then Gloorcraft). The brass cabs are not cheap and the kits are hard to find although they show up on Ebay now and again.

While I have several of the brass and kit-based cabs, I could still use more. I decided to scratchbuild a Class CF wood-side caboose and tell you how I did it. By the way, I’m not going to give every single dimension for every part I made. In most cases, I scaled the dimensions off the drawings with calipers or a scale rule and transferred that to the plastic stock used. You’ll have to do the same. What’s important here is that the model “look” right rather than “be” exactly on the money. Also, I built this with the average modeler in mind. The tools I used were the most basic that any modeler should have. I purchased all my building materials at a local, non-train, hobby shop. Decals, trucks, couplers and brake rigging were mail-ordered from the appropriate vendors listed. Paints were purchased at a local hobby shop and a local Pep Boys auto parts store. There is really nothing exotic used here. There is a Materials and Resources List at the end of this article. It took me about 30 hours to build this model, and that included my figuring out how to accomplish each step, plus the photography and jotting down notes. I like using styrene because the construction moves quickly and you can really see the progress.

A Bit of History

The N&W used several different classes of cabooses during its steam era. The class I’ve chosen is CF, a wood sided cab with a steel underframe. N&W built 381 of these classic wooden cabooses starting in 1914 and used them up through 1959. This class was numbered from 518000 through 518380. The unique details of this caboose are its cupola integrated into the main sides of the body, slightly offset from center and no end windows in the main body other than those in the end doors. The N&W classes CG and CH steel cabooses are almost exact copies of the CF in design with steel sides and end windows in the CH.

The roofs on the CF cabs were wood, covered in canvas and then coated with an asphalt waterproofing. Eventually, many of these cabs were rebuilt with plywood sheathed sides and steel roofs, but that would take them into the Diesel era. I decided to stay with the steam-era design. As delivered, cabs were painted a bright red with white lettering, black handrails and end platforms, and brown roofs.

Okay, let’s begin.

Basic Body

We’ll start by making the floor. Use ⅛” thick basswood cut to length (scale 29½’ L x 9½’ W) and laminate a piece of 0.020” styrene to one side with Testors Cement. This will be the underside of the floor. Clamp and set aside to dry (Fig. 1). Next, lay out the sides on 0.040” scribed siding (Fig. 2). The dimensions are scaled from the drawing and transferred to the plastic siding using a mechanical pencil and a scale rule. Once the drawing is transferred, scribe the outline and snap the sides from the main sheet.

Scribe the centerline between the cupolas and snap the sides in half. Do not remove the excess material around the cupola just yet. Tape the two sides together...
er (back-to-back) to make sure the window openings line up. Also note that one side only has the high, small window for the bathroom. Cut out the window openings on one side and then cut through to the other side using the square edged X-acto blade shown (Fig. 3). Cut out the cupola window openings.

Before separating the sides, scribe the excess material around the cupola and true up the ends (Fig. 4). Snap off the excess while supporting the edges of the cupola with needle-nose pliers (Fig. 5). You should now have two sides (Fig. 6).

Make the two ends from the remainder of the siding sheet. The process is the same as for the sides; transfer the drawing to the siding with a pencil but line up the sides side-by-side (Fig. 7). Scribe between the two sides and fold them over so they are back-to-back. Carefully scribe the arc of the roof and snap off the excess material. True up the arc with a file so the ends match.

Set the ends against the floor (Fig. 8) and scribe a line across the top of the floor. Note the sides are about a scale six inches wider than the floor, so leave three scale inches (one board width) on each side. Trim off the material below the floor line and be careful with those short three-inch wide extensions. They’re delicate.

Find the center of each end by drawing two diagonal lines from corner-to-corner (Fig. 9). Now lay out the door openings using the siding grooves as guides. Scribe carefully through the vertical lines and cut through the horizontal with the chisel blade. Now, trim out the door frame with scale 1 x 3 styrene strips.

Make the doors by laminating 0.010" sheet (Figs. 10 & 11). Make the bottom sheet a bit larger than the door opening so you’ll have something to glue to the end wall. You can also use a Grandt Line plastic door of your choosing. I used a cast white metal door I had in my parts box.

Frame all the windows in the sides. The lower sills are 0.040" x 0.080", while the other three sides are 0.040" x 0.060" (Fig. 12).

Now it’s time to assemble the sides and ends. Glue one end to one side (Fig. 13). Make the side overlap the end. I used Plastruct 1/8" “L” angle to brace the joint. The actual length of the brace isn’t important as long as it clears the floor and leaves some room at the top edge, too. Repeat with the other side and end. You will need to shim the bottom edge of the side with 0.080" x 0.125" strip styrene so it fits properly over the floor. Now assemble the two pieces into a box that fits over the floor (Fig. 14). Be careful not to glue the body to the floor. It needs
to remain removable.

Lay out the cupola ends on more siding sheet (Fig. 15). I decided to try something different here. Frame the windows before you cut them out. Use 0.020” x 0.060” strip.

Cut out the cupola ends like you did the body ends. Lay them back-to-back and shape the arch. Glue some “L” angle to the cupola ends and then attach the ends so they are flush with the sides. Make sure the ends are square and the tops of the corners match up with the sides (Fig. 16).

I thought long and hard about how to make the curved roof, as I could not find curved wooden roof stock. I decided on roof ribs. Four will do the trick.

First, take two pieces of 0.080” x 0.125” strip and glue them to the inside of the body along the top edge of the large windows. If you’ve assembled everything square up to this point the strips will be level and at the same height on both sides. The ribs will sit on these strip ledges. You will have to notch the ledge around the small bathroom window.

Find four pieces of scrap siding about 2.5 inches wide and one inch high (Fig. 17). Make sure each piece is a slip fit inside the body and rests on the ledge. Trace the roof arch on these scraps by holding them against the caboose end from the inside while sitting on the ledge. Trim the roof ribs to shape making sure they’re all the same contour. Glue small scraps of 0.080” x 0.125” to the outer edges of the ribs so they’ll sit squarely on the ledges.

Glue one rib in front of each of the cupola ends. The other two ribs go halfway between the cupola and the body ends (Fig. 18).

The roof itself is made from 0.020” scribed siding with the siding side toward the interior. There are three roofs, all different. The cupola roof is two inches long, the long main roof is 3 3/4” long, and the short main roof is 2 1/4” long. Make these pieces wide enough to hang over the edges of the sides. All the edges will be trimmed later.

Curl the roof sheets in your hand with the scribing to the inside of the curl. Because the sheet is scribed it will take a set. Do this gently until the curve just fits the roof ribs. It doesn’t have to be exact because you will glue all the edges.

Make sure each roof sheet is centered along the body and glue it, first to the roof ribs, then the ends, and finally along the length of the sides. Glue the cupola roof in place the same way (Fig. 19).

That concludes the basic body construction.

Underframe & End Beams

With the body sitting evenly on the underframe, mark the top of the floor on each side where the body ends (Fig. 20). Now cut 0.040” siding (with the siding running across the width of the floor) to fit between the body and the ends of the floor. These will be the wooden decking for the end platforms.

We’ll need to laminate styrene strips to make the end beams. Start by gluing a 0.080” x 0.125” strip to a 0.100” x 0.125” strip. Make these long enough so you will have enough material for two end beams. Now, lay this on top of a piece of 0.040” styrene wider than the 0.180” width of the laminated beam (Fig. 21). Trim the excess and you should have an end beam of the correct dimensions. I decided to make the end beams remove-able. This allows me to work on the end details without having to manhandle the whole caboose and it also allows the body ends to be detailed more easily. More on this in a bit. Cut the assembly into two end beams and trim the ends square with a file.

Locate the centerline of the caboose underframe using diagonals. With the end beams laid in place, locate and drill the holes for your coupler box mounting screws. I used Kadee 405s and 2-56 hex head screws (Fig. 22).

Now drill a #56 hole (0.046”) about 3/8” from the centerline of the end beam through the beam into the underframe. Pin the beam with a piece of brass wire and drill on the other side (Fig. 23). Cut two pieces of brass wire to act as pins and glue them into the end beam below.
the surface with CA. Trim the back side of the pins and make sure the end beam is a snug fit to the underframe (Fig. 24). Repeat for the other end of the underframe. Label the end beams “A” and “B” and mark the corresponding ends of the underframe. This way you will always match the beam with the same end.

Install the end beams and mount the coupler pockets to the underframe. Mark the locations for the truck bolsters (Fig. 25). Make the truck bolsters from \( \frac{3}{8} \) square styrene (or wood) stock and taper the ends with a file, or use commercial parts like the Precision Scale U-49 body bolsters (which I am using). If you make your own bolster from styrene or wood, glue it to the underframe. If you use the U-49 bolster, screw it to the underframe with \#1 x \( \frac{1}{2} \) wood screws trimmed to length (Fig. 26).

Install trucks and check the coupler ride height (Fig. 27) with a gage. I recommend installing the actual trucks you will use on the final model. I didn’t and had to shim the coupler boxes later when I installed the Accurate O Scale leaf spring caboose trucks.

**End Beam Details**

Make the end railings from 0.040” diameter wire (a scale two inches in diameter). I used straight floral wire which you can buy in most craft shops. I bought mine at A.C. Moore and it’s dirt cheap compared to straight brass wire and since we’re going to glue the bits together there is really no need to use brass.

Using the end drawings, locate the positions of the four holes across the length of the end beam. Make sure the holes are spotted through the center of the beam from the underside. (Now you see why I made the end beams removable!). Spot starter holes with a small drill bit (any size) and finish up the holes with a \#56 (0.046”) drill. Be sure to drill straight through the beam from the bottom.

Cut lengths of 0.040” diameter wire about 1¼ inches long. These are the inner stanchions. Cut more wire about 2¼ inches long. These are the outer stanchions. Lay the end beam on the drawing and push the inner stanchions through the holes in the beam until the wires are flush with the bottom of the beam. Secure with CA and trim the tops to the drawing. Repeat for the second end beam.

Temporarily assemble the body to the underframe with the end beams in place and push the outer stanchions up through the holes in the beams until they touch the roof. Secure with CA. Do not trim off the outer stanchions at the bottom of the end beam as these are rain spouts (Fig. 28).

Now make the crossbars for the end railings. Drill a \#56 hole in 0.040” x 0.080” styrene strip by hand. Do this slowly and you won’t distort the styrene. Slip this over the outer stanchion and spot the location for the inner stanchion hole. Drill the second hole and clip off the strip with excess material out past the holes. Slip the crossbar down over both stanchions, making sure it is level, and secure with CA. Clip off the excess with a sprue cutter (Fig. 29).

The crossbars are actually angle iron, so add a 0.020” x 0.060” strip across the front edge (Fig. 30) and glue with liquid cement. Trim with the sprue cutter.

Make the cinder guards from 0.020” styrene sheet. The guards are approximately two scale feet by three scale feet. The mounting tabs are made from 0.020” x 0.060” strip. Attach these with CA to the crossbars and end beams (Fig. 31). Add safety chain across the opening, add the brake wheel staff and the ends are complete.

**Trimming the Roof**

Take 0.040” x 0.080” styrene strip and...
gently shape it to a flat curve with your fingers until it matches the radius of the roof curve (Fig. 32). Temporarily assemble the body to the underframe with end beams in place. Place this end fascia against the outer stanchions and glue in place against the underside of the roof. Trim to length.

Remove the body from the underframe and carefully trim the roof overhang to the edge of the fascia with the sprue cutter. File with a file emery board.

Notch the roof corners $\frac{1}{8}$ in from the side and $\frac{3}{16}$ in from the end. Cut the notches out with the sprue cutter. Now trim all the roof edges with 0.020” x 0.080” styrene strip (Fig. 33). Trim off any overhang.

**Underframe Details**

Cut and file two pieces of 0.040” x 0.250” styrene to fit snugly between the bolsters. Glue in place. These will form the main portion of the center sill. Cut two blocks of 0.25” x 0.25” styrene to fit between the bolsters and coupler boxes. Glue in place. Cut four pieces of 0.040” x 0.25” styrene and glue these on either side of the blocks (Fig. 34). Now trim the top edges of the center sill pieces with 0.040” x 0.125” styrene.

The center support braces are made from Plastruct $\frac{1}{8}$ “U” channel. The channels face in toward the center of the frame. Measure approximately ten scale feet in from the ends without the end beams in place. Cut the channel longer than needed. Glue in place and trim flush to the edge of the underframe (Fig. 35).

I used a Grandt Line kit for the brake details. The brake cylinder and triple valve mount to brackets supplied in the Grandt kit. Make supports from more “U” channel and other bits of styrene scrap for the rest of the components. Now is the time to add the brake piping and brake rods.

The bathroom bucket can be made from 0.25” diameter styrene tubing trimmed to length and glued to the underframe. I made mine by wrapping 0.010” styrene around a wooden dowel I had handy.

The toolbox is about five scale feet long and two scale feet deep. It looks to be about two scale feet high as well. Cut four pieces of 0.250” square styrene tubing 1¼ inches long and cement together (Fig. 36). Glue 0.020” scrap over the ends and trim flush. Choose one side to be the front face and one to be the bottom. Glue 0.020” scrap over the bottom and trim flush. Glue a piece of 0.020” vertical scribed siding across the front face. Make sure the siding is straight up and down. Now glue another piece of 0.020”
Using a gray primer-colored paint, brush on a wet coat and lay the tissue in slightly overlapping strips. Lay them right over the roof walk supports, starting at the cupola face, and work out to the roof edge (Fig. 48). Do both sides and the cupola roof. Put another coat of paint on all the “canvas” surfaces and set aside to dry overnight. After the paint is thoroughly dry, you can trim all the edges of the “canvas” with an X-acto knife.

Now you can add those hand rails to the cupola roof.

**Final Details**

The smokejack is located on the long roof, 5 1⁄2 scale feet from the end and two scale feet in from the side. Drill a pilot hole and then glue a block of 0.250” scrap styrene under the pilot hole from the inside to support the stack. My smokejack came from my parts box. You can make one from scratch or use a Grandt Line stack. Whichever you do, measure the diameter of the base and drill through the pilot hole into the scrap block. My stack was just a bit smaller than 0.250” so I started with a smaller drill and worked my way up to the final size, twisting the drill bit with my fingers. You want a deep enough hole so the smokejack sits parallel and square with the body. Secure with CA. Drill a #73

**End Platform Steps**

There are several ways to approach this. If you have an old Quality Craft or Gloor Craft N&W caboose kit, you can use the steps from that (In fact, you can use all the metal details and save a lot of work). Otherwise, you can make your own from sheet styrene by developing a flat pattern from the drawings. I've done this in the past and the steps look okay but are very flimsy. Another option is to modify a commercial casting like I did here.

Get a set of PSC #40699 passenger car steps. The steps will be mounted upside down and backwards (Fig. 38), so look at them that way. Mount the step in a vise and, using a razor saw, cut off the top step (Fig. 39). Shape the (now) back edge with a file.

Apply some liquid cement to the underframe at each corner. Allow the styrene to soften. Apply CA to the top of the step. Position the step on the underframe and allow the CA to set. Make sure the steps are square with the underframe (Fig. 40). Install your trucks and check for clearance (Fig. 41), then recheck the coupler height.

**Detailing the Body**

Most of the details on the body are handrails. There are four on each end, two on each side, and four on the cupola roof. To make these railings identical, I made jigs for bending and for drilling the holes in the body. Fig. 42 shows the bending jig for the lower handrails on the ends. The railings are made from #21 gauge floral wire (about 0.030” diameter). Make four of these railings. Fig. 43 shows the drilling jig for the lower handrails. Drill the holes and install the railings with CA. Fig. 44 shows the same jig being used to locate the upper handrail holes as the spacing is the same as for the lower.

Fig. 45 shows both the bending and drilling jigs for the cupola handrails. Again, make the railings from #21 gauge wire and drill the holes, but don’t install them until you finish the roof detailing described below.

Fig. 46 shows the combination drilling/bending jig for the side railings. Make the railings from #21 gauge wire, locate the mounting holes and install with CA.

Make window shades for the cupola side windows by fitting a piece of 0.020” x 0.100” styrene strip over the windows (Fig. 47) and glue at an angle.

There are some other minor details like nut-bolt-washer castings and rain gutters that you can add. I didn’t.

**Roof Details**

Make roofwalk supports from 0.020” x 0.060” styrene. Make six for the short roof and seven for the long roof. Starting at the cupola face, mark every two scale feet with the last mark at the edge of the roof. Place a drop of liquid cement on each mark and place the support on the cement.

The roof walks are made from 0.040” x 0.125” styrene but, before adding the roof walks, you need to cover the roof in simulated canvas. I used tissue paper (the kind used in packages) to simulate this material. Cut strips about ¾” wide, long enough to drape over the edges of the roof.
hole through the top of the jack and add 0.020" diameter wire for bracing.

Add markers, brake wheels and ladders of your choosing and you’re done with construction. You can make your own ladders by adapting Gene Deimling’s jig as described in OST#18, or you can buy ladders from Des Plaines Hobbies (Part #PP01003) eight rung ladders. Secure to the ends with CA and trim so they fit under the roof.

Make the main roof walks from 0.040" x 0.125" styrene. The end walks are 0.040" x 0.25" styrene. The supports under the end walks are 0.020" x 0.060" (Fig. 49).

Paint & Decals
Prime everything and let sit for 24 hours. Paint the underframe and end beams a semi-gloss black. Paint the caboose body a bright gloss red. Let everything dry for 24 hours before you decal the body. My decals came from Chesterfield Hobbies in Virginia.

The last two details are to brush-paint all the hand grabs on the body a semi-gloss black and brush-paint the roof box car brown (for a new roof look).

That’s it, you’re done!

(From [Mainline Modeler](https://www.mainlinemodeler.com) #4, 2001, page 49)

(Author’s note: After I had Carey Hinch do this great drawing, but before we went to press, I discovered that Bob Hundman did CF drawings for Mainline Modeler. They are more detailed and worth having for this project.)

References
Caboose of the Norfolk & Western, Bowers & Brewer, © 1994 Progress Press, Roanoke, VA.
Model Railroader, August 1945, plan for class CG steel caboose.
Mainline Modeler, November 1997, plan for CF wood caboose.

Materials List:
General Hobby Shop Stuff
#1 x ½" wood screws
2-56 x ¼" hex head brass screws
PlastiKote #3702 Grey Auto Primer
PlastiKote #637 Black spray
Testors #1203 Gloss Red spray
Testors tube cement
Liquid styrene cement
CA - Cyanoacrylate cement
Evergreen Styrene
2 sheets #4067 Car Siding 0.040" thick
1 sheet #2067 Car Siding 0.020" thick
4 sheets #9020 plain styrene 0.020" thick
0.020" x 0.060", scale 1 x 3
0.040" x 0.060", scale 2 x 3
0.040" x 0.080", scale 2 x 4
0.040" x 0.250", scale 2 x 12
0.040" x 0.125", scale 2 x 6
0.080" x 0.125", scale 4 x 6
0.100" x 0.125", scale 5 x 6
0.250" x 0.250", scale 12 x 12

Plastruct
#90504 ¼" "L" angle
#90533 ¼" "U" channel
#90532 ¼" "U" channel

Precision Scale Co. [P.O. Box 278, Stevensville, MT 59870, (406) 777-5071, psc@ixi.net]

#U-49 body bolster
#40999 Passenger car steps

Des Plaines Hobbies [1468 Lee St, Des Plaines IL 800-264-1956]

#PP01003, 8 rung ladders

Accurate O Scale, [38623 Orchard St, Cherry Valley CA 92223, 909-845-5237]

Swing Motion Caboose Truck (JB) w/33" wheels

Grandt Line [1040 B Shary Court, Concord, CA 94518, 925-671-0143]

#3049 AB brake set.

Kadee 405 couplers

A. C. Moore Craft store [http://acmoore.com to find a local store]

#18 gauge (.040") floral wire

#21 gauge (.030") floral wire

Chesterfield Hobbies 804-379-6591

Decals

Tools [recommend www.EHobbyTools.com]

X-acto, scalpel, or hobby knife with several of your favorite style of fresh blades

Pin vise

Sprue cutter

Razor Saw

Scale rule

Drill bits #61 - #80, #56
N&W Diesel-Era
Class CF Cabs

Richard Howard of Peoria, Ill., saw my announcement about the article on scratchbuilding the N&W class CF wooden caboose and sent me a note saying he had actually owned four CF cabs. He asked if I’d be interested in photos. “Of course,” I responded. Richard sent me a batch of photos and I choose two to illustrate how this steam-era cab could be built for the Diesel-era.

Since the class CF cabs had steel underframes, they were rebuilt, as needed, with plywood-sheathed sides (smooth) and the cupolas were rebuilt with modern all-weather windows.

The top photos shows CF# 518125 which was built in October 1915. It was sold to Luria Steel and Trading Co., in July of 1979. The bottom is CF# 518257 built in November 1917 and sold to Luria at the same time as #518125. Presumably, Richard purchased these two cabs from Luria and two additional CFs, #518335 and 518289, all from the same era.

To model these cabs, layout the sides as I show in the article on scratchbuilding the N&W class CF wooden caboose and sent me a note saying he had actually owned four CF cabs. He asked if I'd be interested in photos. “Of course,” I responded. Richard sent me a batch of photos and I choose two to illustrate how this steam-era cab could be built for the Diesel-era.

Since the class CF cabs had steel underframes, they were rebuilt, as needed, with plywood-sheathed sides (smooth) and the cupolas were rebuilt with modern all-weather windows.

Paint the cabs in either of the two schemes shown for your Diesel-era layout. While the steam-era decals are hard to find, N&W Diesel-era decals abound.

Thanks, Richard, for sharing these with us.
—Joe Giannovario

2-Rail Steam Locomotives

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALCO NN-75</td>
<td>Brass PRR Undec K-4 Broadway Limited</td>
<td>$995.00</td>
</tr>
<tr>
<td>GEM ST-508</td>
<td>RDG Steam Undec Class B-8a, Camelback 0-6-0</td>
<td>$750.00</td>
</tr>
<tr>
<td>KEY X1a675</td>
<td>NYC Steam K-30 4-6-2 Pacific Brass</td>
<td>$2,495.00</td>
</tr>
<tr>
<td>KEY NN-66</td>
<td>B&amp;A Steam F/P K-3 506 Pacific, 4-6-2</td>
<td>$2,495.00</td>
</tr>
<tr>
<td>KEY NN-66</td>
<td>B&amp;A Steam F/P K-3 506 Pacific, 4-6-2</td>
<td>$2,495.00</td>
</tr>
<tr>
<td>MTH 20-3014-2</td>
<td>CNW Steam 4-6-4 Hudson streamlined</td>
<td>$849.00</td>
</tr>
<tr>
<td>MTH 20-3042-2</td>
<td>CGO M-1 Turbine Steam Engine</td>
<td>$849.00</td>
</tr>
<tr>
<td>MTH 20-3146-2</td>
<td>Jersey Central Bullet (Green) 4-6-2 W/Proto Sound 2.0</td>
<td>$749.00</td>
</tr>
<tr>
<td>MTH 20-3138-1</td>
<td>Jersey Central 4-6-2 P47 W/Proto Sound 2.0</td>
<td>$749.00</td>
</tr>
<tr>
<td>MTH 20-3139-2</td>
<td>Nickel Plate 4-6-2 P47 W/Proto Sound 2.0</td>
<td>$749.00</td>
</tr>
<tr>
<td>MTH 20-3140-2</td>
<td>Boston &amp; Maine 4-6-2 Steam Engine W/Proto Sound 2.0</td>
<td>$749.00</td>
</tr>
<tr>
<td>MTH 70-3007-1</td>
<td>Boston &amp; Albany Steam Engine with Protosound</td>
<td>$729.95</td>
</tr>
<tr>
<td>MTH NN-1944</td>
<td>PRR K4 4-6-2 Steam Engine</td>
<td>$795.00</td>
</tr>
<tr>
<td>SUNSET NP-75</td>
<td>NP A5 4-6-4 Engine F/P</td>
<td>$985.00</td>
</tr>
<tr>
<td>SUNSET BO-71</td>
<td>B&amp;O 5-12-10-12 Steam Engine DC only</td>
<td>$1,075.00</td>
</tr>
<tr>
<td>SUNSET CAM</td>
<td>Erie Camelback L-1 Steam 0-8-8-0</td>
<td>$995.00</td>
</tr>
<tr>
<td>SUNSET MS-1B</td>
<td>PRR M-6 4-8-2 Steam Engine 2 Rail</td>
<td>$985.00</td>
</tr>
<tr>
<td>SUNSET UP-42</td>
<td>Union Pacific Steam 9000 Special Edition 4-12-2</td>
<td>$1,475.00</td>
</tr>
<tr>
<td>SUNSET NN-35</td>
<td>PRR Steam undec 1-2-10-1, Long Tender</td>
<td>$995.00</td>
</tr>
<tr>
<td>SUNSET NN-60</td>
<td>CGO Steam undec 4-8-2</td>
<td>$920.00</td>
</tr>
<tr>
<td>SUNSET NN-97B</td>
<td>PRR 2-10-4 used steam engine, F/P, weathered, rare</td>
<td>$1,095.00</td>
</tr>
<tr>
<td>SUNSET S-2</td>
<td>PRR 6-8-6 Like new, ob, factory painted weathered</td>
<td>$850.00</td>
</tr>
<tr>
<td>USH K-4</td>
<td>PRR6-2 (K-4) Used, original box, custom painted poor</td>
<td>$695.00</td>
</tr>
<tr>
<td>USH NN-185</td>
<td>NYC Ltb 4-8-2 Steam Engine</td>
<td>$1,195.00</td>
</tr>
<tr>
<td>USH NN-1596</td>
<td>IHB 8-8-0 C/P Steam Engine (Run Nice)</td>
<td>$895.00</td>
</tr>
<tr>
<td>WEAV G10855</td>
<td>UP Steam Forty Niner 4-6-2</td>
<td>$795.00</td>
</tr>
<tr>
<td>WEAV G10985</td>
<td>Reading Steam Crusader 4-6-2 Cab #17</td>
<td>$895.00</td>
</tr>
<tr>
<td>WEAV G77075</td>
<td>Miltw Rd 5-4-8-4 Steam Engine, Later version, no sound</td>
<td>$939.00</td>
</tr>
<tr>
<td>WEAV G77125</td>
<td>Canadian National U4-A 4-8-4 Steam Engine</td>
<td>$939.00</td>
</tr>
<tr>
<td>WEAV NN-98</td>
<td>WP Steam F/P G54-4-4-4</td>
<td>$849.00</td>
</tr>
<tr>
<td>WEAV T-1</td>
<td>PRR 4-4-4-4 Like new, ob, factory painted weathered</td>
<td>$530.00</td>
</tr>
<tr>
<td>WILLIAMS</td>
<td>PRR K2 4-6-2 Steam Engine</td>
<td>$490.00</td>
</tr>
</tbody>
</table>

Atlas 2-Rail Diesel Locomotives

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1102-2</td>
<td>CGO TMCC Diesel GP-35 Engine</td>
<td>$345.00</td>
</tr>
<tr>
<td>2000</td>
<td>Underc GP-35 Low Nose.</td>
<td>$335.00</td>
</tr>
<tr>
<td>2001</td>
<td>Underc GP-35 High Nose, unpowered</td>
<td>$315.00</td>
</tr>
<tr>
<td>2003-1</td>
<td>GMUG GP-35 Low Nose 62.4</td>
<td>$335.00</td>
</tr>
<tr>
<td>2009-2</td>
<td>EMD Demo GP-35 Low Nose *6545, Ltd Edition, no sound</td>
<td>$335.00</td>
</tr>
<tr>
<td>2111-1</td>
<td>Reading*620-1 GP-35 Locomotive Diesel DC</td>
<td>$350.00</td>
</tr>
<tr>
<td>2111-2</td>
<td>Reading*620-3 GP-35 Locomotive Diesel DC</td>
<td>$350.00</td>
</tr>
<tr>
<td>2111-3</td>
<td>Reading*620-5 (DC) Low Nose</td>
<td>$335.00</td>
</tr>
<tr>
<td>2114-1</td>
<td>Western Maryland GP-35 (DC) 3176 Low Nose</td>
<td>$335.00</td>
</tr>
<tr>
<td>2114-2</td>
<td>Western Maryland GP-35 (DC) 3178 Low Nose</td>
<td>$335.00</td>
</tr>
<tr>
<td>2215</td>
<td>Nickel Plate Road GP-35 (DC) 1010 Low Nose</td>
<td>$335.00</td>
</tr>
<tr>
<td>2251</td>
<td>Underc GP-35 High Nose, unpowered</td>
<td>$177.00</td>
</tr>
<tr>
<td>2257-1</td>
<td>NW GP-35 3 High Nose *200, unpowered</td>
<td>$177.00</td>
</tr>
<tr>
<td>2258-1</td>
<td>WIP GP-35 Low Nose Diesel Loco *5777, Unpowered</td>
<td>$177.00</td>
</tr>
<tr>
<td>2290</td>
<td>Underc A (Hdl) DC/DC Ready</td>
<td>$349.00</td>
</tr>
<tr>
<td>2292</td>
<td>Underc B FM Ern Built DC/DC Ready</td>
<td>$349.00</td>
</tr>
<tr>
<td>2293</td>
<td>Underc A (Hdl) FM Ern Built (Unpowered Units)</td>
<td>$177.00</td>
</tr>
<tr>
<td>2294</td>
<td>Underc A (Hdl) FM Ern Built (Unpowered Units)</td>
<td>$177.00</td>
</tr>
<tr>
<td>2295</td>
<td>Underc B FM Ern Built (Unpowered Units)</td>
<td>$177.00</td>
</tr>
<tr>
<td>2291-1</td>
<td>NYC (Freight) FM Ern Built (Unpowered Units) *5004 (A)</td>
<td>$177.00</td>
</tr>
<tr>
<td>2291-2</td>
<td>NYC (Freight) FM Ern Built (Unpowered Units) *5005 (A)</td>
<td>$177.00</td>
</tr>
<tr>
<td>2292-1</td>
<td>PRR (Freight) FM Ern Built (Unpowered Units) *9464 (A)</td>
<td>$177.00</td>
</tr>
<tr>
<td>2293-1</td>
<td>PRR (Freight) FM Ern Built (Unpowered Units) *9468 (B)</td>
<td>$177.00</td>
</tr>
<tr>
<td>2293-2</td>
<td>PRR (Freight) FM Ern Built (Unpowered Units) *9465 (B)</td>
<td>$177.00</td>
</tr>
<tr>
<td>2223</td>
<td>Santa Fe FM Ern Built (Unpowered Units) *90A (B)</td>
<td>$177.00</td>
</tr>
<tr>
<td>2250</td>
<td>Underc GP-60 Powered Diesel DC Only</td>
<td>$366.00</td>
</tr>
<tr>
<td>2251</td>
<td>Underc GP-60 Dummy Unit</td>
<td>$185.00</td>
</tr>
</tbody>
</table>
Way back in February, I had the opportunity to hit the Springfield Show, hosted by the Amherst Railway Society. The “Amherst Show” is a multi-scale event, and one of the largest in New England (Take your hat off when New England is mentioned, Pilgrim!).

There was a pretty significant O Scale presence at the show, what with the Southern New England O Scalers’ modular railroad, Bill Driscoll and the boys, and a couple really nice O30 modules depicting coastal New England themes. Of course, OST was there, and a sizable crew of O Scale lurkers, shirkers, tramps, bums, and other high forms of life took the time to stop over and gasbag a bit. A good time was had by all, and we all went our separate ways after the show, a-glow in all that free flowing love, admiration, and libation.

A funny thing happened after the show-glo wore off, which brings us to today’s sermon (The congregation leans forward expectantly, hanging on every word). The discussions started, usually based on “there was no, little, or unsatisfactory, O Scale at the show”. I won’t rant (like last issue) about the way the folks who hustled in the afore-mentioned modular railroads might rightfully take that comment, nor will I say “Get thee hence and do it yourself next year!” Instead, I’ll explain how I could come away from this wonderful show all warm and fuzzy, and present (especially for the benefit of our newer converts) the perspective that keeps me that way. No, it doesn’t start with, “Take two fingers of vermouth, a teaspoon of Triple-F gunpowder, and your trusty Zippo…”

OK, so this wasn’t an O Scale show, with table after table of industrial sized loot at attractive prices. However, multi-scale shows are worth the time, not for the newest (or dustiest) in rolling stock, but for other reasons. Here are a few.

First, you can spy on the other scales. Find out what they’re doing, the nefarious thugs. Stealing ideas about scenic treatments from the Ntrak folks is your moral duty. Watching the HO guys fumble around with their control system can yield wisdom about how not to install yours. Get that kind of cross-cultural knowledge and apply it with an air of righteousness. After all, scale does not start until just above the benchwork. Repeat that little gem of wisdom until it is part of your soul.

Why should you have to wait for the O Scale solution, especially when the #1 Gauge guys have already solved the problem? Go to the cross-cultural shows and steal ideas and solutions with impunity.

Also, there are resources at this type of event you won’t find at the O Scale shows, namely the historical societies. Local multi-scale train shows often have representatives of historical organizations of local interest. In this case, what we have is a confluence of New England historical resources unmatched at any other time of the year. I never even knew there was a “Pfaudler Modelers” group! Now I know who to tap for milk car information. The B&M folks were there, along with the New Haven, New York Central, Rutland, and a host of other railroad-specific historical organizations. Several regional groups, such as the Palmer (Mass) Historical Society had booths. What an opportunity, all these potential resources for the prototype and regional modeler represented under one roof.

Also seen at multi-scale shows are a couple other sources for information about the prototype you model, or the about the locale your freelanced empire theoretically serves. These are the booksellers and photograph folks. Here, we had a wealth of printed matter available, both from the historical societies and from commercial vendors. Not to be forgotten are the private individuals who are just thinning out their bookshelf space. There were folks like Bob Liljestrand, of Bob’s Photos. He must have had thousands of photographs available, locomotives, buildings, freight and passenger cars, invaluable for that scratchbuilding or kitbashing project.

Lastly, the multi-scale show has potential converts, in this case the attendees numbered in the tens of thousands. That’s a lot of opportunity for new converts to the one and true faith. Whether in the modular club venue or holding forth at the OST Tabernacle, the opportunity to get ‘em on the hook is there. All of you O Scalers who gathered for a group photo-op under the sign of OST, you may not realize it but there were a lot of HO, N, and 3-Rail folks who got a quick glimpse of the camaraderie we enjoy (Was it Randy Brown who looked around and said that between all the folks in that gathering there was over a thousand years in O Scale between us?) Anyway, several came around later (quietly, in case they were seen!) to find out what the deal was, and to talk about why our world is just a little special. None of that can hurt us!

So take in a multi-scale show from time to time. Don’t obsess about how few tables had O Scale stuff on them. I left Springfield with lots of ideas, a thick pack of photos, a book on B&M cabooses, and a couple sets of decals. I also left with a little hint of a bounce in my shuffle.

Let’s Go Exploring!
Diesel Details

What makes a good model great? Detail, of course. O Scale modelers have had good-looking detail on their equipment for some time. It just stands to reason, because our models are bigger. But what is it about the detailing that makes a locomotive modern?

A modern GP35 looks the same as it did when first produced in 1965, except for the details. I'm not talking about door latches, number boards, or window glass. Those are items I consider a “given” on most models. It's the road-specific details like air conditioners, rotary beacons, and battery boxes that change the era of a locomotive. It's hard to believe, but it has been a decade or more since railroads were required to have ditch lights! Let's not forget paint schemes for a given era, but I'll touch on that in a moment.

So, what if you model a 1970s or 1980s railroad? The best way to know if a railroad applied a certain piece of equipment to their locomotive is to see it in person. Since travel is not yet the norm, we have to rely on pictures, books, and the Internet.

A great Internet source for thousands of railroad photos is the Railpictures.net site. There are several ways to search the photos and almost every railroad, past and present, is represented.

Now, let's say you have searched the archives and have found a photo of a GP35, circa 2004, that you want to replicate. You'll need to get the detail parts. Look for a Walthers Big Trains catalog at your local hobby shop. If you have a computer, the world is at your fingertips with web search engines like Google, Yahoo!, Microsoft Search. Today's locomotives are manufactured with all the creature comforts. Twenty years ago, locomotives didn't even come equipped with air conditioning units. Fifty years ago, locomotives didn't come with radios! Eastern railroads may not have been equipped with air conditioning units, at first. For example, Southern locomotives rarely had a/c units and, even well into Norfolk Southern ownership, many were still without air conditioners. After the merger mania of the 1970s and 1980s, railroads expanded their routes and built new revenue bases. This meant locomotives that once operated in arid Nevada were now seeing service in snow covered Chicago. Snowplows had to be added to the front (and sometimes rear) pilots. Headlight arrangements were relocated or sometimes multiplied. The Gyra-lite was very common until the early nineties, when ditch lights were mandated. Today, a Global Positioning System (GPS) antenna says, “Modern.”

My photos of this ex-Santa Fe locomotive show a present-day GP35. Even tripled with GE Dash 9 locomotives it's very much the modern workhorse, and it's the lead unit on a local freight! The details that make it so are not overly complicated. Our locomotive is painted in the last Santa Fe scheme, although weathered and updated for new owner BNSF. To me, mergers means new paint schemes, but “patching” is used to claim a locomotive for the owner until an overhaul is needed or money allows. This is where the color scheme helps to tie the present to the past. At a glance, the air conditioning unit is orange, and clues you in to the fact it may well have come from a modern BNSF “heritage” scheme locomotive. If the photo were black and white, would you know the year?

That being said, pictures are still the best place to start. I have two Atlas GP35s in the Southern paint scheme and one in Norfolk and Western. I have set the date on my railroad to the early eighteenies. The GP35s fit nicely into this timeframe without any detail modifications. If I move ten years forward, and pair one of them with a GP60, I will be in trouble with the detail police! With a GP60 in the consist with the Southern GP35s, the GP35s would need ditch lights added, since the GP60 came along after the ditch light requirement. Also, the Southern paint scheme didn't last long after the merger with Norfolk and Western, and certainly not into the GP60 years.

Engine detail can be an obsession for some. It's hard not to like a highly detailed engine, but you don't have to apply every pipe and valve to get modern. There are people that just like to see their equipment run (after all, it is called “ready-to-run”), but perhaps the current offerings may well be better termed “ready-to-detail”.

Next time, We'll look at some high-tech and modern lineside details, including satellite controlled switch machines and cab controlled 2.4 GHz remote switch machines, and how to model them.

Web references
http://www.railpictures.net
http://www.walthers.com
http://www.google.com
http://www.yahoo.com
http://www.msnsearch.com
May/June '05 - O Scale Trains • 15

**Important notice regarding First Class Mail subscription availability.**

Many of you have asked us to provide a First Class Mail subscription. Well, your pleas have been heard. We now offer First Class Mail service for $40 a year. We will also upgrade those of you with current subscriptions at $1.65 per issue, but you will have to call the office to find out the exact cost since that will depend on how many issues you have left.

So, if you've had bad postal service in your area, you may want to upgrade your subscription.

---

**DOMINION MODELS**

1/43rd Scale Models of American Cars

1951 Chrysler Windsor by Western...$179.00
1955 Imperial by American Models...$175.00

Call or write for Free Brochure:
Dominion Models • P.O. Box 515 • Salem, VA 24153
phone/fax: 540-375-3750 • e-mail: Bob@dominionmodels.com

**VISIT OUR NEW WEBSITE:** www.DOMINIONMODELS.com

---

**Precision Turntables for the Discerning Modeler**

FEATURING PRO-DEX™ INFRA-RED POSITIONING & DYNAMIC BRAKING

Now it's easy & exciting to operate prototypically: 1. Select direction 2. Push run button 3. Watch bridge advance to any of 48 positions, then slow & lock on desired track when you release button!

AAA PRECISION TURNTABLES

PO Box 64, Plantsville, CT 06479, USA
1-800-569-1423 • www.AAATurntables.com

---

**THE GREAT SCALE MODEL TRAIN SHOW™**

April 16 & 17, 2005
June 25 & 26, 2005
October 8 & 9, 2005

Maryland State Fairgrounds
Timonium, MD

Hours: Sat 9-4; Sun 10-4

100's of tables of scale and hi-rail trains and displays

For details and hotel information about both Shows visit www.gsmls.com or contact:
The Ellicott City Scale Model Railroad Association
410-730-1036 • lzane1@comcast.net

Show Admission: $7 per person

---

**DOMINION MODELS**

1/43rd Scale Models of American Cars

1951 Chrysler Windsor by Western...$179.00
1955 Imperial by American Models...$175.00

Call or write for Free Brochure:
Dominion Models • P.O. Box 515 • Salem, VA 24153
phone/fax: 540-375-3750 • e-mail: Bob@dominionmodels.com

**VISIT OUR NEW WEBSITE:** www.DOMINIONMODELS.com

---

**Precision Turntables for the Discerning Modeler**

FEATURING PRO-DEX™ INFRA-RED POSITIONING & DYNAMIC BRAKING

Now it's easy & exciting to operate prototypically: 1. Select direction 2. Push run button 3. Watch bridge advance to any of 48 positions, then slow & lock on desired track when you release button!

AAA PRECISION TURNTABLES

PO Box 64, Plantsville, CT 06479, USA
1-800-569-1423 • www.AAATurntables.com

---

**THE GREAT SCALE MODEL TRAIN SHOW™**

April 16 & 17, 2005
June 25 & 26, 2005
October 8 & 9, 2005

Maryland State Fairgrounds
Timonium, MD

Hours: Sat 9-4; Sun 10-4

100's of tables of scale and hi-rail trains and displays

For details and hotel information about both Shows visit www.gsmls.com or contact:
The Ellicott City Scale Model Railroad Association
410-730-1036 • lzane1@comcast.net

Show Admission: $7 per person

---

**DOMINION MODELS**

1/43rd Scale Models of American Cars

1951 Chrysler Windsor by Western...$179.00
1955 Imperial by American Models...$175.00

Call or write for Free Brochure:
Dominion Models • P.O. Box 515 • Salem, VA 24153
phone/fax: 540-375-3750 • e-mail: Bob@dominionmodels.com

**VISIT OUR NEW WEBSITE:** www.DOMINIONMODELS.com

---

**Precision Turntables for the Discerning Modeler**

FEATURING PRO-DEX™ INFRA-RED POSITIONING & DYNAMIC BRAKING

Now it's easy & exciting to operate prototypically: 1. Select direction 2. Push run button 3. Watch bridge advance to any of 48 positions, then slow & lock on desired track when you release button!

AAA PRECISION TURNTABLES

PO Box 64, Plantsville, CT 06479, USA
1-800-569-1423 • www.AAATurntables.com

---

**THE GREAT SCALE MODEL TRAIN SHOW™**

April 16 & 17, 2005
June 25 & 26, 2005
October 8 & 9, 2005

Maryland State Fairgrounds
Timonium, MD

Hours: Sat 9-4; Sun 10-4

100's of tables of scale and hi-rail trains and displays

For details and hotel information about both Shows visit www.gsmls.com or contact:
The Ellicott City Scale Model Railroad Association
410-730-1036 • lzane1@comcast.net

Show Admission: $7 per person
### P&D Hobby F Unit Sale

**POWERED F “A” Units: Reg. $350, SALE $289.99**

- #7001 EMD F3-Ph4, F7-Ph1 early, 36” low fans, 36” dynamic brake, 2 portholes, horiz grilles
- #8001 EMD F7-Ph1 late, F7-Ph2, 36” low fans, 48” dynamic brake, 2 portholes, Farr (vert) grilles (shown above)
- #9001 EMD F9, 36” fans, 48” dynamic brake, 2 portholes, Farr (vert) grilles

**POWERED F “B” Units: Reg. $315, SALE $264.99**

- #3001 EMD F3-Ph3, F7-Ph1, 36” low fans, 36” dynamic brake, 3 portholes, horiz grilles
- #4001 EMD F7-Ph1 (late), F7-Ph2, F9, 36” low fans, 48” dynamic brake, 2 portholes, Farr (vert) grilles

---

### UNPOWERED F “A” Units: Reg. $225, SALE $189.99

- #7002 EMD F3-Ph4, F7-Ph1 early, 36” low fans, 36” dynamic brake, 2 portholes, horiz grilles
- #8002 EMD F7-Ph1 late, F7-Ph2, 36” low fans, 48” dynamic brake, 2 portholes, Farr (vert) grilles
- #9002 EMD F9, 36” fans, 48” dynamic brake, 2 portholes, Farr (vert) grilles

**UNPOWERED F “B” Units: Reg. $200, SALE $169.99**

- #3002 EMD F3-Ph3, F7-Ph1, 36” low fans, 36” dynamic brake, 3 portholes, horiz grilles
- #4002 EMD F7-Ph1 (late), F7-Ph2, F9, 36” low fans, 48” dynamic brake, 2 portholes, Farr (vert) grilles

---

**F Unit “A” Body KITS: reg. $99.95, on sale $82.99**

- #7000 EMD F3-Ph4, F7-Ph1 early, 36” low fans, 36” dynamic brake, 2 portholes, horiz grilles
- #8000 EMD F7-Ph1 late, F7-Ph2, 36” low fans, 48” dynamic brake, 2 portholes, Farr (vert) grilles
- #9000 EMD F9, 36” fans, 48” dynamic brake, 2 portholes, Farr (vert) grilles

**F Unit “B” Body KITS: reg. $94.99, on sale $79.99**

- #3000 EMD F3-Ph3, F7-Ph1, 36” low fans, 36” dynamic brake, 3 portholes, horiz grilles
- #4000 EMD F7-Ph1 (late), F7-Ph2, F9, 36” low fans, 48” dynamic brake, 2 portholes, Farr (vert) grilles

---

All kits include brass etched grills, appropriate detailed parts, and preformed grab irons for indicated model. These kits include only the parts above the frame.
Building a Small O Scale Layout
Part Three
Michael Culham

In the previous parts (OST #18 and #19) of this series, we built the benchwork and got to the point where we are now; all the ties are in place, painted and ready for rail. In this part of the series, we are going to learn how to handlay track. Now I can hear some of you out there saying, “I can’t handlay track. It’s too hard!” If I can do it with arthritic hands, anybody can. It is very easy. If you can hold a pair of needlenose pliers, you can lay track. It does not take a lot of time to handlay track; you can have three feet laid in less than half an hour. In Part Two, I gave you a list of tools that you need. Let’s review that list here:

Needlenose pliers
Heavy-duty rail cutters
Small files
Three-point gage for code 125 rail, two required (Precision Scale)
NMRA gage
Modeling knife with sharp #11 blades
Tweezers
A truck with metal wheelsets that are in gauge.
Map pins (These are straight pins with little colored balls on the end of them)

One thing I do recommend, before doing trackwork, is to go out and take some photos of prototype track and turnouts. Take lots of detail shots, as they will help you understand how and why things are used when you start spiking rail.

How to Spike
Before we get started, let’s take a moment and have a look at how to hold the pliers and spikes when laying track. This is very important for making tracklaying easy. Make sure that the needlenose pliers that you choose feel comfortable in your hand.

Hold the handles of the pliers in the palm of your hand as if you were holding a ball (see Photo 1). The spikes are then held in the tip of the nose of the pliers. Push the spike halfway into the tie, release the pliers from the spike, and then close them up. Then you can push the spike home with the end of the nose of the pliers (see Photos 2 - 5). Drive the spike in on a slight angle away from the railhead on both sides of the rail (see Fig 1).

Spiking Down the Rail

The first thing you should do before starting the trackwork is to get all your tools together that you’ll need and have them handy. You don’t want to have to go looking for them while you are in the midst of laying track. Do the same for all the track components, and don’t forget the tie plates and spikes.

As you can see in Photo 6, the ties are all ready for rail, and so are you. This is easy. Take one rail and align it along one of the guide lines on the tabletop. This will give you the correct
distance from the rail to the end of the ties (about \( \frac{3}{8} \)”). Hold the rail in place with the map pins, placing them about every four inches along either side of the rail.

In the photos, you can see that I am laying the track on a curve. Here is where that curve template (See Part 2, OST #19) comes in handy again. Place it along the inside of the rail and pin along the outside of both the rail and template (see Photo 7). This will make it easy to get the curvature that you need. If you are laying a straight section, you can use a straight-edge ruler if you want. I find it is not needed as you have the guide lines to follow. Because this is an industrial railway, small kinks in the track are normal. The track does not have to be perfect, like mainline iron.

Once you have the rail pinned in place, slip the tie plates (part #TPF2-125) between the rail and the ties. You will notice that the tie plate has a slot in it for the foot of the rail. This helps to hold it in place until you put the spikes in. I only put about 12 tie plates in place at a time, then spike about eight of them, and keep adding another dozen as I go along.

Spike along the outside of the rail, putting the spike through the left-hand hole in the tie plate on every tie (see Fig. 2). Once this is done, remove the curve template and spike the inside of the rail, putting the spike through the right-hand hole on the tie plate as shown in Photo 8. There you go! One rail is down. That wasn’t too hard to do, was it?

To be able to run trains you need two rails, so let’s get busy and lay the second rail on the other side of the ties. Here, you will need the pair of three-point gages that I mentioned in the list of tools. Just like the first rail, you line up the rail along the guide line. Then, using the gages to set the distance between the rails, pin the rail in place with more map pins. Once the rail is pinned, remove one of the gages.

Place the tie plates between the rail and the tie, as you did on the first rail, and start spiking the inside of the rail. Spike as close to the gage as you can, moving the gages along as you go (see Photo 9). Spike about six ties or so, then go back and spike the outside of the rail. Proceed like this until you are finished (see Photo 10). You have just installed your first section of handlaid track and it looks good, with four spikes per tie and tie plates. It is starting to look like the real thing.

**Rail Joints**
How do we keep the rails aligned at the joints? The most common way is to use metal rail joiners. On this layout, I am using metal rail joiners made by ROW (Part # NJ25). These are cast in nickel silver, with all the details including the nuts and bolts, and they are made to look just like the joint bars used on the prototype. They slip on to the rail as seen in Photo 11. If you need to make an electrically insulated joint, ROW also make a plastic joiner (Part # JI25) that mechanically works in the same way as the metal ones.

On the prototype, bolted joint rail comes in 39’ lengths. To help us replicate that, ROW also makes a cement-on joint bar (Part # CJ25) that you glue to the sides of the rail every scale 39’ with an ACC glue (see Photo 12). After the glue has set, file a small groove in the top of the rail at the center of the bar to represent the joint in the rail. (Note: North American practice is to stagger the joints when possible. You may want to plan for that rather than allowing your joints to fall opposite each other. –ed)

Painting the Rail

Once you have laid the track, added the details, and connected all electrical feeder wires, it’s time to paint. I paint the rails and details with the same color as the ties (see Photo 13). If you prefer, you could use a rusty brown color. Once the paint dries, clean off the top of the rails with a fine grit sandpaper or sanding block, as shown in Photo 14. You will find that some paint stays in the grooves at the joints; this is okay as it helps them to visually stand out. As long as the paint is removed from the top of the rails, you will not have any problem with electrical pickup. I run my layout with DCC and have had no problems.

Conclusion

I find handlaying track to be very relaxing and rewarding. Once you have finished it, with all the details and four spikes per tie, it starts to look like the prototype. Best of all, you can show it off to friends and family and say you did this yourself. The trackwork on the layout is starting to take shape. There is one thing missing from this picture, the turnouts. These are needed if you intend to do any switching. Next time, I will show you how to build turnouts using ROW components.

I have mentioned in this article the use of the curve template. I do not know the name of the company that makes these in the UK. You could look on the web or make one yourself out of styrene or heavy cardstock. First draw the centerline of the radius for the outside rail and then the inside rail; these should be 1 1/4 inches apart. Cut out the template along these lines and put it to use.

So until next time
Happy Modeling

O Scale Realty
One-of-a-kind Scratchbuilt O Scale Structures
Realistic: Looking Weathered, Detailed and Lighted Buildings.
Built from photos, plans or ideas. I will also build and weather your kits or make your plastic buildings look real. Call or Write
Call or Write Reed: 973-472-7456, 75 Woodridge Rd., Clifton, NJ 07012
Nickel Plate Models

NKP War Emergency Cabooses

NKP 1900 Series Flat Cars
Exclusive from Red Caboose. Painted, six new numbers. Assembled, metal wheels. $47.50 each, plus $7 shipping; $270 for six-car set, plus $15 shipping.

42' USRA Clone Flat Cars
Red Caboose. Painted black, unlettered. Assembled, metal wheels $47.50 each plus $8.50 shipping; $270 for six-cars, plus $20 shipping. Wheeling & Lake Erie and NKP decals for car available separately.

All models listed are in-stock for immediate shipment. Write, call or email for order form, product list or NKP O Scale newsletter.

Nickel Plate Models
M. David Vaughn & James Canter
13732 Lakeside Dr
Clarksville MD 21029
301-854-3200
nkp48@aol.com
Ideas to Improve Your Switching.

The Bay Ridge Harbor Railroad is a complete switching layout in an area of 25’ x 25’ using car floats for staging. Here are three ideas that work for me. Maybe you could use them, too.

Unloading Carfloats (Photo 1)

Photo 1 shows the water end of the carfloat. I move the floats around for staging purposes. I find, for safety, it is better to have the freight cars coupled to the float while doing this. I use discarded couplings that I have replaced with Kadees. The only problem is, when it’s time to unload the float, the cars are still coupled. So, before the pullout, I uncouple the cars and slide a piece of 5⁄8” square plastic between the couplings. This helps if the switcher operator is a little rough. The cars don’t couple up again to the car float, and the pullout goes smoothly the first time. This hint is also useful for any type of detachable staging platforms you may use, not just for carfloats.

Switching Cards (Photos 2 and 3)

Have you ever switched cars into a siding and been frustrated when they all won’t fit? Meanwhile, the yardmaster is yelling at you for taking too long because you are doubling up on the move. Here is how I got around the problem. Each of my switching districts has a switching card with the track diagram on it showing the number of cars each siding or spur will hold.

To keep it simple, the numbers are based on 40’ cars. There are three numbers. “Storage” is represented by a plain number. “Switching Capacity” means how far the loco and cars can go before entering a new block. “Run-Around Capacity” shows how many cars can be left in the siding while still allowing the loco to run around. Also shown on the diagram are the gaps for each section, which is very handy to know. I mount these cards separately from the control panels so as not to confuse the operators.

Uncoupling Tool (Photo 4)

This last tip is not really mine. All uncoupling on the BRHRR is by hand. After trying numerous tools from coffee stirrers to plastic ties, I have found the Micro Mark O Scale uncoupling tool (#82823) is just the ticket. It’s long, it’s a nice weight, and it slips in between the couplers easily. I like it.
The New Northway Railroad

In O Scale Trains Magazine Issue #19, I described plans for my new Northway Railroad and promised to expand on some of the operating features. Our new home should be ready to move into around May 15. The bricking is complete and all doors and windows installed. The gas line, heating, plumbing, wiring, insulation and drywalling have been completed. The contractor is waiting for warmer weather to finish off the interior, siding and landscaping.

My current Northway Railroad is in a 40’ x 12’ room and is quite similar to the left half of the drawing in Issue #19. The new layout will represent expansion into the Rockwood Minerals District and will more than double the size of the railroad.

The Northway Railroad can be broken down into four main sections: Beague City, Northway, Midway and Rockwood.

Beague City Yard

The Northway Railroad connects with CN at Beague City and runs north to Northway, then west to Rockwood. The Dispatcher’s Office is at the Beague Yard and there are long storage tracks for cars to be used on the layout.

The Beague Yard is operated from the Control Room and, although the yard extends through a hole in the wall into the Rockwood room, the yard tracks will be behind a divider and not visible from the Rockwood room. The Beague Yard operator will be able to view the turnouts in front of him and monitor the ends of the yard tracks in the next room via a four-camera security system.

At the Beague Yard, a southbound train arriving from Northway, switches off the main line to arrive on Track One, and the back-to-back road switchers pull right up to the end of the track. The Beague Yard switcher then leaves the Yard Office, couples to the rear of the train, and moves the caboose to Track Two, the outbound track. The switcher then moves the rest of the train to Track Three or Four and begins to make up an outbound train. The road switchers glide up to the Yard Office for fueling or lunch break. When the outbound train is ready, the road switchers leave the Yard Office, couple up to the outbound train and depart for the 11-mile run to Northway, as scheduled. The local switcher crew carries on with their switching duties or returns to the Yard Office. The Dispatcher can double as the Beague Yard switcher operator if necessary.

Northway

One of the main customers at Northway is Owen Industries, a firm that repairs, upgrades and restores old railroad equipment. They have several major rebuilding projects on the go at all times and they often conduct running tests on the line to Rockwood.

A number of other industries require switching a wide variety of freight cars. Layout visitors can operate the switchers, switch the yard, move cars to and from the industrial spurs and make up trains for departure. It’s a nine-mile run west to Rockwood and there is a passing siding at Midway.

Midway

The passing siding at Midway is also in the Control Room, but it is completely separate from the Beague Yard. Due to the short distance between rooms, the Midway Operator controls all main line trains. He can watch the action in Northway and in Rockwood via video monitors, and take control when any main line train is ready to depart. Trains operating between Northway and Rockwood often have to wait to pass by each other at the Midway passing siding. The shortest train takes the hole and the longer train runs by. The Dispatcher can also double as the Midway Operator.

I expect it will be quite impressive for visitors to watch a train leave Northway and disappear through the wall into Midway, then learn that it will take an appropriate length of time before it arrives at Rockwood.

Rockwood

The Rockwood District is a booming little town on the shores of Phache Lake, at the gateway to a popular recreation area and to cottage country. Natural resources in the Rockwood District include coal, crushed stone and ballast, lumber, and railroad ties that must be transported to Northway for shipment to Beague City. Several small industrial switchers are usually busy moving cars around the quarry, mining, and timber spurs, delivering carloads to the Rockwood Yard and returning with empties. Owen Industries stores a lot of railroad and construction equipment at Rockwood as part of their leasing operations. In the summer, tourists, boaters, fishermen, campers and daytrippers fill the streets of Rockwood. Here also, there are several unique restaurants and a growing antique shopping area.

Passenger Service

The Northway operates a seasonal passenger service from Beague City to Rockwood and a pair of RDC-1 units make several round trips each day during the busy summer holiday season.

Narrow Gauge

Several narrow gauge railways operate in Northway and Rockwood. There are mining and logging lines, a popular train ride for the tourists, a tiny train ride for the children and a small railroad museum.

General

The Northway Railroad should include most of the features I have grown to appreciate in over 50 years of model railroading. On the Internet, see: http://groups.yahoo.com/group/Northway for photos and a full screen drawing of the layout.

I welcome your comments or suggestions.

Happy rails from
Bobber@sympatico.ca
Painting and Lettering a B&O Baggage Car

Ed Bommer

It's one of those jobs that you either enjoy doing or prefer to have someone do for you. Painting and lettering cars and locomotives is time consuming and tedious. This is especially so with multi-color paint jobs. With the excellent factory paint and lettering currently coming out in O scale, it is a challenge to “do your own” in a way that will hold its own with those ready-to-roll models.

I built a B&O baggage car from an All Nation kit, making many modifications to be more accurate to its prototype. A new set of sheet aluminum sides were made, as well as a set of eight operating baggage car doors. The car’s interior and underbody was fully detailed as well.

A pair of old Walthers trucks were rebuilt. The wheel gauge was checked and adjusted. The trucks were tested for their “roll-ability and track-ability”, which was quite good. The trucks were disassembled and the parts given two coats of Dupli-Color semi-flat black engine paint. I had it on hand. It dries to a low sheen, which was perfect, since my finished car was to represent one that had been recently shopped. After the paint was dry, the trucks were re-assembled and set aside.

When I built the kit I completed all the work, but did not mount the sides or roof. This allowed me to paint and letter sub-assemblies, a lot easier to handle than a completed car would be.

First, all wood stock and parts were given four coats of sanding sealer, with a light sanding after each coat. Between each of the last two sealer coats, the parts were rubbed down with fine 0000 steel wool. This leaves the wood surfaces smooth and shiny; any flaws that may need to be filled are easy to spot.

After the basic underframe was attached to the car floor, the trucks were mounted to check for the correct height for the couplers. I also checked to see that the car stood level and straight on its trucks. I tested it on some curved track and through switches as well. Better to find any potential gremlins now than later on! The tests were run again, after all the underbody detail was added.

Photo 1 shows the completed baggage car ‘in the white,’ after its final track tests. The sides fit snugly enough to the car body that no glue was needed to hold them in place. Diaphragms were tacked in place with tiny dots of Walthers GOO. They were then removed for painting.

The car was taken apart into the sub-assemblies shown here in Photo 2. First the interior, underbody, and roof will be painted. The eight white panels are baggage car interior door pocket walls. The pigeonhole desk and cabinet will be hand painted Floquil Bright Silver. The prototype was made of nickel plated sheet metal.

Photo 3 shows the components masked for the interior color, which was a mix of Floquil UP Armour Yellow with some Depot Buff to darken it a little. B&O used a shade called “golden tan” inside its baggage and express cars.

The underbody of the car floor and frame was given a quick coat of black before details were added (Photo 4). This assured coverage in places that would be hard to reach later on. B&O painted the car stirrups and faces of the battery box and relay box B&O Blue, so they are covered and masked off. The underbody was airbrushed with a 50/50 mix of
A two-color paint job requires some careful measuring to make sure the color separations are in the right location. Having to paint eight baggage car doors was the challenge! All exposed metal areas to be painted were carefully cleaned with thinner and dried. Take care not to touch them again with your bare hands. Put a glove on or handle them with clean paper towels.

To get a knife-edge color separation, I put the masking tape on a clean piece of glass and cut it in strips with a fresh X-acto blade and straight edge. This gives a clean true line for the color separation.

Photo 5 shows the car sides and doors masked off and airbrushed with Scale Coat D&H Gray, which is close to the B&O color. EL Gray would also work. As dark as that gray might look, it will “brighten up” when the blue paint is put on. Three light coats, an hour apart, were applied. The parts were allowed to dry for three or four days before doing the next color.

The sides and doors were re-masked to cover the gray for airbrushing Scale Coat B&O Royal Blue (Photo 6). As with the gray, it was applied in three light coats, one hour apart. Note the car stirrups are exposed and painted blue at this time. A few more days were allowed for the paint to thoroughly dry.

When removing masking tape, work slowly and keep the angle as low as possible while pulling it. If the metal underneath is clean, the paint should adhere well enough that it won't lift when this is done. Ah well, that is in a perfect world. Yes, I had some spots where the paint came off. These had to be touched up.

In one area it was bad enough to warrant stripping off the paint, re-masking and re-spraying. The baggage car doors were special culprits for this. (Before applying masking tape to my models, I stick it down on a clean piece of glass. The act of removing it from the glass removes some of the adhesive. There is still enough to hold the tape in place, but less adhesive to pull paint when I remove it after spraying. Experiment with this to see if it works for you. - Ed).

Decal application was next. The car sides were not permanently installed. I find it a lot easier to letter passenger car sides before final assembly of the body. First I applied the striping (Photo 7), below and above the gray band. I did the bottom stripe on each side first, then went back to do the top stripe. This allows the bottom stripe to set up and dry. Champion Decals’ 1” Dulux Striping and a B&O Passenger Car set were used. A light coat or two of Champion’s Decal Set was applied after each decal was set in place and blotted dry.

The lettering of the railroad name on the Champion decal sheet was spread out too far for this car, so each letter had to be cut out and applied separately (Photo 8). The top stripe for this side will be put on later.

A straight edge was used to make sure the letters all lined up properly (Photo 9). Photographs of the prototype car helped find the exact location for key letters and placing them in their matching locations and applying the bottom and top stripe as appropriate. A fresh black permanent “Sharpie” pen was used to draw the window gaskets on each baggage car door, inside and out. After all the decal work dried, it was carefully washed with a warm damp cloth and dried to remove any traces of glue or stains.

Final exam time! Carefully going over all the decal work with a magnifying glass, I looked for spots where decals did not bed down or stick properly to the surface. This is usually seen as a faded background color under the decal, or the decal print looks more ‘intense’ than elsewhere. Each area was pricked with a pin and a touch of Decal Set applied. Then it was lightly pressed in with a damp Q-Tip. After drying, the area was checked again for proper adhesion.

Now satisfied, the exterior parts were given a light coat of Testors Glosscote to seal the decals. Following that, I sprayed the doors, ends and sides with a very quick thin coat of Testors Dullcote, not fully shaking the can. This takes down part of the high shine, making the car look like it was freshly shopped. Each window was then fitted with a clear styrene glazing panel slid into a slot in the top, between the inside and outside surfaces.

The doors and sides were then permanently installed on the car. Only one detail remained, the gray area and Dulux
striping for each corner post of the car (Photo 11). The gray was brush painted and short pieces of Dulux decal striping were applied after it had dried. A bit of Glosscote sprayed into a jar lid was brushed over the striping to seal it.

The interior detailing for our B&O baggage car is shown in Photo 12. The floor was given a light coat of Min-Wax Golden Oak stain before final assembly. The floor racks enabled packages and trunks to be above any water that might get the floor. The roof fits snugly between the sides and ends with no fasteners. The side doors slide in tracks cut into the floor and under the upper side stiffener. The beveled areas are the tops of steam heat radiators, which had heavy canvas coverings painted the same color as the walls.

Finished at last, the car was given two more drying days before being packed into its custom made box and taken to the B&O Railroad Historical Society Convention at St. Louis MO last October.

---

**Cabin Cars Of The Norfolk & Western...**

- Limited Edition
- Brass Body Construction
- Multiple Car Numbers

NORFOLK AND WESTERN
518361

NORFOLK AND WESTERN
518390

WEAVER MODELS
PO Box 231 • 315 Point Township Drive
Northumberland, PA 17857
Phone: 570-473-9434 • www.weavermodels.com
©2005 Weaver Models - Not Responsible for Typographical Errors

Reliving The Last Days Of Steam
The McCabe Lumber Company in O Scale!

Slatyfork Sawmill is a double bandsaw mill that can handle the load! This Master Creations kit consists of laser-cut basswood, plywood, and lots of detail castings. Interior walls, stairs and floors are included as are removable roofs. And the standard features of B.T.S. kits are there... peel & stick window sashes, positionable doors and window sashes, slot and tab construction, brass door knobs, and well-engineered construction providing fast and easy assembly.

Most modelers want interior machinery components. The machinery is not included in the sawmill kit, but will be offered as a separate package with lost-wax brass bandsaws, edgers, rollers, etc., combined with urethane, white-metal and laser-cut components to complete the mill. The footprint of the mill building over the loading docks is about 118' x 85' with the jackslip extending out into the mill pond another 60' – it stands about 54' above the mill pond. More photos are on our web site along with information about the other kits in the series.

This is a very Limited Edition kit available direct only from B.T.S. The mill is due to start shipping in March 2005 with the interior coming later.

#18300  O Scale  Slatyfork Sawmill  $ 850.00
#18301  O Scale  Sawmill Interior  $ TBA

Shipping: $5.00 in the U.S.  $6.00 in Canada  Actual Cost elsewhere

Call in your order today!

Shown above is the HO version of the sawmill. All McCabe kits are sold direct only from B.T.S.
PHIL OPIELOWSKI

It's not pretty, it could use some paint, but it works. It was the obvious answer to crossing a doorway on my railroad; I certainly wasn't going to allow this little obstacle to cause me to abandon the perfect trackplan. I also wanted something better than the typical options, such as bench or bridge sections that lift out completely or solid skull-crushing duck-unders; they can become a nuisance.

Traingate may not work for every situation, for example where you have a yard throat or other complex trackage. This was designed to be a simple way to complete a loop, giving my point-to-point Ware River Railroad a continuous running option when I want to just turn a train loose to entertain visitors or myself. Traingate merely is a glorified, solidly constructed fence gate. I might be able to swing on it like I did at my Grandma's farm during my innocent youth eons ago. Certainly, this will support the heaviest possible piece of O Scale equipment we could ever run.

There are important points about building your own reliable Traingate. The adjoining sections of benchwork must be solidly attached to a non-movable structure. In my case, it's the foundation of the house. We don't want to be bothered by misalignments, excessive maintenance and any other failures. We want to treat this like any other door or passageway in our home, more or less coming and going as we please.

The photos show varying angles and details, but you can make this any way that suits your needs. Mine is built to accommodate a curve, for instance, and to span a doorway. When the Traingate is in place, I lock the door to prevent any wayward grandchildren or other persons from opening the back door and crashing into it. When the last unit is shut down and the world of the Ware River Railroad is again suspended in time, the gate is opened and it.

Let's begin by making some decisions. First, determine the length of the span. Not only will you need to have the clear space for the gate to swing through its arc, but you'll need to make provisions for the gate to be secured in its open position, hopefully out of the way.

Next, build the approaches. Make sure that the benchwork is rock-solid. Remember, we want both approaches to be in the same plane. If you can design the trackwork so that there is no grade across the gate, then you can use a level to lay everything out. Here's where that long rigid straightedge comes in handy. If you are dealing with a grade, that straightedge becomes indispensable.

My Traingate and approaches are decked with scrap 5/8” plywood, but a ¼” thickness would be even better. The non-hinge approach side should have a lip of bench material extending out from the benchwork frame about two inches (See Photo 1). We also want to attach our approaches to a solid wall. In my case, I borrowed an impact drill, and bored ¼” holes in the concrete foundation wall to accept anchors for ¼” lag screws or machine screws.

Build the gate portion as shown, and allow it to be about ½” shorter than the actual opening. Bevel any edges that will interfere. The detail in Photo 2 shows how the end of the gate is angled to the track to allow immediate clearance once the gate begins to open. Frame the gate with 1 x 4 lumber, or go a step further and attach two 2” x 2” aluminum angles for absolute rigidity.

The hinge side of the gate and the approach are built using vertical 2 x 6’s. (Photo 3) With heavy-duty door hinges attached as shown, this section will be really solid; just be sure your hinges are square and aligned so the pivot points or hinge pins line up with each other (Photo 4). I didn’t frame the gate. Instead I used a rigid piece of aluminum channel under the plywood.

Now let's make the "docking" section. With about ⅛” of clearance and all surfaces in the same plane, we can make up a dock-
ing plate with somewhat of a press fit. Attach another piece of plywood as shown in Photo 1. Use two $\frac{3}{8}$" diameter by 2" long machine screws to attach this plate. Drill and tap the bench section as shown for another $\frac{3}{8}$" machine screw. This screw will become an adjusting screw to adjust our press fit (Now this part is arbitrary - I haven’t used the adjusting screws, but included them anyway). Next, make stops as shown, and add or make a locking latch if you want (Photo 5). In my case, the press fit works fine without a lock.

Once all construction is done and tested, lay your track completely across all joints and to your best standards. I suggest using flextrack and flowing geometry on your favorite roadbed material. I used Midwest cork roadbed. Where joints will soon be cut, I used a solid piece of basswood for roadbed, allowing for two or three inches on either side of the joint. Just be sure that no track components “float” anywhere near the opening joints. On the docking side, I stripped away track ties over about 8” of track. Because this track is on a curve, a guardrail was added. The photos also show how I soldered tabs made from 0.016” x 0.250” brass to the rail bases and drilled them to accept #4 panhead sheetmetal screws as fasteners. Gauge your rails and fasten.

Now it’s time to cut the joints, but first we must build in some insurance against misalignments on the hinge side. Count back three or four ties on each side of the eventual joints. Drill holes in the ties next to the rails and secure the rail using several pan head sheetmetal screws. These are heavy-duty adjustable spikes. These will not only make our alignments solid but will allow the rails to be adjusted later, if needed. Any errant bump will do severe damage to an elbow instead. You can see in the photos how I made ties from styrene and used the screws to solidly anchor the rails. Now cut the rails as shown to allow swing and clearance as your Traingate opens and closes. Be sure to cut one rail about $\frac{1}{4}$” back so that it misses the next rail during opening or closing (See diagram). Your gate should open and close freely, with only a slight push, as it enters the press-fit docking plate. File the...
rail ends and slightly break the insides of the railheads. Attach power feeders from the stationary portion of the railroad and, of course, solder them to the rails. I used #18 gauge stranded automotive wire. Drape the wire, and make it long enough to eliminate any bind or snags (Photo 4).

Once your Traingate operates smoothly and the track aligns each time you close it, it’s time to make a retaining bar to keep it out of the way when fully opened (Photos 6 and 7). This bar is just a flat piece of ⅛ x ¾ steel. I made a pin from a ¼” machine screw to attach it to the gate. A ¾” hole in the bar slips over the pin. When you close the gate, just tuck the bar away on the benchwork. We don’t want the gate swinging in the breeze (that is, if it’s perfectly balanced as we O-Scalers are known to strive for). If you’re lucky, your Traingate will have a surrealistic “creeeeeeak”; mine did until I finally get around to oiling the hinges.

That’s basically the entire process for making your very own Traingate (I had to name it something to add in any new published model railroad glossaries!). This article only presents how I made mine to give you, the typical innovative O Scaler, the basic concept.

Since you don’t want to send your precious loot to the depths of the earth by forgetting to close the gate when operating, I’ll leave you to think about how you can interlock track power to prevent any mishaps. Here’s where micro switches come in handy. Perhaps some spring-loaded physical stops that pop up as soon as the gate begins to open will fill the bill. I haven’t done this part yet (and may someday regret it, given my far-less-than-perfect memory).
**Stevenson Preservation Lines**

**O Gauge Kits and Parts from past Master Modelers**

Catalog 2005  Price: $3.00

- Baldwin Model Locomotive Works
- Loughaba
- Adams & Sons
- Lenoir
- Kansas City Kit
- Alexander
- Pearce Tool Co.

**Rolling Stock**

- PSC DM5/8R Wood Caboose UP New ...........................................$330
- PSC GATX 6 Dome Wine Car FP New ............................................$350
- ORI GN Wood Express Reurer FP New, No. 2090 ............................$295
- BCRGN X580/X683 Wood Caboose FP New, 2 Versions Available ....$400
- PLTD GN Truss Rod Box Car UP New .............................................$395
- HILL Wood Billboard Reurer, IGA or Prima FP New, 2 Versions....each $375
- OMI LV Steel Caboose UP New ..................................................$275
- PLTD MDT Composite Reurer FP New .............................................$350
- OMI NKF Wood Caboose UP New ..................................................$325
- W&N FP 24’ Wood Caboose – 1700 Series UP New .........................$355
- PSC NYC 18680 Series 30’ Wood Caboose UP New .......................$375
- CNJNYC NYC Pacemaker Caboose UP New ....................................$350
- PSC NYC 30’ Express Reurer FP New .............................................$375
- PLTD PALE - NYC USRA Design Steel Box Car UP New ...............$375
- PSC PFE 50’ Wooden Ice Reurer FP New ........................................$325
- PSC 50’ Wood Pflauper Milk Car - Bordens FP New .....................$425
- PSC PRR K7a Stock Car CP L/N .....................................................$285
- PSC PRR R50h Express Reurer FP New ...........................................$350
- PCO PRR X-42 Mail Storage Car UP New ......................................$395
- OMI RI Outside Braced Wood Caboose UP New, Pohlman Shops ...$375
- BCRUP R-30-31 Express Box Car FP New, Barber Trucks ..........$495
- PSC Harriman 60’ Shopped Coach UP New ..................................$500
- PSC Harriman 72’ Shopped Coach UP New ..................................$450
- PSC Harriman SP Dining Car FP New ..........................................$600
- PSC NYC Standard 70’ Heavyweight Coach UP New .....................$425
- PSC NYC Standard 70’ Heavyweight Combine UP New ................$425
- PSC PRR R70 Baggage FP New ......................................................$495
- SS PRR Horse Express Car UP New ..............................................$495
- PSC PRR Queen Mary Business Car FP New ................................$575
- PSC Pullman HWT Dining Car UP New .........................................$425
- PSC Pullman Standard HWT Observation UP New .......................$450
- PSC Pullman Standard Passenger Cars UP New, Many Available Call

**REPAIR SERVICES SALES INSTALLATIONS**

**Products from:** Western Scale Models
- Banta Modelworks - Kadee® - Red Caboose
- Tichy - Dall/electronics Inc. - Grandt Line
- Berkshire Valley - ModelTechStudios
- Woodland Scenics® - Lenz® - Tomar

Special & Mail Orders -- Credit Cards

Shows in CT, MA, MD, MI, OH, PA
Call / e-mail for more info & Product Guide

Now on eBay! ID: Crusader_Rail_Services

**Crusader RAIL SERVICES**

5920 Houghton St. Phila, Pa. 19128
215-482-7530 e-mail: trainfols@rcn.com

**Schomberg Scale Models**

PO Box 88
Schomberg, Ontario
Canada L0G 1T0

905-939-0694

**O Scale**

**Resin Detail Sets**

email: ccomport@earthlink.com

**Russian River Railroad Co.**

8525 N. 60th Avenue
Merrill, WI 54452 (715)673-3557

---

**T-BONE MODELS**

**“O” Scale**

CUSTOM PAINTING & REPAIR
Dealer for Pacific Limited
Sunset & Weaver-
T-Bone Models
- James Christensen
3224 Cleveland
Cottage Grove, OR 97424-8381
email: tbone@epud.net
541-942-5237

Send SASE for information

---

**Central’s Latest Releases**

GP38-2, GP40-2, SD40-2, SD40T-2 & SD45T-2

The finest in modern O Scale Brass, 2 or 3-Rail operation. Machined brass frames and fuel tanks, Pittman motor with dual flywheels. Your choice of gear ratios, wheelsets, detail parts, etc. Custom built to your specs. Kits $600 - $800. Custom built, painted and lettered $1100 to $1400.

**Central Locomotive Works**

PO Box 1231 • Hesperia CA 92340
ph 760-244-9222 • fax 760-244-9322
e-mail clw2000@earthlink.net
www.centrallocomotiveworks.com

---

**May/June ’05 - O Scale Trains • 31**
In this issue we welcome our newest columnist, Roger Parker. Roger will be taking over OST’s traction column, so all you overhead wire types can now send him lots of material and ideas. You guys aren’t off the hook yet, however, as we still want to pick up a bit on the traction content. Meanwhile, here’s Roger:

**Modeling the Westchester — From Book to Layout**

Looking for inspiration for a new traction layout? Consider the advantages of high-density trolley modeling. Robert A. Bang’s recently released book, The New York, Westchester & Boston Railway Company: 1906-1946 (www.nywbry.com) is just such an inspiration. This extremely well produced and fairly priced volume contains dozens of ideas that may spark your interest.

The following are some of the ideas that occurred to me while reading this fine volume. Your takeaways may differ, but this book has more to offer the traction oriented reader than the typical volume.

**High-Density Urban Modeling**

One of the most interesting possibilities the Westchester offers is the ability to model a high-density railroad, without the need for building a huge and complex layout. Although much of the New York, Westchester, & Boston was double-track, with four-track stations, the “atmosphere” of the layout could be communicated by its terminals.

The result? By adapting the basic track plans and the use of multi-car trains, you could recreate the frequency and the crowded terminals of a high-density railroad in a relatively small amount of space. Detail could be concentrated in the terminals, and density achieved by multi-car trains passing each other on the two-track right-of-way, or perhaps passing stopped trains in the four-track stations.

**Shelf Modeling**

The atmosphere and feel of a high-density line could be easily recreated using a narrow, point-to-point around-the-room shelf layout. Because so much of the Westchester’s main line was in below-level cuts or on elevated sections, building flats could be used to give a feeling of depth.

Adding to the possibilities, many of the Westchester’s stations were located on bridges above the tracks, often at oblique angles, eliminating the need for depth. One of the striking aspects of the lineside scenery illustrated in the book is the lack of horizon. Because the area had not experienced great growth, many of the modules could be relatively shallow, with a suggestion of few homes and lots of undeveloped land in the background.

**Right-of-Way Variety**

Although the New York, Westchester, & Boston lends itself to narrow around-the-room shelf construction, this by no means limits the design options available. In its journey from the Bronx to White Plains, different sections of the Westchester were built using elevated, subway, depressed cut, and private right-of-way construction.

Built around the walls of even a small bedroom, it would be possible to combine sections of each type of construction. I am especially intrigued by the idea of creating a short two-track subway, with the front of the tunnel open to the front of the layout.

**Terminals and Track Plans**

One of the book’s best features is its numerous track plans of the stations, especially the three-platform Harlem River Terminal in the Bronx and the two platform Westchester Avenue station in White Plains, NY. In a relatively small amount of space, these stations and trackwork are complex enough to communicate “high-density urban,” without requiring too much space. The complex track layout at Westchester Avenue is especially interesting, with an unusual combination of slip switches and crossings.

Best of all, the terminal buildings themselves could be built as flats, with the emphasis on station platforms, approach trackwork, and platform shelters.

There are also trackplans of several junctions, ideal for connecting different modules at club gatherings and train shows.

**Simple Station Construction**

A significant portion of the right of way features cement and terra cotta structures. The straightforward construction, without undue ornamentation, would simplify station and retaining wall construction and painting. It would also be possible to create molds and castings for station and trackwork foundation elements found in more than one location.

**Conclusion**

You may or may not run or collect the type of steel multiple-unit cars that the Westchester ran. But, by using the New York, Westchester, & Boston setting and track plans as a starting point, you could create a high-traffic main line with frequent meets, lots of cars waiting to depart from the various stations and terminals, a little freight and lineside business, all without undue complexity.

Station, junction, and terminal modules could be designed for easy transportation to events, leaving the subway and elevated sections at home, or vice versa.

Although there are a lot of “look alike” books on the market, Robert A. Bang’s is to be congratulated for creating a high-value book with exceptionally sharp photographs, well-drawn track plans, and high printing quality on glossy paper stock. All of this is found in a large format (8-1/2" by 11") with hard covers and 180 pages of historical information for just $35.00 (plus $5.00 shipping), a bargain these days. All of this inspiration is available, directly from the author, at PO Box 164, Port Chester, NY 10573.

Roger will be taking over the traction column, so all you overhead wire types can now send him lots of material and ideas. You guys aren’t off the hook yet, however, as we still want to pick up a bit on the traction content. Meanwhile, here’s Roger:
Porsche 356B - $3.95 Each!
#CAR25007E - Red/Silver - $5.95
#CAR25007F - Red - $5.95

VW Beetle - $3.95 Each!
#CAR25103A - Hard Top - $9.95
#CAR25103B - Convertible - $9.95
#CAR25103C - Soft Top

1950 Chevy 3100 Stake Truck
#CAR25007E - Green - $5.95
#CAR25007F - Red - $5.95

1950 Chevy 3100 Wrecker
#CAR25007C - Yellow - $5.95
#CAR25007D - Red/Silver - $5.95

New Mini Cooper - $3.95
#CAR43201

Chevrolet Tahoe - $4.95
#CAR-F350

F-350 Super Duty P/U - $4.95
#CAR-F350

VW Bus Samba w/Large Trailer - $9.95
#CAR14801

VW Bus w/Caravan - $9.95
#CAR14803

VW Beetle Turbo S - $3.95
#CAR-F430

1950 Chevy 3100 Stake Truck
#CAR25007E - Green - $5.95
#CAR25007F - Red - $5.95

All Items On This Page Are O-Scale Compatible!

To Order, Please Call M-F 9:00am - 5:00pm ET
Orders 1-800-718-1866 - Phone (502) 227-8697

Call For Our Low Price Guarantee! Free Shipping On Orders Over $300.00
www.diecastdirect.com/osm

Over 1,500 'O' scale cars, trucks, buses, airplanes, fire, police, military & construction replicas available. Catalog $2.00.
Or check out our web site at: www.diecastdirect.com/osm

Shipping & Handling: (Continental U.S.)
Shipments $0.01 - $20.00 ............ $4.95
Shipments $20.01 - $40.00 .......... $5.95
Shipments $40.01 - $60.00 ........... $6.95
Shipments $60.01 - $80.00 .......... $7.95
Shipments $80.01 - $100.00 ......... $9.95
Shipments $100.01 - $150.00 ........ $12.95

1950 Chevy 3100 P/U - $5.95
#CAR25007A - Silver - $5.95
#CAR25007B - Blue - $5.95

VW Beetle Turbo S - $3.95
#CAR-F430

Scale up your Authenticity and Quality!
Train Order Board $34.95
Block Signal std pole mount $18.95
Block Signal std pole mount with relay box $22.67
Two color horizontal USAS dwarf (2 pack) $24.95

Precision Crafted

• True "O" Scale - White metal and Brass NTS
• 12v Grain of wheat bulbs
• Easy to Assemble
• See your local dealer or order direct

Scaled World
Cottleville, MO 63397-2997  www.scaledworld.com

May/June '05 - O Scale Trains • 35
PRODUCT NEWS & REVIEWS

REVIEWS

USRA Twin Hopper $52.95, 8000-Gallon Riveted Tank Car, $59.95
Atlas-O, 378 Florence Avenue
Hillsdale, NJ 07642
www.atlosa.com
reviewed by Brain Scace

As most of you know by now, Atlas-O purchased the former Intermountain line of steam-era freight cars some years ago, and has been reintroducing them as part of their line of ready-to-run equipment. One of the goals in the re-engineering of the line has been to increase the robustness and handleability of these models with as little detrimental effect as possible on the scale fidelity. A couple of issues ago, I compared the Intermountain steel 1937 AAR boxcar to the Atlas version. This time, we offer the same sort of head-to-head comparison, but this time looking at the USRA two-pocket steel hopper and the 8000-gallon riveted Type 103 tank car.

Now, I'll be honest. For some reason I never enjoyed building the Intermountain hopper. Before arming yourselves, realize that I find San Juan boxcars a joy to build, for instance. It can't be the part count (the San Juan cars have lots more!). The fit was fine, all the parts were true, but I just could not get a rhythm going, and the finished product was indeed delicate.

On the other hand, I loved building that tank car. About the only real delicacy issue I found in running them was the walkways. You had to be careful about sideswiping these cars, and picking them up required me to identify them from, say, a brass Drake 8000-gallon car (which was surprisingly difficult at a glance, by the way!). Boy, I loved those laser-cut wood walkways, though!

Just don't smack 'em.

Well, they're both out in their re-engineered form from Atlas, and here's what I see, starting with the hopper. The assembly and lettering is, as always, neat and true. The car is solid, and the weight is such that there's no anti-social behavior when mixed in with the standard Scace variety of brass, wood, plastic, free-rollers and bricks that make up my roster. This is an accomplishment, by the way; I never liked having to put lead plugs in the bottoms of these cars and having to fill them with coal as the only option. There's lots of nice detail inside them, and they always looked good empty.

Also on the plus side, the various rungs, handles, grabs, and ladder-work are all much more robust, with little or no increase in cross-section.

The tank car shows these same treatments, all to good effect. I was worried about losing the nice wood walkways, and indeed they're gone. The metal cast frame and walkway assemblies are neatly done, and have decent detail levels. The secondary frame members that support the walkways are still nice and lacey. My only gripe is the increase of thickness in the walkways themselves. Though not hideous, I'd have preferred that the old cross sections were maintained, here, at the possible expense of a little robustness.

On the minus side is the area of the frame at the bolsters, on both cars. Osten-sibly, to provide clearance for the Atlas three-rail truck and talgo-type coupler, the frame has been cast with a large gap in it on either side of the bolster. Without the rig for the hi-rail coupler in place, this is now an unfilled space in the frame. The issue isn't equivalent to a mid-sized dual-service Northern on other roads. Indeed, they are quite similar in size and appearance to the RF&P 4-8-4, as an example. The B&M sold 13 R1's to the B&O in 1947, after they had bought enough FT's and F2 Diesels to cover the trains on the Fitchburg line (and pull down the overhead wire through Hoosac Tunnel); Diesels could go through without asphyxiating the crews, while steam needed to be pulled through by the boxcab electric (stationed there). Delicious irony has it in this story. The B&O ran the ex-B&M Mountains into 1958, a year after B&M traded many of the FT's that replaced them back to EMD for stripping.

Our test engine is nicely finished and stoutly assembled, something we've come to expect from Sunset. The paint is nice, with good coverage and a satin finish, just begging to be submitted to the tender mercies of the Scace weathering technique. The lettering is neatly screened and, wonder of wonders, there are even figures in the well detailed cab. They aren't Artista-quality, but they aren't little S-Scale figures, either.

What's this?! No silly red lights on the tank! Hooray! I'd still like to see one of those vacant slide-switch ports (the three-rail version has all kinds of switches on it, to turn off
the smoke unit as an example) used to wire the class lights up with a way of manually turning them off. The hole is already there, why not use it on the two-rail version for something we scale guys find useful?

Down to the nitty-gritty here. How does it run? Our sample needed a tiny bit of work first. On the pilot truck, there are brakeshoes. These brakeshoes are set way back to accommodate the flanges on the three-rail version. Our's hit the inside of the steamchest on curves and caused some anti-social behavior. Well, you can't see 'em, they're in the wrong place for us anyway, and they come off easily and neatly, so away they go! All anti-social and immoral behavior went away, just like that. Also, this is a large Mountain, with a long rigid wheelbase and larger diameter drivers, so it will be less forgiving of lousy trackwork than your average 63" diversified Consolidation. Don't whine about the engine; just fix your d@$n trackwork (like I did!). Once I fixed a few sloppy places in my trackage, we marched around with my standard mix of free-rollers, plastic, brass, sleds, and other categories of freight equipment with aplomb and dignity. My 2% grades didn't phase it a bit, either, with a healthy string of cars stretched out behind.

What truly fascinates me, is that this is a "crossover" engine made for both the scale and the HiRail market. Unlike others in a similar price range, however, it has full sized pilot truck wheels, a trailer that doesn't have a lot of air around it, a pilot mounted at a decent height, and very little evidence of compromise to accommodate the three-rail world. A lot of thought was put into the tail of the frame, which does mechanically require clearances for the three-rail version. The result is a nice illusion of "full frame-ness"; you have to really look to see the gap in the frame for clearance. About the only "air" that I found mildly eye-annoying was the tender height over the trucks. This is an easy fix, if you care, discussed in the "Notes for the Neurotic" found below. Sunset is proving that if you care, discussed in the "Notes for the Neurotic", there are opportunities to noodle it up a bit, and it operates quite nicely as it comes out of the box (outside the HiRail brake shoe bit). We, of the Yankee persuasion, are fortunate. Here is a good model of an important (for the mainline B&M types) prototype not likely to be repeated any time soon, certainly not to this level at an MSRP of $1099. Sunset is also doing something a little different here. You can get the R1 either in the original block lettering, or in the spiffy script lettering that some, if not all, of these engines received just before and during the war. The script version is a "special edition" and very snappy. Sunset says all the 2-Rail B&M's are sold out. They have received 15 of the Speed Lettered #4102 engines in 2-Rail only at this time. The price for these models are $1149.95 Retail + $30 S&H. The lions' share of us can now make our choices with confidence. For the more anal among us, and the inveterate tinkerers, we present...

Notes for the Neurotic:

Here are a couple of things to think about, should you want to detail a few things up to whatever your level of neurosis may be, and bring this guy up to the level of the $3000 crowd. I don't claim to know everything about the R1, but I do have a list of little things to change or deal with to bring this bad boy into my 1944-era.

The R1a was originally built with a Baldwin piston-type power reverse, which proved to creep a bit. These were replaced on the first five with the Langelier "Micro Non-Creep" air operated power reverse, and the subsequent ones were built equipped with this appliance. The Langelier gear looks like a simple box, rather than the piston-type on the model. During the war years, parts for the Langelier reverse became hard to get; so some R1's were fitted with Alco piston-type gear. Because of the paucity of photos taken during the war years, it isn't clear to me that all of them were refitted with the Alco gear, so I think I'll see if I can cobble up a decent Langelier box.

I haven't been able to come up with pho-
The ACF® Industries Coalveyor™ II gondola was first produced in 1978, with continued production lasting into 1982. The design of the Coalveyor™ II gives it the name "bathtub gondola" because of the rounded bottom. This design was intended to lower the car cost, lower car maintenance costs, and still deliver more coal. Since there are no bottom discharge doors, these cars are rotary-dump only. As such, the painted end identifies the rotary coupler (one per car) that can pivot 360°, allowing a single car of a unit coal train to be dumped while remaining coupled in the train. This only works if the painted end is coupled to a non-painted end!

Atlas-O first announced the built-to-order Coalveyor™ II gondola in June of 2004. The production models have now shipped to dealers and are commercially available. Since these were a built-to-order item, I would suspect a sell-out of certain road numbers. A future second run with more road choices and maybe different road numbers on current names would not be surprising, either.

Atlas has paid close attention to the fine details of this car. My two-rail version matched the prototype height at 12 4”, length of 53’ 1”, and width of 10’ 8” perfectly. This model of the Coalveyor™ II gondola has a stenciled capacity of 4240 cubic feet and 105 tons. This was the capacity sold to most customers. The capacity of the gondola varies with the type of coal carried. Different capacity gondolas are used to carry heavier or lighter coal, depending on the coal seam properties.

The weight of the Atlas car is very noticeable due to the die-cast metal “bathtub” bottom. In an open-top model such as this, it can be hard to conceal the extra weight needed to match NMRA standards. The NMRA standards dictate an initial five ounces plus one ounce for every inch of length. Many coal cars conceal the added weight required with a coal load, but this model weighs over 15 ounces out of the box without having to conceal anything! Pulling 18 to 25 of these cars around a layout will require two units if there are any grades. Pulling 25 or more cars around a layout will require three locomotives. Trust me.

My sample Coalveyor™ II gondola was painted in the ACF® demonstrator scheme. The stenciling on the car is sharp. The lettering is crisp and legible, even on the lube plate! This model was printed “NEW 9-82”, making it among the last produced by ACF®. The Atlas model has superbly detailed metal grab irons, underside brake lines, fine brake wheel detail, as well as brake cylinder/valve detail on the opposite end. Adjacent to each coupler is a train airline molded into the side of the coupler housing. Wheel size is a scale 36” with the usual bright chrome nickel silver finish. The wheels are free rolling and matched the NMRA standards recommended gauge. The car rides on the new Atlas-O roller-bearing trucks with rotating end caps. These are nice to see when several cars roll past. The rotating end-cap detail is one I hope continues on future Atlas models. The coal load itself is nicely done, with what would be medium to fine sized coal. It is not easy to grip, but will remove readily.

Atlas-O has produced a beautiful model of a modern coal gondola. The cars come ready-to-run. Initial road names include undecorated, Nebraska Public Power (NPPX), Unit Train Services (UNSX), Utility Fuels (UFIX), Wisconsin Public Service (WPSX), and ACF® Demonstrator. Each roadmap features eight individual numbers except for the ACF® Demonstrator which has one. Suggested retail is $64.95 for 2-Rail and $59.95 for 3-Rail.

**REVIEW: GN S2 4-8-4, 2-Rail version; MSRP $1199**

M.T.H. Electric Trains, 7020 Columbia Gateway Drive, Columbia MD 21046 410-381-2580 • www.railking.com reviewed by Joe Giannovario & Jeb Krigel

**The Prototype**

Great Northern is known as the “other” U.S. railroad (besides the Pennsy) that extensively used Belpaire fireboxes on their steam engines. So, it was no surprise that their first 4-8-4 steamers, class S1, were built with Belpaire fireboxes in 1929. These locomotives were placed into passenger service even though their 73” diameter drivers qualified them for mixed service.

What was a surprise was the appearance of class S2 just a year later. At 420,900 lbs. they weighed almost 73,000 lbs less than the S1s and had about 10,000 lbs. less tractive force. The big difference was that the S2 rode on 80” drivers, the highest at that time for a 4-8-4, which put them clearly into passenger-only service and a class by themselves.

The S2s ran mainly out of Seattle, WA, and between Williston, ND, and Havre, Montana. These beautiful Northern’s set a precedent for other roads to try 80” diveded 4-8-4s for long haul passenger service.

**The Model**

The model wears the famous GN Glacier Green boiler and cylinder jacketing, black cab and black tender with the famous GN “goat” logo on its flanks. There is almost no cast-in detail. From a foot away, I couldn’t tell this model is diecast and not a brass import. One nice touch is the blackened axles on the drivers.

I am not a GN fan, so I had no plans on-hand to check dimensions. However, a fellow O Trains lister on Yahoo! Groups steered me to the Newton Gregg Train Shed Cyclopedia #23, Steam Locomotives and Tenders from the 1938 Locomotive Cyclopedia - Part 2. Armed with the dimensioned drawing and a caliper, I set about checking the accuracy of the model. I can say, without reservation, this is the most accurate diecast model I have ever examined. Every dimension I checked on the locomotive itself was within ±1 scale inch (0.020”) of the prototype drawing.

I had no drawing or diagram for the tender, so I am guessing it is correct given the accuracy of the locomotive. I did notice one small goof that required no drawing to verify. The tender is an oil-type Vanderbilt. The lettering on the rear of the tank should indicate water and fuel capacity. Instead of “fuel capacity” it says “full capacity”! Oops!

**Operations (from Jeb Krigel)**

I placed the S2 on Atlas two-rail track, checked to make sure it was set up for two-rail operation, and powered up the M.T.H. DCS command system. Nothing happened! This led me to check the polarity of the locomotive. On most of the newly announced M.T.H. ProtoScale 32 locos, the polarity switch is located under one of the hatches on the top of the tender. As this is an uncataloged loco, the booklet that came with it was no help in locating the switch (it shows the N&W J). I must say it took me a little while to find it. The switch is hidden not only under the tender, but directly under the front tender truck.

Once I switched the polarity, the locomotive came to life. I test ran just the loco and tender at slow speeds in both forward and reverse. The engine was very responsive to every command. The sounds were clear. Synchronized chuff and smoke were exciting. The bell was the typical recording. The whistle was a unique full-bodied...
multi-chime and not the same “canned” type, really cool! The loco was tested with all sound features on and in “stealth mode” with all sounds and smoke off.

The next test came under load when 40 freight cars were coupled up to the locomotive. I slowly increased the power and the S2 pulled the consist out at a slow 3 scale miles an hour according to the DCS display. Very nice sound with synchronized chuffing made this exciting. Several passes were made with the train up to speed both in forward and reverse. It performed flawlessly and without any hesitation.

And now the bad news

Jeb mentioned the polarity switch in his operations review. The M.T.H. DCS system is polarity sensitive and this is a real “gotcha” for two-rail operations. If the DCS command signal is not sent down the proper rail, the command decoder cannot “see” the signal and the locomotive just sits there. As Jeb had to do, there is a polarity switch that must be thrown to get the locomotive to respond. This becomes a problem with reverse loops, wyes and turntables where the track polarity must be reversed to prevent a short circuit. Once you do that...

A quick run-about with various gages and those ends give it away in spades. That’s why this car is so cool.

Our loaner is nicely assembled, as one has come to expect from the museum-grade end of the hobby. Everything is tight, square, and clean. All the details we love are here; with this prototype, there’s lots of opportunity to include detail. Paint is neatly applied, with good coverage. The lettering is a watershed in this prototype, there’s lots of opportunity to include detail. Paint is neatly applied, with good coverage. The lettering is a watershed in all things Nickel Plate.

A quick run-about with various gages only reveals one issue, that of coupler height. Ours was a bit high using the supplied boxes. It would be an easy adjustment to add a Micromark box shim or two. Although more involved, lowering the carbody doesn’t appear to cause interference between the swing of the trucks and the steps, and would be a more elegant approach. I do like the coupler boxes, though. The idea of supplying boxes detailed to an appropriate level with the model is a good one.

I have now done several reviews on recent brass and diecast locomotives and have developed two pet peeves which I will harp upon until the manufacturers and importers do something about them. Pet Peeve #1: every booklet included with a locomotive that I have examined has had blank pages and no information about the prototype. Come on guys! It won’t cost you a cent to include a few paragraphs about the prototype locomotive. Pet Peeve #2: there is a huge “cable” that connects the electronics in the tender to the electronics in the locomotive. I don’t see why that cable has to be so thick, but even if it does, why? There is another slight problem that bears mention. All these great new scale diecast locomotives from the various manufacturers have rigid frames. There is no springing or equalization between axles. On a locomotive with a long wheelbase, such as the S2, there is a tendency for the middle drivers to lift off the rails at the bottom of a grade change, or for the lead axle to lift off at the top of a grade change while negotiating super-elevations. This means you have to pay attention to track and grades for reliable operations.
Duryea Underframe Modeling

Back in the dark ages of railroad technology, the O.C. Duryea Corporation invented a way of controlling the shock generated by the harsh coupling of cars. Their design was quite simple. The center sill was made to slide back and forth, buffered by a series of springs. The Duryea underframe was adopted by a number of railroads starting in the 1930s. The B&O railroad was the largest user, with the application to their large fleet of M-53 wagontop boxcars and to their hoppers, as well. The Santa Fe purchased the underframe for a number of their boxcars and reefers.

The underframe design has a few visible clues that are evident in photos. The underframe juts out nearly a foot beyond the end of the car. There are several stringers hanging down that tie the frame together and provide mounting points for the brake equipment. The design of Duryea underframes appears to vary from one era to the next and with car type. There are differences between the underframe used under Santa Fe Reefer Dispatch (SRFD) reefers and ATSF boxcars, for instance.

Modeling the Duryea underframe presents few challenges for the average modeler. I modified an Intermountain AAR 1937 boxcar kit to represent an ATSF Bx-27 class. The prototype was delivered with a Duryea underframe. My model was built up using standard Evergreen channel and angle stock.

New Products Useful to the Finescale Modeler

A few new developments have come to the surface since the my last column was written. On the decal front, RL Design is preparing to release several new sets for Southern Pacific rolling stock. Rick Leach has prepared all new artwork for two groups of 50’ automobile cars. The first set (SP-138) covers the A-50-1 through A-50-3 and the A-50-9 through A-50-11, covering most of the single sheathed cars. The second set (SP-139) covers the later A-50-15 through A-50-18 all-steel AAR style cars. The SP-140 set covers black company tank cars, and the last set (SP-141) covers 50 and 70 ton flat cars. Prices range from $9 to $10 per set. Some of the sets will letter more than one car. You can contact RL Design at 14123 206th Street S.E. Snohomish, WA 98296-3947 for additional information. RL now lists 72 different lettering sets for steam-era rolling stock. They are currently working on all-new and very accurate Diesel lettering for Northern Pacific F-units, GP-7/9 and switchers. The decals will...
American Switch and Signal has released some new Proto48 turnout parts in various rail sizes. They include:

- #7 bolted rigid frog, code 100
- #7 bolted rigid frog, code 125
- #7 Manganese insert frog, code 125
- #8 Manganese insert frog, code 125
- #10 bolted rigid frog, code 125
- #10 Manganese insert frog, code 125
- #10 Manganese insert frog, code 138
- 16’-6” points (no filing of stock rails), code 125

The parts sell for $10 each and are made using Right-O-Way rail to A.R.E.A. standards.

John Pautz has promised some additional parts in the near future. You can contact him at jfpautz@pwrtc.com

Auf Wiedersehen!

This will be my last column in O Scale Trains. I have decided to spend more time modeling rather than writing about it. I have enjoyed the experience and hope that you, the readers, have benefited from the column.

◆

From your friends at OST: Happy modeling, Gene!

For the rest of the Finescale, Proto-type modelers, and Proto48 crowd, we now have a need. We consider the Finescale, Proto-type, and Proto48 world as, not only an integral part of the O Scale experience, but as a discipline to aspire to. First, we would welcome a new columnist to continue to inspire and inform, as Gene has so gallantly done since the magazine’s inception. Also, we would really appreciate some feature articles that showcase the Proto48 and Finescale world. We’ve seen some fantastic work done in this discipline, and would love to see some of it showcased in these pages, so others can learn about it, and perhaps be inspired to try their hand at it. Growth in the Proto48 world has to be healthy, and you gotta show it to grow it! Join us. -Ed .
Get Real Productions
is pleased to present
O Scale model building services:
Custom high quality railroad buildings

Kitbashing
Scratchbuilding
Craftsman kit building
Custom painting
Realistic Weathering
Super detailing
Quick turnaround with progress updates
Commissioned & freelance work
Creative, Imaginative, and Realistic
Specializing in unique & one-of-a-kind creations
All work guaranteed by a Model Railroad Craftsman
"We photograph what we build!"

Visit us at: www.oscalemag.com/pix/index.html

WWW.EHOBXYTOOLS.COM
Serious Tools for Serious Modelers

10-piece diamond file set, $15
Olfa® Chisel Blades - 5 pack, fits X-Acto knife, $3 pkg.
Quik ratching bar clamps $4.50 ea, 2 or more @ $4 ea.
5-piece sanding stick set, 120 to 600 grit, $10
Dremel-style fine saw blade, $6 ea., two or more @ $5 ea.

Visit our website and see hundreds of useful hobby tools: clamps & vises, Dremel tools & accessories, drill bits and pin vises, electrical accessories, files & sanding supplies, glues, hobby knives, magnifiers, pliers, scissors, saws, tweezers and a whole lot more!

EHOBXYTOOLS.COM, 4 Tupelo Lane, Langhorne, PA 19047 • Order toll-free US & Canada 888.469.0404, (10AM - 8PM Eastern)
Mention O Scale Trains Magazine when you order and receive a free pair of needle-nose clamps!

A New Drive By Accurate O Scale
MAX-M-DRIVE Synchronous Belt
All New Ball Bearing Quiet Drive
Replace Those Tired Worn out Old Technology
Drives With A Pittman Bearing Motor.

NEW PRODUCTS
• California Roadbed •
• PECO Track & Turnouts •
• Special Shapes Brass •
• NWSL • Keithco Loco-Link •
• Freight Trucks • Kadees •

Accurate O Scale
38623 Orchard St
Cherry Valley CA 92223
One of the good things about model railroading is the people you meet, hence the friends you make because of that common bond. Some of these friends have asked me for layout designs, and I have come up with a few of them. Layout design is intensely personal and almost infinitely variable (what I think looks good does not necessarily appeal to others), so my batting average for layouts getting built anywhere near the way we were designed is nearly zilch. Not that I am complaining, I like the challenge and I realize that layout design is a trial-and-error process.

Anyway, here is one I designed for a friend. It is presented here for your inspiration, even though he didn’t build it because he wanted a different prototype scheme. The larger the layout area, the more opportunity there is for personal variation. Since the shape and size of his basement will likely not be duplicated in your house, look at this more for ideas rather than for something to copy exactly.

The layout area is large, a rough “T” shape about 30’ x 45’ overall. My friend likes the Boston and Maine Railroad, so one of the ideas I had was representing the crossing of the Berkshires through Hoosac Tunnel. Check out the accompanying drawing as you read on.

Starting at East Deerfield, Massachusetts, the westbound mainline (known as the Fitchburg) climbs, following a river valley, to the Hoosac Tunnel. The line passes through the 4.5 mile long bore under a ridge, emerging in North Adams to continue west toward New York State. Also, the north-south Connecticut River line to Springfield passes through East Deerfield.

If you’re not partial to the Boston & Maine, other prototypes could serve. How about the Rio Grande from Denver to the Moffat Tunnel and the north-south Cheyenne to Pueblo line? Maybe the Pennsylvania from Altoona to the tunnels at Gallitzin appeals? Lots of other possibilities abound.

Getting back to the B&M, I compressed about 25 miles into one scale mile in order to squeeze it into the available area, while still permitting the drama of battling mountain grades with helper locomotives.

The East-West Mainline
In East Deerfield, the main line heads east into two staging tracks hidden behind a 12” high backdrop consisting of building flats and painted scenery. This is just high enough to conceal the staging tracks, yet low enough to reach over in case of trouble. The staged trains can be hand-fiddled by reaching over the backdrop, or just backed out and rearranged. Putting ½” hardboard around and between the rails makes re-railing cars easier.

Arrival and departure tracks are provided in front of the backdrop. The switch lead allows classification of freight cars to proceed without tying up the mainline. The turntable and roundhouse handle any helper engines and road engines that need servicing or repair. Four more tracks for freight car classification are provided, plus a fifth track for car storage and a route for locomotives to and from the roundhouse. Also, there’s a double-end caboose track, allowing crews to get the last caboose out without disturbing the maintainers. Crossovers between the switch lead and the arrival/departure tracks facilitate run-around moves and allow locomotives to escape to the roundhouse.

A siding is provided to serve the local industries and a road bridge crosses the end of the yard (A mirror under the bridge would make the yard look longer). The passenger station sits next to the main line.

From East Deerfield the westbound line first crosses over, then passes through the junction with, the Connecticut River line. Climbing begins in earnest as the line curves to follow the river valley up through the hills. It passes through Shelburne Falls, by a rock quarry, through Charlemont, and finally enters the Hoosac Tunnel where the modeled portion of the line ends. A three-and-a-quarter turn helix spirals the line back down to a hidden four-track holding yard.

The North-South (Connecticut River) Line
The other end of the holding yard connects to the south end of the Connecticut River line. The line appears under the east-west tracks, curves up to the junction,
and proceeds north to Brattleboro, Vermont, which is represented by a hidden two-track storage and reversing loop.

**Operations**

The East Deerfield yard serves to interchange cars between the mainline and the Connecticut River line, as well as to forward and receive cars from local freights. Trains from Brattleboro arrive from the storage loop and drop off eastbound and westbound cars. They pick up southbound cars, back out to the junction and proceed to Springfield, Massachusetts (the four track holding yard). Northbound trains arrive from the holding yard, back into the East Deerfield yard, drop off cars for the mainline and pick up northbound cars, and proceed to Brattleboro in the storage loop.

Eastbound freights stop in East Deerfield to interchange cars with the Connecticut River line. They are then backed out of the yard and proceed east into the staging tracks. Westbound freights arrive from the staging tracks and back into the yard to interchange cars and then proceed. The grades are such that the westbound freight can clear the yard without a helper. The helper engine is then coupled to the rear of the train and the battle begins. When the train reaches the tunnel, the helper is uncoupled and parked in the helper pocket. For Diesel locomotives, the helper can couple to an eastbound train to assist with its dynamic braking, or just return light.

Local freights can pick up cars at East Deerfield for industries at Shelburne Falls, Charlemont, and the rock quarry. Passenger service is possible, too, but you’ll have to be modeling the pre-1960s to have it.

I have suggested sidings at Shelburne Falls and Charlemont. A short passing track at Shelburne Falls keeps the locals out of the way of the through trains, and allows run-arounds for switching. The track should be kept nearly level at the towns to keep unattached cars from rolling away.

**Control and Power Supplies**

Walk-around control is a must for this railroad. You can really get the feeling of being out on the line running your train, since the hills and backdrops block your view of the rest of the layout.

You should use a power supply with a minimum five amp rating, and I’d recommend Crest (Aristocraft) radio control throttles. I like the model ART 5473, intended for large-scale outdoor railroads, with its 300’ range. The extra range helps in basements with metal obstacles (rebar, track, support columns, steel beams, etc.).

The usual multiple-cab block switches can be mounted on distributed control panels, one at East Deerfield, one at Shelburne Falls, one at Charlemont, and one at Hoosac Tunnel.

A good alternative is to use a DCC system such as Lenz, North Coast Engineering, and DigiTrax, with only a few electrical blocks to facilitate finding short circuits. Most DCC manufacturers offer radio throttles these days, although the plug-in throttles will work as well. The use of DCC will ease pusher service operation, but ordinary DC block control works as well.

**Trackwork Standards**

The minimum radius on the main line is 48”, except for one 44” curve on the Brattleboro loop. The sharpest mainline switch is #6, and #6 easements are designed into the layout wherever curved and straight track meet. For a #6 easement and 48” radius curves, the curved length of the easement is 31” and the offset distance between extensions of the curve and straight is 7/8”. Track centers are 3 7/8” apart on the straight and four inches on curves. The same easements are used for the 44” and 52” radius curves, although there are technically small differences. Short curve radii are 84” without easements. See my articles in O Scale Trains (#12 and #14) for an easy way to lay out easements. They are invaluable in allowing cars lengths up to 85’, and steam locomotives with rigid wheelbases up to a scale 17’, to operate satisfactorily.

The maximum grade is three percent, with some grades at two percent, and the helix is 1.9 percent. Maximum train length is about 27 feet (roughly 24 cars and three Diesel locomotives).

You can use standard switches available from Atlas-O, though they offer #5 and #7.1/2. You can substitute #5 switches in most places, while using the #7.1/2 for crossovers. Old Pullman and Roco have #6 switches, if you can find them. Flex-track from Atlas-O, Old Pullman, and House of Duddy is a natural. Of course, you can still hand-lay your own track and switches using rail from Old Pullman and wood ties cut from Northeastern basswood strips.

**Modifications**

Of course, your space is not the same as this plan calls for. To cut down the width, cut out the center Shelburne Falls peninsula, and move the Charlemont-Hoosac Tunnel peninsula over into its place. Fewer turns are needed on the helix to get down to the holding yard, and the holding yard is shorter. The Brattleboro loop might have to be eliminated if you can’t get it to fit next to the helix. The Deerfield yard can easily be shortened. It could also be turned parallel to the wall where the holding yard is located. Further shrinking could be done by reducing the minimum curve radius, but the aisle widths are already at a minimum 18” at the entrances to the loop areas.

**Construction Notes**

I recommend open-grid tables made of 1 x 4 joists butted to 1 x 4 runners along the table edges and walls. Arrange the joists to provide trackboard support every 16” using 1 x 4 or 1 x 6 risers. Leave the centers of the loops open for access. Use 2 x 2 legs every four to six feet apart.

Track roadbed is ¼” plywood or 1 x 6 boards topped with ½” Homasote. Bevel the edges of the Homasote 45 degrees for ballast slope. Don’t cut across your roadbed at grade changes. Instead, spring the roadbed up or down to the new grade, forcing a gradual transition. The yard area roadbed can be made with ⅛” plywood sheet laid directly on the joists. The Homasote can then be cut out to follow the trackage with 45 degree beveled edges.

**Scenic Treatment Notes**

The scenery consists of hills and more hills - this is a mountain climbing railroad, right? Ridges and backdrops on the peninsulas should be high enough to block the view of people in the next aisle.

Backdrops are made of ½” tempered Masonite (hardboard) and curved to follow track and conceal corners. Place the rough side of the Masonite toward the viewer. It diffuses whatever light is shined on it. Try to get the type without the rough patterned surface if you can, but don’t worry too much about it. The patterned surface is not objectionable if not viewed too closely. Backdrop sections should be no more than 48” long. Any longer lengths become unwieldy. Prime and paint both sides to seal against moisture, leaving three inches at each end of the back side bare for gluing. Sears Federal Slate flat latex paint makes a good sky blue color. White ceiling latex paint can be used for the back side. Mount the sections on supports and glue them together with Elmer’s glue using six-inch wide strips of Masonite as joint backing. Reinforce joints with short flathead wood screws. Spackle the joint and screw heads before painting. Roll on another coat of blue paint and finish off the back side, too. Drybrush cirrus clouds with long swipes using a two-inch brush and white latex flat ceiling paint. If you don’t like the results, roll more blue paint over it and try again.
1-877-531-5275 TOLL FREE
DigistarDCC@netacc.net
P. O. Box 3337
Spring Hill, FL 34611

Your DCC, Sound and Signalling Specialist

NCE
PH PRO10 10 Amp DCC Starter Sys $649.95 $484.00
PH PRO10R 10 Amp Radio DCC Starter Sys $869.95 $660.00
PB-10A Add-on 10 Amp Booster $269.95 $186.00
PRO Cab Deluxe Programming Cab $159.95 $119.00
PRO CAB-R Deluxe Radio Programming Cab $249.95 $188.50
CAB04P Intermediate Cab w/Pot $89.95 $68.50
CAB04E Intermediate Cab w/Encoder $119.95 $91.50
CAB04PR Intermediate Radio Cab w/Pot $199.95 $155.00
CAB04ER Intermediate Radio Cab w/Encoder $199.95 $155.00

DIGITRAX
Super Chief 8 Amp DT400 Throttle DCS200+ Booster $469.00 $365.00
Super Chief 8 Amp Radio DT400R Throttle DCS200+ Booster $639.00 $504.00
Super Empire Builder DT300 Throttle DCS200+ Booster $249.00 $204.00
Super Empire Builder Radio DT300R Throttle DCS200+ Booster $459.00 $329.00
DCS200 8 Amp command Station/Booster $305.00 $238.50
DCS200S 8 Amp Booster $199.99 $155.50
DT400 Super IR Throttle with Programming $179.99 $136.00
DT400 R Super Radio/IR Throttle w/Programming $229.99 $174.50
DT300 Infrared Dual Throttle w/Programming $154.99 $115.00
DT300R Radio/Infrared Dual Throttle w/Programming $204.99 $144.00
UT1 Utility Throttle $79.95 $59.50
UT2 Utility Throttle w/Programming $99.95 $72.50

Decoders
NCE D408SR 4 AMP 7 Fx Wired $89.95 $70.75
NCE D408SR 8 AMP 8 Fx Screw Terminals $129.95 $105.00
Digitrax DG383AR 3 Amp 8 Fx JST/Wired $59.99 $40.00
Digitrax DG383AR 5 Amp 8 Fx JST/Wired $64.99 $43.75
Digitrax DG583AR 5 Amp 8 Fx Screw Terminal $69.99 $47.25
Lenz LE4024 4 Amp 4 Fx Screw Terminal $69.95 $52.95
Sound Soundtraxx DTX Sound Decoders $129.00 $97.00

Light
MiniTronics
1.5V 15ma 10 Pack $8.00 20 for $17.00
1.4V 30ma 10 Pack $8.00 20 for $15.00
1.6V 30ma 10 Pack $8.00 20 for $15.00
2nd Place - Caboose, CP Rail Caboose  
Bill Yancey, Boise ID

1st Place - Steam Locomotive, C&NM H1 4-8-4, Alf Modine, Cupertino, CA

3rd Place - Favorite Train, London Midland & Scottish freight, Michael Anderson, Everett WA

2nd Place - Steam Locomotive, RGS #20, Glenn Erikson, Brentwood CA

1st Place - Electric Locomotive, Milwaukee Bi-Polar  
John Dill, Minifee CA

1st Place - Favorite Train, Southern Pacific Lark  
Bill Gallagher, Santa Rosa CA

1st Place - Traction, CA&E #456  
Alf Modine, Cupertino CA

1st Place - Diesel Locomotive, Oahu Rwy #19  
Glenn Erikson, Brentwood CA
1st Place - Structure, Oil Well Drill Rig with Pump
Mike Linxwiler, Hollister CA

2nd Place - Structure, Idaho Hotel, Eureka, Nevada
Jim Harper, Reno NV

3rd Place - Structure, B. Johnson Leather Works, Jim Harper, Reno NV

2nd Place - Favorite Train, Desert Mine Train
James Eckman, Mountain View CA

3rd Place - Structure, B. Johnson Leather Works, Jim Harper, Reno NV

Add $6.00 S&H in 48 States • Others pay actual postage cost • N.Y. residents add 8.25% sales tax. (prices are subject to change w/o notice)

www.valleymodeltrains.com
Your Local Hobby Shop

It is good to be back on the rails after missing the last issue, owing to relocation. I suspect just about all of you who have had to pack up and move have found that, although the temptation to get out the tools and trains shortly after arrival at the other end is very strong, they tend to be among the last items back in service. I have been accumulating considerable helpful information which readers have sent by letter and by e-mail to share, adding to our common store of knowledge; I have hopes of sorting it all out and getting it into an early column, so I ask your patience a bit longer. Incidentally, I can usually respond promptly to an e-mail, but letters tend to get put in the file (and we all know what happens to filed items). In any event, all contributions are gratefully received, so keep those letters and e-mails coming.

The primary purpose of this column is to provide some context and perspective for what we see now and think of as “O Scale”. The artifacts (locomotives, rolling stock, structures, power sources, and all of the other “hardware”) demonstrate considerable change over the seventy years or so that it has been a distinct (as from toys) and recognizable activity. I think the “software”, that is to say how we understand, operate, and acquire the hardware, has changed at least as much. In this issue, I’d like to reflect on marketing and merchandising model railroading in general and our scale in particular.

In the beginning, model railroaders made their own replicas from wood, metal, and whatever other suitable (and occasionally unsuitable) raw materials they had to hand or could obtain. Probably we have all seen, whether in books or museums, examples of scale models of contemporary railroad equipment from the nineteenth century, some of which approach our own sophisticated standards. It was not uncommon for railroad shop apprentices to construct miniatures of the full-size locomotives and cars they were learning how to construct and repair. Nonetheless, this was not yet model railroading but only model building. On the other hand, toy representations of trains were also available about the same time, most constructed individually (rather than mass-produced) before the beginning of the twentieth century. Some were even live-steam, and quite a few actually ran on rails. Gradually, after the Great War, commercial toy products often began to more closely resemble the real thing, and adults started to buy sufficient “hardware” from toy and department stores to operate semi-permanent rights-of-way. Although it was at first more common in Europe, where Bassett-Lowke and Hornby in England and Maerklin in Germany manufactured very convincing models (primarily in #1 and #0 gauges) with elaborate accessories and track components, it also began to grow in popularity on this side of the Atlantic. Largely, though, Americans had to rely on imports before the early 1930s.

Whatever American modelers couldn’t (or wouldn’t) buy from overseas, they built for themselves, from homemade castings for locomotive parts and basic freight and passenger components. They might sometimes sell or trade extras to friends. The basement manufacturer is one thing that continues into our own time. A few producers advertised in general craft magazines before Model Railroader began publishing in 1934, after which they had a specialized venue to announce items for the hobby. The loss of employment during the Great Depression of the 1930s led many of those who had thought of model railroading only as a hobby to begin trying to earn real income from it. By the end of that decade, complete kits for almost everything a modeler needed were commonly available, and recognizable hobby shops to sell kits and supplies at retail had been established. Before that time, most items had been “direct sales only”, and, although the majority of lines (often fairly limited in what they offered) were still very small operations, wholesalers appeared to distribute product where the volume of consumption made it cost-effective.

Fine distinctions between manufacturers, distributors, and retailers were still hard to draw before WWII, however, and most of the larger stores that sold model railroad items also sold their own brand-name lines, among them such familiar names as William K. Walthers, Megow, and the Model Railroad Shop of Dunellen, N.J. In my files are early catalogs from such early outlets. They included their own products (sometimes made in-house, other times, contracted out) as well as offerings from the few larger manufacturers whose production made it profitable for them to sell quantities at lower wholesale prices. Some of the retailer/wholesaler hobby shops were more comprehensive (such as Megow of Philadelphia or Hawk of Chicago), also making, distributing, and selling model airplanes, boats, racecars, and military vehicles. Commercial model railroading was growing, but usually not quite to the extent that one could specialize in it. When I was stationed in Japan, as late as the 1980s, many of the model railroader manufacturers still operated retail outlets, primarily for their own products. However, they also stocked those of other producers, something that had largely disappeared in the US some years before.

What about some of those larger manufacturers I noted? Bill Walthers was himself a traction modeler (as was Al Kalmbach), and he gradually progressed from offering hard-to-find electrical parts to complete traction kits, then track, freight and passenger cars, and, finally, locomotives. To promote sales of his products, he authored a whole series of “how-to” booklets, nominally priced to encourage the hobbyist to get more deeply involved in model railroading (encouraging the addiction, one might say). The catalogs of other more established manufacturers also had extensive instructions on how to build a model railroad and all its components. Walthers was one of the few larger operations that was entirely railroad oriented. My understanding is that Rollin Lobaugh owned a successful machine shop which produced screw products for what was then high-tech, and his railroad line was his added personal interest (although presumably it had to stay in the black). Others have written about the unique circumstances of Scale-Craft and Elliott Donnelly, who was from a well-to-do family and could afford to subsidize his company until sales could sustain it.

Where could the typical model railroader find the essentials to realize his dream? If he was fortunate enough to live in a large city, particularly in the Midwest or the Northeast, it was likely there might be one or two of the large hobby shops accessible. If he lived elsewhere, in other parts of the country or far from urban areas, he might find a retail store that also stocked a small amount of railroad equipment as a sideline (usually because the owner was himself a model railroader). Some rather odd combinations occurred: obviously toy, hardware, and department stores (Remember them?), but also furniture stores, even haberdasheries (Now even more obscure) and others. When I was in high school in the 1950s, I came across a locksmith shop in Geneva NY that had been selling trains for many years. If even the local combination shops weren’t nearby, it was mail order, and all the largest hobby stores developed a thriving business through the post office, supplying the lone ranger in the boondocks. The illustrated extensive catalogues I mentioned above became increasingly common as this part of the business took off. We O Scalers, to a large extent, seem now to have come full circle in having to rely on buying our necessities from a distance, although the Internet has now become our tool.

Merchandising model railroad products changed markedly after WWII, for several reasons, but I hear Brian Scace calling “Board!”, so that will have to wait until next issue.
The Rules

• You may only enter one category of the contest.
• You may enter a maximum of two (2) photos in that category.
• Image must include O Scale equipment befitting the category.
• Image must be submitted in digital JPEG format.
• Image size must be approx. 1200 x 900 pixels in size.
• Final file size must not exceed 500Kb.
• Image must be emailed to: contest@oscalemag.com

All submissions become the property of O Scale Trains Magazine.

Images must be submitted by midnight July 1, 2005.

Winners will be announced and winning images published in OST #22 (Sept. 2005).

Additional Details: All photos MUST be submitted by email. Photos DO NOT have to be taken with a digital camera. You may take a photo with a wet-film camera, scan it into your computer, and then submit it.

Three winners will be picked by judges in each of the three categories. There will also be an Editor’s Choice Award for which the prize is an AtlasO Signal System 4-pack.
Fallen Flags

I note with great interest your editorial regarding research material for modeling railroads in particular using the Internet. I am constantly looking for new material about most anything regarding railroads. One of the best sources for steam photos is George Elwood’s Fallen Flags website. May I suggest you enlighten your reading public to take a look at this website. There is just a plethora of information on railroads from A to Z. In particular the New York Central, which I mainly model, has an awesome collection here. The site address is [www.rr-fallenflags.org]. Incidentally, the PRR gets the most hits.

Another comment is regarding the new Atlas deck bridge. Take a good look at that bridge and ask yourself what other railroad structure does it remind you of? It is obvious to me, a TURNTABLE BRIDGE! I am surprised I am the only one, it seems, to see this. I have contacted Atlas to consider making it longer and using it for just that. O one could kitbash two of them into any usable size I suppose. As it is only 20” long I suppose it could be used for turning smaller motive power, too.

Best Regards, Sam Shumaker

Wants Demographic Data

I wish to congratulate you on arranging with Jim Canter to do the 2007 National O Scale Show at Indianapolis in September/October, 2007.

I agree this should be an improvement in location and time of the year over many of the past National shows. To continue this effort, prior to the National show at St. Louis this year, I propose we produce two reference documents:

1. On a map of the 48 states, mark the location of each subscriber to your magazine. This would show the areas of greatest concentration of O Scalers and should be favored in selecting a National show location. We also need a volunteer group in that area who wish to staff this show.

2. Prepare a tabular listing of past National shows (at least 7 shows) showing the location, the date (month and year) and the attendance. This, presumably, will show poor attendance (if reported correctly) was due to the location and the time of year (summer months). We need this to compare with the 2007 show at Indianapolis to be held in the Fall months.

I suggest we assemble this information prior to the St. Louis National show to influence the selection of location and time of year for the 2008 National show. Again I am proposing the location (in areas having greater numbers of O Scalers) and scheduled in the later months of the year (fall weather) will improve attendance.

Sincerely, Bob Retallack

Joe responds: That’s a lot of data analysis, Bob, and while it might be useful and instructive, it will take away from the time we spend putting the magazine out. Besides, knowing where the greatest concentrations of OST subscribers are is no guarantee for a successful convention. However, anyone could do Bob’s second suggestion. Any takers?

HiRail to Scale

Thank you for reviewing the Lionel O-6-6-6, as most of us have purged our rosters of Lionel since the Atlas F-9 replaced 2-rail F-3s. Lionel has not helped the situation by not spelling out scale-sized rolling stock from the near ¾ scale of many of their offerings. Their stubborn retention of tubular rail, and not increasing track radii beyond 36” doesn’t help, either. At least M.T.H. differentiates the scale-sized Premier Line from the mostly smaller Rail King Line.

KLine’s 85’ passenger cars are outstanding; I have four sets (SF, UP, Amtrak Superliner, and Surf Liner), and I am waiting for the San Diego Coaster set as my son-in-law is a manager of this commuter line. Now if only Kadee will bring out some long-shank couplers for passenger, piggyback and auto carrier cars. The coupler travel on real auto carrier cars is incredible.

Lionel may have other models that would make easy conversions to full scale, but most of us approach a Lionel catalog as if it were contaminated by tubular rail.

North West Short Line is at least offering wheel conversion sets for most 3 rail models, but a large selection of steam loco drivers and tires may have ended with the passing of Jan Lorenzen of Loco Workshop. Those of us with access to a medium-sized lathe are able to turn down 3 rail drivers to fit insulation and new tires. The MTH ATSF 4-6-4 in the following review could use a change of drivers. I’m also disappointed at the undersized drivers and wheels of steamers available in both 2- and 3-Rail.

There is a growing and needed market for products to convert 3-Rail to 2, so I hope all the manufacturers make their products known in the pages of OST. It’s for sure we won't hear about them in the HO oriented, generic model RR mags., and please, no 3W addresses only, I’d rather talk to a real person and get an immediate response.

Happy Rails,
Lamar Scheuerman
P. S. Holgate & Reynolds was alive and well and selling product as of ’03.

More on Using LEDs

Great to read the article “Powering Up” in the [OST #18]. LEDs probably will play an increasingly important role in our scale, especially as our equipment is large enough to take advantage of the various sizes of LEDs. Attached are some photos of a plywood diner that’s about twelve years old and still has the original batteries running the lights (the batteries are in the kitchen.)

In this car, one LED is for general lighting and the rest, on the tables, represent those little glass candle holders that have been around forever. These are all yellow mainly because white was not available when this car was built. That was a bit of luck, yellows are best in this car anyway because of the warm candle-like glow. A pleasant surprise was how the figures came alive with the sources of light being in exactly the right place!

continued on page 52
A companion lounge car has both red and yellow “candles” and really sets a relaxed, romantic mood. I can send a photo of that if you’d like to see it.

The blue-white LEDs are great to reproduce the sickly “modern” lighting of many early lightweight cars and because they’re so bright very few are needed to light an entire chair car. The yellow-white LEDs are perfect for steam headlights. Also a blue-white bundled with a smaller red in a cab (road-appropriate, of course!) unit main light gives a real punch in forward (projecting a perfect 20–30 degree cone) and a surprise red in reverse and, best of all, the wiring couldn’t be easier!

Truly, with LEDs the only limit to their application is our imagination!

But a caution: as with so many things in this hobby, getting interested in LEDs leads you down a garden path: to learning how to design your own circuits, to print and to etch and to assemble and to mount your own circuit boards. It goes on. It’s one more learning path offered by this incredible hobby! No wonder our brains stay so supple.

After doing on-board track power conversions a few times my passenger cars are now powered by batteries like the prototypes for rock-solid steady illumination. They have a micro toggle mounted beneath the cars that responds to an electromagnet between the rails so cars can be switched on or off remotely just by running the train over the energized magnet. This switch also allows trains to be run “dark.” Using batteries also means NO track power is drained.

Just touching on a subject that offers some of us a chance to learn and to grow and your article should snare more of us into this exciting area.

Good on ya!

Nick Pulskamp

Available Again! 15” PLATE GIRDER BRIDGE
From New Double-Track Dies
£50

Pullman 6-Wheel Truck Kit $35.00
Pullman Industries
10350 Veronaic Ave, North Huntingdon, PA 15642-2065

SMRtrains
Unique Limited Edition Scale Models

The General

Unlike any other model of the famous General ever made, SMR’s all-new model is not based on later reconstructions. This is the first time the famous engine stolen during the “Great Locomotive Chase” has been modeled as it really looked in 1862! All-Brass, 1:48 Scale, Superb Detail! 2- or 3-Rail. Matching Boxcars.

VERY LIMITED QUANTITIES REMAINING!
WWW.SMRTRAINS.COM
Schneider Model Railroading, Inc.
P.O. Box 753 Mount Laurel, NJ 08054

Available Again! 15” PLATE GIRDER BRIDGE
From New Double-Track Dies
£50

Pullman 6-Wheel Truck Kit $35.00
Pullman Industries
10350 Veronaic Ave, North Huntingdon, PA 15642-2065

SMRtrains
Unique Limited Edition Scale Models

The General

Unlike any other model of the famous General ever made, SMR’s all-new model is not based on later reconstructions. This is the first time the famous engine stolen during the “Great Locomotive Chase” has been modeled as it really looked in 1862! All-Brass, 1:48 Scale, Superb Detail! 2- or 3-Rail. Matching Boxcars.

VERY LIMITED QUANTITIES REMAINING!
WWW.SMRTRAINS.COM
Schneider Model Railroading, Inc.
P.O. Box 753 Mount Laurel, NJ 08054

American “0” Scale Professional Services
Low-cost consignment sales.

Purchase and sell quality “0” Scale brass and custom model trains.
VISA, MasterCard & Lay-a-ways Accepted. Call for Terms.

WE BUY BRASS TRAINS
☆ Estate and collection liquidations
☆ Locating services
☆ Purchases of your new, used & unwanted equipment
☆ Consignment sales
☆ Layout dismantling services
☆ Auction services
☆ Collections Purchased
☆ Cash Paid for new & used trains

Call days or early evenings...

Bill Davis
Email bdavis148@aol.com
Phone/Fax (262) 560-1619

American “0” Scale Professional Services
PO Box 575
Waukesha, WI 53187-0575
As a 27-year employee on the current BNSF and previous BN railroad, I still remember the evolution of the 45' intermodal trailer and container from the older 40' and 20' units. When this happened, there was a scramble to modify existing 89' cars to carry the new 45' units. BN modified the flats to accommodate the length of the 45' trailers by relocating the existing hitches to either end of the car. The cars were then re-stenciled “TWIN 45”, to signify the car’s ability to carry two 45' trailers.

Being a two-rail modeler, I acquired a two-rail model and a pair of three-rail models for my layout, with a plan to convert the three-rail units for two-rail operation. I used Kadee 805 couplers and Intermountain 33" wheel sets for the initial conversion. I was disappointed with the appearance of the finished car for three reasons. The Atlas truck placed the top deck too high, the 3/16" coupler pads used to bring the Kadee boxes down to proper height looked odd, and they could not carry two 45' trailers with the factory hitch placement patterns. Photo 1 shows the difference between my conversion and the stock Atlas two-rail car.

The first two-rail conversion was easy enough, but I set out to find a better way to convert the second car. After removing the Atlas three-rail trucks and couplers, I had the idea to mount the Kadee 805 coupler box directly to the bottom of the car (Photo 2). I centered the Kadee box on the coupler pad, marked the holes, then drilled and tapped for #2-56 screws. I pondered on the idea of modifying the Atlas trucks, but decided to go with a pair of Weaver plastic roller bearing equalized trucks equipped with Intermountain 33" metal wheel sets. A test fit showed the couplers sat a scale 9" too high.

To solve this problem, I placed two #6 washers with a 3/16" I.D. (available in many places, these came in an assortment pack from Radio Shack) over each truck mounting boss. I then ground down the top of the boss even with the top of the washers. I used a rotary tool with a heavy cut-off disk for this. Before attaching the trucks, I had to drill and tap #2-56 holes in the truck bosses an extra 3/16" to 5/8" in depth to compensate for grinding off some thread. After attaching the trucks, I placed it on the test track and checked the coupler height with my Kadee gage (Photo 3). The couplers were within tolerance, and the lowered height of the car deck looked great. I then ran the car in a train to check clearances; there were no problems with wheel-to-carbody clearance and the tracking was excellent for such a heavy car with plastic trucks.

As on the prototype, the hitch modification to the cars (which
are actually only 89' 4" over the end sills) would cause two 45' trailers to overhang the ends of the car. After experimenting with different possibilities, I decided to remove the four mounting pins on the bottom of each hitch. I then removed the bevel portion of the hitch back to a point six to nine scale inches from the vertical fifth wheel legs (Photo 4). I then centered the mount, with the front of the modified hitch foot positioned at the parting line between the deck and end sill of the car.

At this point, I went back and removed the Kadee couplers and extended the #2-56 screw holes through the car deck and into the bottom of the hitch. I tapped the plastic hitch foot, replaced the coupler boxes, and installed two #2-56 screws that extend through both the car body and the hitch foot. The result was solid as a rock. Now, two 45' trailers will fit perfectly door-to-door. There is no interference with other modified 89' flats or other freight cars operating on 54" radius curves and through #6 switches.

With this modification you get a more prototypical look to the car and the ability to carry two 40' trailers, a 40' and 45' trailer, two 45' trailers, or a 53' and 20' trailer. Take care in handling this car while making the modifications. The plastic details are a bit fragile and can break off if you are not careful. As with the prototype, discard the long end-ramp. Install the short ramp according to the time period you choose to model, as these were left in place for a while and later removed.

Here's a note on trailer modification. I have taken a couple of my Atlas 45' trailers and removed the large fifth wheel pin. I drilled and tapped the center of the pin site for a #2-56 screw and installed a 3/4" #2-56 screw for the pin. By doing this, I can now use my Atlas trailers on my MTH spline and deep well cars' fifth-wheel hitches, and visa versa. Don't feel confined to
do things my way. This worked for me and reflected the materials that I had on hand at the time. Long-shank Kadee couplers would be nice (hint, hint). Couplers from another manufacturer will work just as well.

My original two-rail 89' flatcar, with the factory installed Atlas couplers, has a tendency to lift upward in a heavy train. It will also be modified to use Weaver trucks and Kadee couplers.

I have yet to try the Weaver scale metal roller bearing trucks with this modification. If they are similar in height to the Weaver plastic trucks, they should work also.

This is a simple project for converting three-rail equipment to two-rail operation. No need to be intimidated; a little “imagineering” goes a long way. Right now the phone is ringing. Looks like another “night train to Memphis”. ◆

---

Photo 5. The Atlas-O 89' 4" flatcar is back in revenue service with “TWIN 45” trailers.

---

Randsburg Falsefront Stores in O Scale !

O - Randsburg Barbershop.......................... $34.95
O - Randsburg Assay Office.................. Coming Soon!
O - Randsburg Mercantile..................... Coming Soon!

Please visit our website for a complete product listing and availability. www.papercreek.com papercreek@earthlink.net (661) 242-2421

---

Paper Creek
MODEL WORKS
The ORIGINAL Paper Craftsman Kits

Laser Cut Paper Shake Shingles
HO, S, O $10.95

Shipping in USA and Canada: (Please add $4.50 outside US and Canada)
$0.00 - $9.99 ........................................... $5.00
$10.00 - $99.99 ...................................... $4.50
$100.00 - $499.99 .................................. $6.00
$500.00 and over .................................... FREE
CA residents add 7.25% tax

P.O. Box 6863
Frazier Park, CA 93533

* Visit our website at http://www.papercreek.com

---

The Original EMD “E” Passenger Units
The EA, E-1, E-3, E-4, E-5 & E-6

Next to the PA’s the Classic EMD “E” has the prettiest nose in town and that’s the way Key Imports will build them big and beautiful in “O” scale. All units are painted and lettered starting with the original EA on the B&O #51 (A/B) and the Santa Fe E-1 #2 (A/B), the E-3, -4, -5 and the E-6 beginning with the AT&SF down to the Union Pacific and a dozen roads in between. Most are A/B combinations with a few exceptions.*

---

Key Imports Inc.
The Key to Quality
P.O. Box 1848
Rogue River, OR 97537

* Visit our website at http://www.keyimportsinc.com

---

Always inquire about Key Imports models through your nearest Key dealer.
NSL Electroliner
“Get your electroburgers.” This dish was served in the dining car of the 4 car Electroliner. This sleek interurban whisked passengers at over 100 mph in amazing comfort. Powered by two in truck mounted motors for smooth and quiet scale performance.

B&O S-1a “Big Six”
B&O had over 120 of these freight monsters. Choose from either the Baldwin or Lima versions. Accurate down to the builder’s plates. Others have treated themselves to this excellent model, why haven’t you? Call today before they are all gone.

CB&Q O-5 4-8-4
The highest level of detail... Opening cab doors, operating vestibule, convertible tender (oil to coal). Operating MARS light. Fully detailed cab interior with figures. The list goes on. Only a few 2R models remain. Call Today!

B&M R-1a Speed..
The R-1a was a great model and quickly sold out. A limited number of R-1a #4102 are decorated with the Speed Lettering scheme. Only 15 of these R-1a were decorated this way. Get yours while they last.
Neal Schorr is a very serious model railroader who is passionate about the Pennsylvania Railroad. He is also a dedicated HiRailer who models in ¼" scale. With over 25 years of modeling experience, his layout, “The Middle Division of the Pennsylvania Railroad,” depicts the geographical part of the Pennsy between Harrisburg and Altoona. This story is a success story. His need for realistic line poles took him on a journey that finally led to success.

Neal had made some very detailed and realistic line poles for his layout, all by hand, but he found he needed many of them. He calculated that if he needed quantities of this great detail item, other model railroaders probably needed them too. He did his marketing research. He did his homework with plans and diagrams directly from engineering drawings. He contacted several major model train manufacturers about the possibility of having them mass-produce a quality line pole. He met with several R&D people at the manufacturers. Most were not interested. Neil persisted. Finally, just when it seemed that the entire project would not come to fruition, he got lucky. Weaver Models decided to help with the project. They would produce the line poles if Neal would cover the costs of creating the tooling. They reached an agreement and the poles are now offered for sale through Weaver.

Many of us don’t have the opportunity to have our dreams turned into reality. Many of us are lucky enough just to have a manufacturer listen to what we would like in a product. Schorr’s persistence paid off, and the result is a very easy-to-do project that will add a great deal of detail to your model railroad.

The manufactured package offers you a choice between 9" and 12" line poles. The kits come with crossarms, and you can choose how many you want to add to complete your poles. Easy instructions are included and assembly only requires basic tools, glue, and a little paint. The process is quite simple.

Now, here is a challenge from this Hobo. Finish the scene. Complete your modeling of the line poles by adding the lines! I’ve researched the major modeling magazines from the last several years (including the one you are now reading) and was amazed that several modelers went to a great deal of time and effort to place realistic looking poles along their pike. They stopped short, however. They left the poles without any lines. Adding lines will make a difference, and here is my challenge for both HiRalers and Scale modelers. Take the time to add the lines and the effort will pay off.

A lot of people are afraid to add lines, because most lines are too rigid and they will interfere with accessibility. The answer lies in a simple product I found a couple of years ago, called EZ-Line. EZ-Line is produced and distributed by Berkshire Junction of Adams, Mass. (www.berkshirejunction.com or 413-743-3960). This line is made of an elastic polymer that behaves like a thin rubber band on a roll. It is flexible and elastic in nature, allowing for pulling and stretching. If you pull on it or bump into it, the line will pull itself back to its original state (which we hope is between your line poles!). It is available in several colors and thicknesses. If you are a serious modeler you will want to stay tuned. This old Hobo has a lot of tips and techniques that he will pull out of his bag for you in upcoming issues.◆

---

THE WESTERN RESERVE "O" SCALE TRAIN SHOW
CLEVELAND, OHIO
SATURDAY, NOVEMBER 5, 2005
9:00 A.M - 2:30 P.M.
ADMISSION: $5.00
6' TABLES - $35.00
LAKELAND COMMUNITY COLLEGE
190 and ST.RT. 306 (S.E. CORNER)
HELD IN THE AUXILIARY GYM / ATHLETIC CENTER
24 HR. POLICE - PUBLIC WELCOME - FREE PARKING - 2-RAIL "O" SCALE ONLY - PLEASE NO OTHER GAUGES
THIS SHOW IS NOT AFFILIATED WITH THE WESTERN RESERVE O SCALE COMMITTEE WHO ANNUALLY PUT ON A SIMILAR SHOW
BOB FRIEDEN - 9695 CHILLICOTHE ROAD - KIRTLAND, OHIO 44094 - 440-256-8141 - FAX: 440-256-1749 - E-MAIL: TWORailscale@AOL.COM

---

May/June '05 - O Scale Trains • 57
Key NYC E7 A-A, latest run F/P, new, never run .................. $2595
Oriental GN N3 2-8-8-0, F/P Glacier Park, new, never run ...... $2395
Key PRR E7 B unit, F/P Tuscan, buff stripes, new, never run ... $1950
PSC SP AC-9 2-8-8-4 Coal 292 R-1 Tender F/P - Black Boiler New $3195
OMI UP FEF-3, F/P, Road# 844, new, never run .......... $2350
PSC C&O T1 2-10-4, CP, like new condition, REDUCED .... $1400
OMI UP DD40X F/P Road# 6931, like new w/Cochrham drive . $1795
Kohs & Co., PRR GG1, F/P #4913, 5 stripe, gold leaf and Tuscan, new, never run ........................................ $2800
PSC NP Z5 2-8-8-4, F/P Rd# 5006. ............................ $3995
Key UP Challenger, 4-6-6-4, Fd#3977, oil version, two-tone grey, silver stripe. New, never run ....................... $3295
Key UP Challenger, unpntd, coal version. New, never run .......... $2995
PSC NYC F12e 4-6-0, 5000 gal. tender, F/P, new, never run .......... $1195
PSC VGN AG 2-6-6-6 with Cockerham drive and paint, new. $2695
Key PRR E8 AA, FP Brunswick Green, gold stripe, new .......... $2695
OMI NP A4 4-8-4 with Cockerham drive, new, u/p .............. $1750
Kohs NYC 3a 4-6-4 F/P #5437, builder's photo edition, 1 of 10 with white tires and running board. ............................. $3900
Key UP FEF3 4-8-4, unpntd, coal version, rare .................. $2995
Key D&RGW L95, 2-8-8-2, F/P #3400, gm boiler, new, never run ... $3600
PSC D&RGW L-131, 2-8-8-2, Fd#3600, black boiler (one of a kind), boiler tube pilot and tri-color herald w/D&RGW spelled out, new, never run .................................................. $3895
OMI UP FEF-3, F/P #835, w/triple stacks, new, never run ........ $2495
Key UP FEF-2, F/R #825, two tone gray, silver stripe, new .... $2795
PSC DM&IR M4 2-8-8-4, F/P w/black jacket, Worthington Fw'd1 . $5000
Fine Arts NYC passenger cars, -never out of box, CALL (only 4 left). ea $800
Key PRR F3 A-B, latest run, F/P Brunswick Green, new never run . $2495
Key PRR FP7 A-B, latest run, F/P Tuscan 5 stripes, new, never run .... $2495
Key C&O FP7 A-A, latest run, F/P, new, never run .............. $2995
Key C&O FP7 A-B, latest run, F/P, new, never run .............. $2495
Key C&O FP7 A-B, A latest run, F/P, new, never run .............. $3850
PSC SP GS5 4-8-4, latest run, F/P Daylight Rd #4458, new, never run ... $2995
Key B&A K3n 4-6-2, latest run, Fd#506, new never run .......... $2550
Key UP FEF-3 4-8-4, F/P #8444 Black & graphite, new, never run .... $2995
Key UP FEF-3 4-8-4, unpainted, new, never run .................. $2150

Whitehall Hobbies
Specializing in Brass Locomotives
1431 Windrush Circle, Blacklick, Ohio 43040
Voice: (614) 861-0018 - Fax: (614) 861-3034
JWTrains@aol.com

Photos are available on request.
Ask about new unlisted items. We carry nearly every imported brass line.

—Trail of the Frisco Flyer—

2005 O Scale National Convention
June 15-18 • Collinsville, Illinois-

Sponsored by the Big Bend Railroad Club, Inc., at the Gateway Center, 1 Gateway Dr., Collinsville, Ill., just east of St. Louis. For more info contact Paul Metzler, convention chair, 314-968-6847 or send email to [BBRC2005Oscale@swbell.net].

Visit the convention website for schedule details: [http://www.geocities.com/bbrrclub/].

Guest speaker for the banquet will be noted railroad photographer Joe Collias.
## Advertisers Index

<table>
<thead>
<tr>
<th>Company</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA Precision Turntables</td>
<td>15</td>
</tr>
<tr>
<td>Accurate O Scale</td>
<td>42</td>
</tr>
<tr>
<td>Allegheny Scale Models</td>
<td>31</td>
</tr>
<tr>
<td>American Professional O Scale Services</td>
<td>52</td>
</tr>
<tr>
<td>AM Hobbies</td>
<td>13</td>
</tr>
<tr>
<td>AtlasO IBC</td>
<td>27</td>
</tr>
<tr>
<td>Central Locomotive Works</td>
<td>31</td>
</tr>
<tr>
<td>Crusader Rail Services</td>
<td>31</td>
</tr>
<tr>
<td>Custom Signals</td>
<td>20</td>
</tr>
<tr>
<td>Diecast Direct</td>
<td>35</td>
</tr>
<tr>
<td>Digitar</td>
<td>45</td>
</tr>
<tr>
<td>Dominion Models</td>
<td>15</td>
</tr>
<tr>
<td>Eagles Nest Miniatures</td>
<td>35</td>
</tr>
<tr>
<td>Ehobbytools.com</td>
<td>42</td>
</tr>
<tr>
<td>FOS Scale Limited</td>
<td>41</td>
</tr>
<tr>
<td>Get Real Productions</td>
<td>42</td>
</tr>
<tr>
<td>Gorilla Glue</td>
<td>23</td>
</tr>
<tr>
<td>Great Scale Model Train Show</td>
<td>15</td>
</tr>
<tr>
<td>House of Duddy</td>
<td>20</td>
</tr>
<tr>
<td>Just Trains</td>
<td>61</td>
</tr>
<tr>
<td>Keil-Line Products</td>
<td>20</td>
</tr>
<tr>
<td>Key Imports</td>
<td>55</td>
</tr>
<tr>
<td>LaBelle Woodworking Co.</td>
<td>20</td>
</tr>
<tr>
<td>Model Building Services</td>
<td>52</td>
</tr>
<tr>
<td>M.T.H. Electric Trains IFC</td>
<td></td>
</tr>
<tr>
<td>NCE Corp</td>
<td>45</td>
</tr>
<tr>
<td>Nickel Plate Models</td>
<td>20</td>
</tr>
<tr>
<td>Norm's O Scale</td>
<td>12</td>
</tr>
<tr>
<td>O Scale National Convention</td>
<td>58</td>
</tr>
<tr>
<td>O Scale Realty</td>
<td>19</td>
</tr>
<tr>
<td>Old Pullman</td>
<td>41</td>
</tr>
<tr>
<td>Overland Models</td>
<td>49</td>
</tr>
<tr>
<td>P&amp;D Hobby Shop</td>
<td>16</td>
</tr>
<tr>
<td>Paper Creek Model Works</td>
<td>55</td>
</tr>
<tr>
<td>Public Delivery Track</td>
<td>23</td>
</tr>
<tr>
<td>Railroad Collectibles</td>
<td>59</td>
</tr>
<tr>
<td>Rons Books</td>
<td>23</td>
</tr>
<tr>
<td>Russian River RR Co.</td>
<td>31</td>
</tr>
<tr>
<td>San Juan Car Co.</td>
<td>30</td>
</tr>
<tr>
<td>Scale University</td>
<td>29</td>
</tr>
<tr>
<td>Scaled World</td>
<td>35</td>
</tr>
<tr>
<td>Schomberg</td>
<td>31</td>
</tr>
<tr>
<td>SM R Trains</td>
<td>52</td>
</tr>
<tr>
<td>Stevenson Preservation Lines</td>
<td>31</td>
</tr>
<tr>
<td>Suncoast Models</td>
<td>45</td>
</tr>
<tr>
<td>Sunset3rd Rail</td>
<td>56,BC</td>
</tr>
<tr>
<td>T Bone Models</td>
<td>31</td>
</tr>
<tr>
<td>Valley Model Trains</td>
<td>47</td>
</tr>
<tr>
<td>Weaver</td>
<td>26</td>
</tr>
<tr>
<td>Western Reserve Train Show</td>
<td>57</td>
</tr>
<tr>
<td>Whitehall Hobbies</td>
<td>58</td>
</tr>
</tbody>
</table>

### MTH 2-Rail Locomotives

<table>
<thead>
<tr>
<th>Locomotive</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATSF Northern</td>
<td>$1150</td>
</tr>
<tr>
<td>CNJ Blue Comet</td>
<td>$1200</td>
</tr>
<tr>
<td>CNW S/L Hudson</td>
<td>$900</td>
</tr>
<tr>
<td>C&amp;O Greenbrier</td>
<td>$975</td>
</tr>
<tr>
<td>NK P Berkshire</td>
<td>$1100</td>
</tr>
<tr>
<td>PRR Centipede</td>
<td>$1250</td>
</tr>
<tr>
<td>PRR T-4 #6110</td>
<td>$1200</td>
</tr>
<tr>
<td>N&amp;W Class A</td>
<td>$1150</td>
</tr>
<tr>
<td>SP 6-6-6 CAB FWD</td>
<td>$795</td>
</tr>
<tr>
<td>SP 4-B-4 Daylight</td>
<td>$1250</td>
</tr>
<tr>
<td>UP Big Boy</td>
<td>$1350</td>
</tr>
<tr>
<td>UP Gas Turbine</td>
<td>$850</td>
</tr>
<tr>
<td>WVP&amp;P Shay</td>
<td>$1000</td>
</tr>
<tr>
<td>ATSF A-B-B-A</td>
<td>$950</td>
</tr>
<tr>
<td>C&amp;O F3 A-B-A</td>
<td>$550</td>
</tr>
<tr>
<td>NYC F3 A-B-A</td>
<td>$650</td>
</tr>
<tr>
<td>SOU F3 A-B-A Early</td>
<td>$600</td>
</tr>
<tr>
<td>T&amp;P GP9</td>
<td>$1350</td>
</tr>
</tbody>
</table>

All Locomotives new in original boxes. 
Additional locos and cars available - call.

Railroad Collectibles
86 W. Johnson St.
Philadelphia, PA 19144
Voice: 215-438-4330 • Fax: 215-438-7322
oguage.railroad@verizon.net

### A Guide To Modern O Scale

A Guide To Modern O Scale by Brian Scace

Almost Sold

For the first time, here is a guide to O Scale two rail. This book was written by O Scale modelers with years of experience in the hobby and they share that experience with wit and wisdom. We'll show you how to get started in 2-rail O what you need and where to get it.

Get your copy today from your local O Scale hobby shop or direct from O Scale Trains, just $14.95 plus $3 s&h. VISA & Mastercard Accepted.

Here's a peek at the Table of Contents:

1. Welcome, and a little History
2. Concept of Operation
3. Locomotives
4. Rolling Stock and Couplers
5. Space Prep and Benchwork
6. Track and Track Plans with Joe Giannovario
7. Structures and Scenery with Neville Rossiter
8. Wiring and Control Systems with Ted Byrne
9. Narrow Gauge with Bobber Gibbs
10. Conductor Traction
11. Proto 48 with Gene Deimling
12. Tools with Neville Rossiter
13. Useful Tables, Tips, and Short Notes
14. Sources, Conventions, and Meets
15. Glossary of Terms

O Scale Trains
PO Box 238
Lionville PA 19353-0238 • 610-363-7117

May/June '05 - O Scale Trains •
**Events**

A current list of events is now available at our website [http://www.oscalemag.com]. If you have an event you’d like listed, we have a submission form at the website (the preferred method), or you can mail the info to our office address given on page 3.

**May 2005**

7: Merchantville, New Jersey
Cherry Valley Model RR Club O Scale Swap Meet held at the Grace Episcopal Church, 7 E. Maple Ave. Merchantville, NJ. Admission $4.00 (spouses & children under 14 are free), tables are $16.00 for the first table (includes one admission) and $12.00 for each additional table. Info/reservations, SASE – CMVRC PO Box 192, Maple Shade, NJ 08052, Harry Hieke (856) 625-5506 between 6 & 9 pm or Dave Richter (215) 639-3864. Contact harrystrains@verizon.net

13-15: Philadelphia, Pennsylvania
17th National Model Trolley Meet held at the National Guard Armory, Rt 1 and Southampton Rd. Hours: 6 pm to 11 pm Friday, 9 am to 10 pm Saturday, Fan Trip on Sunday. Dealers, model layouts, clinics, photos, books and videos. Admission: $20 per person (spouses & children under 18 free). Registrar, Charles Long, 17 Lanfair Rd, Cheltenham, PA 19012. Contact webmaster@eastpenn.org

21: St Paul, Minnesota
Twin City Model RR Museum Model RR & Hobby Sale at the Education Building, Minnesota State Fairgrounds. From 9 AM to 3 PM, admission $4, under 8 free (includes admission to the Model RR Museum at Bandana Square if you get your hand stamped). Contact paulgruetzmann@usfamily.net

**June 2005**

15-18: Collinsville, Illinois (East of St. Louis)
Trail of the Frisco Flyer — 2005 O Scale National Convention at the Gateway Center, 1 Gateway Dr. Info: Paul R. Metzler (club president, convention chair), Big Bend Railroad Club, Inc., PO Box 4357, St. Louis, MO 63122, 314-496-8847; Email: BBRC2005Oscale@swbell.net or www.geocities.com/bbrcclub/. All checks should be made out to: O Scale National 2005 and mailed to: Forest Trent, Registrar, O Scale National Convention 2005, 304 Christopher PI, Union, MO 63084.

25-26: Timonium, Maryland
The Great Scale Model Train Show & The All-American Hi-Rail & Collectors Show - Maryland State Fairgrounds, Fri: dealer setup 5 pm to 11 pm; Sat: setup 7 to 9 am, sales & exhibits 9 am to 4 pm; Sun: setup 8:30 to 10 am, sales & exhibits 10 am to 4 pm; $6, kids under 12 free, family max $12; 8’ tables $55, free electricity (bring your own cords). Info: ECSMRA, 5336 Thunder Hill Rd, Columbus, MD 21045; Howard Zane, 410-730-1036; email: hzane1@comcast.net; www.gsmts.com

**July 2005**

5: Kirtland, Ohio
Two-Rail Train Meet of the Western Reserve dedicated to the memory of Gil Stovichek. Two-Rail only meet (no tinplate, Hi-Rail or other scales allowed). Admission $5, under 12 free. Show hours from 9 AM to 2:30 PM. Six foot vendor tables are $35. Vendor entry at 7 AM. Not affiliated with the former Western Reserve O Scale Committee. Contact Bob Frieden, 440-256-8141. Contact tworailscale@aol.com

**August 2005**

6: Denver, Pennsylvania
Eastern “O” Scalers Swap meet at the Denver Fire Hall, 4th & Locust Sts. - 9:00 a.m. - 1:00 p.m. Admission $5; (spouses & children under 14 are free), tables are $16.00 for the first table (includes one admission) and $12.00 for each additional table. Dealer’s setup Friday evening 6:00 p.m. to 9:00 p.m. and Saturday morning 7:00 a.m. to 9:00 a.m. Info/reservations, SASE – EOS, PO Box 1781, Bensalem PA 19020; (215) 639-3864. Bring an index card with your name, address etc., for a $1.00 off your admission. Contact eostrains@att.net

**September 2005**

3: Merchantville, New Jersey
Cherry Valley Model RR Club O Scale Swap Meet held at the Grace Episcopal Church, 7 E. Maple Ave. Merchantville, NJ. Admission $4.00 (spouses & children under 14 are free), tables are $16.00 for the first table (includes one admission) and $12.00 for each additional table. Info/reservations, SASE – CMVRC PO Box 192, Maple Shade, NJ 08052, Harry Hieke (856) 625-5506 between 6 & 9 pm or Dave Richter (215) 639-3864. Contact harrystrains@verizon.net

**November 2005**

5: Wind Gap, Pennsylvania
Eastern “O” Scalers Swap meet at the Plainfield Fire Hall, 6480 Sullivan Trail – 9:00 a.m. – 1:00 p.m. Admission $5; (spouses & children under 14 are free), $16.00 for the first table (includes one admission) and $12.00 for each additional table. Dealer’s setup Friday evening 6:00 p.m. to 9:00 p.m. and Saturday morning 7:00 a.m. to 9:00 a.m. Info/reservations, SASE – EOS, PO Box 1781, Bensalem PA 19020; (215) 639-3864. Bring an index card with your name, address etc., for a $1.00 off your admission. Contact eostrains@att.net

**Buy–Sell–Trade**

Buy-Sell-Trade ads are $5 for 30 words plus your address information. Additional words are $0.25 each. Subscribers are permitted one free ad per subscription cycle. All B-S-T ads are prepaid. You may send ads by postal service with a check or money order. Ads sent by email or called in must use a credit card. See our contact info on page 2.

KEYSTONE MODEL WORKS: PRR H25 quad hoppers; PRR gondolas, PRR drop-bottom gondolas; PRR scrap tin gondolas. Scale versions only at dealer cost. Much more brass, SASE for three page list. Ph: 727-391-3135, John Clemens, 5273 97 Way N, St. Petersburg, FL 33708

PECOS RIVER BRASS painted cars... $189, tank cars, Clinchfield cabooses, Airslide covered hoppers, 50’ grain cars, Santa Fe flat cars, Pullman-Standard covered hopper. Listings SASE, Ph: 727-391-3135, John Clemens, 5273 97 Way N, St. Petersburg, FL 33708

INTERMOUNTAIN build-up gondolas: C&O, NYC, CB&Q, MoPac, PRR, Frisco, Espee; box cars; B&O Sentinel, B&O Timesaver, EJ&E, Monon, NYC&StL, Western Pacific. SASE for lists. Ph: 727-391-4135, John Clemens, 5273 97 Way N, St. Petersburg, FL 33708


FOR SALE: Down payment on Geo. Kohs PRR K4, $900 value, $150 down payment on PRR NSc Cabin Car; asking $800 for both. Bob Lowery, Ph: 215-887-7049.


FOR SALE: SS USRA undec. 2-10-2, $1000, 2-8-2 Hy $950, 2-8-2 L $900. Shipping extra. Bank cheque or Money Order. Sarah Flynn, 108 Rivers Edge Dr., Burlington VT 05401. Email“ saraflynn@yahoo.com

RESERVE KEY: Also PA/8-1/2, PA-3; SP GS1, GS2 4-8-4; ATSF 2900, 3776 series 4-8-4; C&O H6 2-6-6-2; EMD EA, E1, E3, E5, E6, E7, E8, E9; PRR Q2 4-4-4-4; (1944 and 1945 runs, to be the best imported so far); UP and LA&SL MT 4-8-2; C&O H6 2-6-6-2; EMD EA, E1, E3, E5, E6, E7, E8, E9; PRR Q2 4-4-4-4; (1944 and 1945 runs, to be the best imported so far); UP and LA&SL MT 4-8-2; PRR S2 6-8-6. All are multi-number and prototype specific. Firm reservations only. MAIL ORDER TRAINS PLUS, 349 Roosevelt Rd, Pghsh PA 15237. Phone: 412-766-1068, Fax: 412-766-4213

60 • O Scale Trains - May/June '05
The Wheel Turns

This issue we say “farewell” to Gene Deimling as a regular contributor and “welcome” to a new writer, Roger C. Parker.

Gene’s contributions to OST helped elevate the magazine to a higher standard of modeling. Unless you’ve seen his work first-hand, you cannot fully appreciate the craftsmanship involved in his models. We will miss his column but he has promised to grace our pages in the future with feature length articles. We look forward to seeing his work.

Back in November 2004 both Brian and I put out the call for traction material. To our great surprise and delight, several people responded with material and proposals. One of those was Roger C. Parker. Roger sent me an email with a proposal for a regular traction column. Now, his name seemed familiar to me. Way back at the “dawn” of desktop publishing (the mid 1980s), a Roger C. Parker wrote several books on the subject, many of which I have in my library. As it turns out, our new traction columnist and the book writer are one and the same! You can read Roger’s first column on page 34.

And, I promise there will be traction-related feature articles in future issues.

The Photo Contest Returns

We decided to host another digital photo contest this year. The response last year was very good and the photos were just marvelous. But this year we’ve expanded the scope to include Steam-era and Modern-era photos, as well as Industrial & Narrow Gauge. AtlasO, Bachmann, San Juan Car Co., and Weaver Models donated close to $2000 worth of prizes for the contest. I specifically want to mention Kelly Schaefer and Joe Hayter from Weaver, Bob Lawrence from AtlasO, and John Parker at San Juan Car Co. Too often, we talk about the companies but forget there are real people behind the corporate façades. Thanks guys (and gal!) for your support of OST.

Be sure to read all the rules on page 50 of this issue. Pick one category and submit no more than two photos. We’ll take it from there.

Coming Soon!

We have a number of scratchbuilding articles in the hopper and we can promise one per issue for the next year.

If you have never attempted to scratchbuild a model, now is your chance to try. It is not that difficult, especially when you have someone lead you through it step-by-step. We will have articles on flats, gons and tank cars, all of which everyone can use more of on their layouts.

Ted Byrne (Powering Up) is working on a side-by-side comparison of DCC, TMCC and DCS command control systems. We had hoped to have it for this issue but that didn’t happen. Look for it in the July 2005 issue.

I’ve been talking to Mike Culham (Great Central Railway) and he says he has enough material for almost 3 years worth of issues. So, you can expect to see “Building A Small O Scale Layout” for a while. Mike will cover literally every aspect of building a model railroad by the time he’s completed the series.

Wants and Needs

What we’re lacking, at the moment, are articles about Proto48 and finescale modeling projects, structures, scenery, and small layouts. If you are working on projects in any of those areas, give us a shout. Maybe you’ll get to see your name in print!

We would also like more “O Scale Influences” articles honoring those who have inspired you to take up O Scale, or to build better models by their examples. We don’t need scads of photos. Just write down why this person inspired you and send it to us.

Because I say we “need” articles on the above subject areas doesn’t mean you shouldn’t contact us if you are working on something else. We’re always open to any O Scale project proposal. Just talk to us.

Growing Pains

It has been obvious to me for about two or three issues now that we need to increase the page count again. It’s likely that we will do that for the next issue (July). This will mean we will have more room for additional content and advertising. It also means the magazine will be heavier and more expensive to mail. The good news is we will not raise the Standard Mail subscription rate. The bad news is that we will have to raise the First Class Mail rate. We will keep you apprised of this.

Surprise!

This issue was all wrapped up except for a few ads. So imagine my surprise when I received the Weaver ad you see in this issue — N&W steam-era cabs are coming! The lowdown on these brass crummies is that Weaver will do the class CF (wood) and CG (steel, no windows in the ends) cabin cars, painted and lettered, with interiors, for about $260 each. Diesel-era paint schemes will be available, too. How cool is that? I still hope some of you will try your hand at scratchbuilding one of these cars simply because it’s fun.

That’s it for this issue. Keep Highballin’.
It's time for some Spring Reefer Madness with the release of the Atlas O 40' Rebuilt Wood Reefers with New Paint Schemes and a Special 4-pack of the Original Body, 40' Wood Reefers. Atlas O's reefers are always popular, so don't delay, and head down to your local hobby store to pick up yours today!

40' Rebuilt Wood Reefer Features Include:
- FREE! Optional 3-Rail Scale Adjust-A-Coupler™ System included
- Simulated metal roof • Modernized braking system
- Raised hatch platforms with simulated hatch plugs
- Brake wheel and brake housing • Underframe details • And more!

2-rail versions feature die-cast scale couplers and scale 33" wheelsets.

40' Wood Reefer (Original Body) Features Include:
- FREE! Optional 3-Rail Scale Adjust-A-Coupler™ System included
- Separately-applied ladders, grab irons and stirrups
- Separately-applied door hinges, handles and latches
- Separately-applied opening roof hatches, hinges and latches
- Highly detailed ABS body • Opening doors • And more!

2-rail versions feature die-cast scale couplers and scale 33" wheelsets.

<table>
<thead>
<tr>
<th>ITEM # 3-RAIL</th>
<th>DESCRIPTION</th>
<th>ITEM # 2-RAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>8150</td>
<td>Undecorated</td>
<td>9150</td>
</tr>
<tr>
<td>8156</td>
<td>Lackawanna</td>
<td>9156</td>
</tr>
<tr>
<td>8157</td>
<td>M&amp;St.L</td>
<td>9157</td>
</tr>
<tr>
<td>8158</td>
<td>Silver Edge</td>
<td>9158</td>
</tr>
</tbody>
</table>

Eight road numbers are available per road name, except for Silver Edge which has two road numbers.

<table>
<thead>
<tr>
<th>ITEM # 3-RAIL</th>
<th>DESCRIPTION</th>
<th>ITEM # 2-RAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>6792</td>
<td>Grand Union</td>
<td>7792</td>
</tr>
<tr>
<td>7792-3</td>
<td>Ralston Purina</td>
<td></td>
</tr>
<tr>
<td>7792-3</td>
<td>Blitz</td>
<td></td>
</tr>
<tr>
<td>7792-3</td>
<td>Kraft - Phenix</td>
<td></td>
</tr>
</tbody>
</table>

One road number is available per road name. One of each road name will be in each case.

For the NEW Atlas O 2005 Spring/Summer Locomotive & Freight Car Catalog, please send $5 ($7 outside the US) to the address shown below.

Atlas O, LLC. • 378 Florence Avenue • Hillside, NJ 07205 • www.atlasO.com
NYC J3 Empire State Express
This Famous J-3 Hudson was streamlined specifically to match the “Empire State Express” train. Made with nickel plated brass, this fine scale model will steam your way in 2006. Only a limited quantity will be produced. Pittman Powered with our “Quiet Drive” Mechanism.
$1099.95 + $30 S&H

Late Allegheny SE
The last class of H-8 Allehenies (1645-1659) are coming in 2005. This Special Edition production will consist of only 50 models in 2-Rail O Scale. This later class of Allegheny had overfire jets on the firebox. Pittman powered, super detailed in brass.
$1799.95 + $40 S&H

MP54 - Electric
PRR fans pay attention. These self-propelled 54’ coaches, were very numerous on the PRR and LIRR (no pantograph). With full interior detailing, overhead constant voltage lighting and working pantograph these scale MP54s will be rambling your way in late 2005. Propelled by in-truck mounted motors
$499.95 + $20 S&H

NP Z-8 Challenger SE
The Grand Daddy of all Challengers, the NP Z-8 will be arriving in June 2005. Only 40 NP and 10 SP&S (Oil) will be produced in 2R O Scale. The Z-8 will have all the features you have come to expect from Sunset Models. Order today, as this short run will not last long.
$1799.95 + $40 S&H