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“Parts Is Parts”

One of the biggest hurdles for me to overcome in three-rail conversions was the trial-and-error fear. I wanted to convert several models to 2-Rail for my railroad, but I was unsure of how the parts would fit. I have custom detailed numerous Rail Power Products HO models over the years. That meant powering them with various parts from Athearn and Northwest Shortline. For O Scale the concept is the same. In some ways the process is the same, but the action is much more expensive. I was afraid of making a $300 junk pile.

Luckily for us, several U.S. companies now use standard parts from Korea, Taiwan, and China to construct a locomotive’s running gear. Of the conversions I have tried, I like Weaver two-rail trucks used in a three-rail model. A phone call to Weaver will get you to the service people and they’ll know just what you need. I have noticed Weaver trucks will fit most Williams, K-Line and MTH models, but Atlas trucks should be used to convert Atlas locomotives. The Atlas trucks are reversed from the Weaver trucks. The Weaver trucks, at $75 a pair, include motors, gears, wheels, contacts, and pilot. A three-rail model of an engine doesn’t need much (if any) modification to accept the Weaver trucks to make it into a two-rail model. The truck replacement type of conversion is the easiest, though it is certainly possible to re-wheel a three-rail truck with wheelsets from Northwest Shortline (it is critical to electrically isolate the wheels on one side of the truck from the truck body so as not to cause a short. It is not as straightforward as what I am showing here, but not difficult either). Note that I am using a two-axle truck. A wheel conversion is probably necessary for a three-axle truck. A three-axle two-rail truck with the correct shape to fit a motor is very hard to find from any manufacturer.

Similar, Yet Different

I am modeling some 1970s L&N equipment for my layout, so the Weaver U-25b will fit right in with the Atlas GP35 I painted. The deciding factor for a type of conversion is the fit of the trucks. If you have ever seen an O Scale motor off the truck, as in Figure 1, you will notice the half round bottom with a turning radius stop cast into the base. This keeps the trucks from freely spinning in the frame and twisting the wiring around the motor. It is also what determines turning radius. The shape is carried through the frame. The frame sandwiches between the motor and truck. It is very obvious as to which direction the truck must point to fit to the motor.

Generally, by removing one Phillips screw and two slotted power-pickup screws, you can separate the truck from the motor and frame. Since you have a two-rail truck, the parts from the three-rail truck are not used. Look at them closely (Fig.2) and you will see very similar construction to the two-rail truck, with the notable exception of the wheels. That’s what makes this conversion easy. Now, with the motor and three-rail truck separated, you will be able to simply fit the new two-rail truck to the motor and reinstall the Phillips screw to hold them together. Don’t forget to lubricate the base of the worm gear in the two-rail truck! The new two-rail truck gears will not come lubricated.

“She’s Got No Power, Captain!”

You are now about halfway through your conversion of a three-rail locomotive to two-rail operation! Doesn’t sound that great, does it? Actually, that’s not all that bad, since what’s left is merely the rewiring for power pickup. A two-rail truck gets power in the same fashion as a three-rail truck. The big difference is that the third-rail roller is gone and a brass wiper is put
in its place, hence the need for electrical isolation in a wheel replacement conversion. Once the truck is installed, you can push the long slot-head screw back down into its hole. The screw should pass through a small plastic insulator cap on top, then a large plastic insulator underneath, the brass wiper, and the metal bottom plate supplied with the two-rail truck. Figure 3 shows the various parts of the power pickup. Next, the short slot-head screw attaches to the top of the truck, just as it did on the three-rail truck. If you have everything installed as it should be, the wires will pass from the truck back through the frame as before. The truck now has a different wiring scheme, but is getting the same track power to the electronics as the three-rail configuration. You have now completed the electrical hook-up of the two-rail truck! But, there's more.

**AC Theory and DC Operation**

These wires will surely be attached to something electronic on the other end. The AC electronics of a three-rail engine can't tell the difference from two-rail AC. You still have AC “hot” and “ground” feeding the electronics. I have never tried this, but you could power the two-rail track with AC and have an engine with QSI sound or simple forward/neutral/reverse. One consideration is that the frame of the locomotive is no longer “ground”, so any wires screwed to the frame will have to be removed and connected directly to the electronic unit in the locomotive.

The more common alternative is to simply remove the three-rail electronics. The locomotive can then be operated with conventional DC power. Snip the wires as close to the electronics as possible, remove the boards, and connect the wires from the motors to the wires from the trucks. These wires are not always color-coded. Generally, the motor wires are blue and yellow and truck wires are black and red, however, this does not hold true on the inexpensive Lionel Diesels and on earlier K-Line Diesels! As long as you connect the wire from the truck's wiper side to the same side of the motor, you will be correct. If you connect each motor to one another in parallel, jumping the terminals on the same side of both motors, you will greatly enhance electrical pick-up. (Also, if you wire the motors in series, rather than in parallel, you can reduce the maximum speed of these types of drives if your railroad uses conventional DC control. In this scheme, wire the two wiper leads to, say, the left terminal of the forward motor. Run a wire from the right terminal of the forward motor to one of the terminals on the rear motor. Wire the remaining terminal of the rear motor to both non-wiper leads from the trucks. Check the motors to see if they both run in the same direction; if not, reverse the leads on the rear motor. Then, check the drive with another locomotive to see if they both run in the same direction. If not, trade the wiper pickup leads on the front motor with the non-wiper leads on the rear motor. -Ed)

**DCC and TMCC**

You have now created an electrically isolated platform for your choice of command systems, be it Digital Command Control (DCC), a radio system like Loco-linc, or TMCC.

All that you DCC folks have to do now is drop in a decoder and begin programming CVs. With all that room between the motors, you'll just have to install sound, too. Just remember that a low-amp decoder is no match for the high amperage draw of a twin motored O Scale locomotive and 25 weighted cars.

I am using AC power on two-rail track with Lionel Train-Master™ Command Control (TMCC) as my system of choice. TMCC uses a wireless command control technology with sound capability built on the board. It is the same TMCC as in the 3-Rail world. I purchased a TMCC SAW 1.5 controller board with Railsounds 4.0 from Train America Studios (www.tastudios.com). SAW stands for Sunset, Atlas, and Weaver controller board. It featured GE sound, but equal to a modern Dash 9. Well, a U25B does not sound like a Dash 9, however, Lionel makes a U30C with TMCC and a more appropriate sound for our purposes (I'll try not to get too far off base here). Thanks to the Internet, I was able to locate a U30C sound chip from a Lionel repair dealer. I pulled and replaced the sound chip installed on the Railsounds 4.0 board; just match the orientation of the new chip to the old and gently push it home. All Railsounds 4.0 boards are the same, but it's the sound IC chip that gives the distinctive sound. A computer chip puller is handy here. The puller is cheap, and you can get it at Radio Shack. Once the electronic surgery was over, I installed the SAW board according to TAS' instructions. The installation was painless (my fourth to date). If you can install a DCC decoder, or wire a switch machine for that matter, you can install a TMCC board in any locomotive.

**Finishing**

The trucks I ordered from Weaver came with new pilots for two-rail use. This allows you to install a pilot on the frame, which provides a mounting pad for the coupler and better appearance. Two screws hold each new pilot in place with the coupler at the correct height. It is possible to build a pilot from brass or styrene for more detail, if you choose. In a locomotive consist, I find the level of detail I get from the stock pilots is less (my fourth to date). If you can install a DCC decoder, or wire a switch machine for that matter, you can install a TMCC board in any locomotive.

**FIG. 4**

[Image of a model train with a pilot box attached]

[Caption: FIG. 4] Reverses slot compared to Fig. 1

**FIG. 5**

[Image of a plastic insulator cap and a metal bottom plate]

[Caption: FIG. 5] Remove this section

**Converting Two-Rail Trains to TMCC**

The puller is cheap, and you can get it at Radio Shack. Once the electronic surgery was over, I installed the SAW board according to TAS’ instructions. The installation was painless (my fourth to date). If you can install a DCC decoder, or wire a switch machine for that matter, you can install a TMCC board in any locomotive.

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Still not sure? If there is a particular three-rail model you would like on your two-rail layout, then convert it. Some of the electronics intended for the three-rail world may not work in your DC/DCC environment but, if you acquire a TMCC model, gut it and sell the TMCC portion on Ebay to regain some expense. If you model two-rail TMCC, it is possible to pick up a three-rail TMCC locomotive and convert just the trucks as I described on the Atlas model. A simple truck replacement makes conversions even cheaper. I cannot stress enough how good Ebay (www.ebay.com) is for finding deals on TMCC locomotives, but don’t forget the many fabulous merchants out there that offer great deals on train equipment. Even if you don’t have a computer to surf Ebay, or the Internet in general, you can find phone numbers for great hobby shops in O5T and many other model train magazines. Give a hobby shop a call and check some prices. You’ll be glad you did.

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**Steam Locomotives**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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<td>N &amp; B</td>
<td>Switcher CP Used, No Box</td>
<td>$315</td>
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<td>WS &amp; CTO</td>
<td>TI 2-10-2</td>
<td>$1,995</td>
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<tr>
<td>ORI GN R2</td>
<td>8-8-8-2 UP Vestibule Cab</td>
<td>$2,450</td>
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<tr>
<td>OMI SP NH</td>
<td>2-8-8-4 UP New</td>
<td>$2,650</td>
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<tr>
<td>PSC &amp; NWZ</td>
<td>2-6-2 6-2 FP New</td>
<td>$2,750</td>
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<tr>
<td>SS NYC K5</td>
<td>Pacific UP L/N</td>
<td>$3,675</td>
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<tr>
<td>WS PRR J1</td>
<td>2-10-4 UP New</td>
<td>$3,995</td>
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<tr>
<td>PSC PRR K4</td>
<td>4-6-6-2 Modernized FP L/N, Can Motor</td>
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<tr>
<td>WS UP Big Boy</td>
<td>4-8-4 UP New</td>
<td>$3,750</td>
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<td>SS UP</td>
<td>6-6-6-4 CP Cockerham Dual Drive, Unique</td>
<td>$3,750</td>
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<td>KEY UP</td>
<td>Challenger 4-4-6-4 FP Gray, Silver Stripes, New</td>
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<tr>
<td>KEY UP</td>
<td>FE&amp;F 2-4-8-4 UP Coal, 1 of 10</td>
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<td>OMI WM</td>
<td>11-t 2-8-0 UP New</td>
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<td>OMI WM</td>
<td>L-1 Decapod 2-10-6 CP New</td>
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**Diesel Locomotives**

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<td>KEY ATSF</td>
<td>EMD E8 A-B FP New, 1st Run</td>
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<td>OMI A&amp;SF</td>
<td>SD70/66 FP New, Warbonnet</td>
<td>$2,295</td>
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<td>CR&amp;I</td>
<td>Alco RS-12 CP L/N, Blue - Yellow, No. 6782</td>
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<td>CR&amp;I &amp; ALCO</td>
<td>ALCO RSD-12 DP L/N, Blue - Yellow, No. 6789</td>
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<td>KEY EMD</td>
<td>E8 A-A FP No Color, New</td>
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<td>OMI DL&amp;W</td>
<td>EMD FT A-B UP New</td>
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<tr>
<td>KEY &amp; WCM</td>
<td>EMD FT A-B FP New, 1st Run, Yellow - Black Stripes</td>
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<td>RGM GE</td>
<td>44 Ton Diesel Switcher U7 L/N, Phase IV</td>
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<tr>
<td>OMI NW/C</td>
<td>C636-7 UP New</td>
<td>$850</td>
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**Rolling Stock**

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<tr>
<td>KEY SP</td>
<td>EMD E9 A-A FP Black Widow, New, 1st Run</td>
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<td>KEY UP</td>
<td>EMD E9 A-B FP New, 1st Run</td>
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<tr>
<td>KEY UP</td>
<td>EMD F7 A-B FP L/N, 1st Run</td>
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<tr>
<td>KEY WP</td>
<td>EMD F3 A-B FP New, 1st Run, Rare</td>
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<tr>
<td>PSG</td>
<td>Harman 60’ 60’ 2-Rail Engine</td>
<td>$500</td>
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<tr>
<td>PSG</td>
<td>NYC 60’ 60’ 6-Heavily Modified FP New</td>
<td>$475</td>
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<td>PSG</td>
<td>NYC 70’ 6-Heavily Modified FP New</td>
<td>$475</td>
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<tr>
<td>PSG</td>
<td>RR 870 Baggage Car New</td>
<td>$600</td>
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<td>PSG</td>
<td>Pullman F&amp;F Dining Car UP New</td>
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<td>PSG</td>
<td>Pullman Standard 12 Section Sleeper UP New</td>
<td>$1,641, Plan 2411, w/Air</td>
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<td>PSG</td>
<td>Pullman Standard 12 Section Sleeper FP New</td>
<td>$1,539, Plan 3410, w/Air</td>
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<tr>
<td>PSG</td>
<td>Pullman Standard 16 Section Tourist Car UP New</td>
<td>$1,585, Plan 3410, w/Air</td>
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<td>PSG</td>
<td>Pullman Standard 16 Section Observation Car UP New</td>
<td>$1,200, w/Air</td>
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<td>OMI Baldwin Scale Test Car UP New</td>
<td>$225</td>
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**Structures**

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<td>OMI Baldwin Scale Test Car UP New</td>
<td>$225</td>
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<td>HILLS Wood Billboard Reefer, IGA or Prima FP New, 2 Versions Available</td>
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<tr>
<td>CNJ &amp; Seaboard Tank Car UP New</td>
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<td>OMI NKP Wood Caboose UP New</td>
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<td>PSG</td>
<td>NYC 18000 Series Wood Caboose New</td>
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<td>CNJ &amp; Seaboard Wood Caboose UP New</td>
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<tr>
<td>PLT &amp; CRL</td>
<td>USRA Die-Cast Steel Box Car UP New</td>
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<tr>
<td>PSG</td>
<td>EMD 50’ Wood Ice Reefer UP New</td>
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<td>PSG</td>
<td>50’ Wood Pfaudler Milk Car - Bordens FP New</td>
<td>$425</td>
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<td>PLT &amp; CRL</td>
<td>H120 Quad Hopper UP New</td>
<td>$175</td>
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<td>PLT &amp; CRL</td>
<td>H222 Quad Hopper UP New</td>
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<td>PSG &amp; CRR</td>
<td>K7a Stock Car FP New</td>
<td>$285</td>
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<td>PSG &amp; CRR</td>
<td>RS60 Express Reel FP New</td>
<td>$350</td>
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<td>PCS &amp; PRR</td>
<td>X-42 Mail Storage Car UP New</td>
<td>$395</td>
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<td>PRB &amp; SP</td>
<td>Greenville 70’ 100 Ton Gondola FP New</td>
<td>$275</td>
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<tr>
<td>MIDDY &amp; CRR</td>
<td>H21a Quad Hopper (Atlas) FP New, Professionally Weathered</td>
<td>$80</td>
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<tr>
<td>ATLAS</td>
<td>Cylindrical Hoppers FP New, 3-Rail, Several Available</td>
<td>$65</td>
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**New two-rail TMCC engine converted from three-rail TMCC.**
Once again, it’s time to admit that I can’t come up with a single thought upon which to expound for this issue’s column, so we present (once again) another edition of Scace’s Short Furrows.

Really Obvious Tips

Many moons ago, we came up with this category, in which you, O Gentle Reader, are invited to share your wisdom with the masses. It’s kind of funny, but the concept never really took off. Perhaps we’re so competitive that we hold our nifty little secrets to ourselves, or maybe we just don’t feel we have the ability to put them into words. It’s time to resurrect this most wonderful of concepts (No conceit here!) because I want to learn something from you folks, just as you expect the self-anointed Oracle to ply you with knowledge, wisdom, and snappy patter. Here are a couple of examples.

Tiny Dry Transfer Issues

For many years, the good folks at CDS and Clover House, to name a few, have been supplying us with dry transfer lettering. For those who are new to the trade, these lettering sets are used by trimming out the design, laying the transfer on the model, and rubbing them on using a burnishing tool of some sort. The advantage of transfer lettering over decals is the lack of a film that 20-mile trip to get the above-men tioned dry transfers. By now, you are (that 20-mile trip to get the above-men tioned dry transfers. By now, you are incantation proficient!) and get a scrap of soft milky white translucent plastic. Set it up with a lightbulb underneath to get the same effect.

Nifty Sign Material

While prowling the local craft store, making big points with the wife, I spied with my little eye something beginning with, “Wow! I can use that!” The scrapbook people have all these nifty little things they glue on the various pages, like little fish, trees, even bottles. These designs look to be made from very thin wood, and are ideal for those old signs that hung over the sidewalks in front of various stores back in the not-so-old days. Go look, and make some points in the process.

Furniture

The architect trade uses "?" to the foot as a standard scale, and they have all kinds of neat stuff they use for architectural models. They have lots of furniture. Go out on the Internet and search for architectural modeling supplies. I found all the stuff I needed to furnish my O Scale brothel (you can’t model a seaport scene without one!) for less than the cost of yet another freight car. The best part is that all the pieces came painted. Go ahead and laugh; ever tried to paint a dozen O Scale beds?

Those #% @ Little Screws (Revisited)

Here’s another trick about dealing with those pesky little screws all the brass importers use. Keep a jar of cheap petroleum jelly on your workbench. Put a tiny dab on the screwdriver and stick the screw to it. Now, you can reach down between the sideframe and the gearbox to drive that puppy into the frame without losing the #%@ thing.

So, What’s My Motivation?

Send me some Really Obvious Tips (email them to brian@oscalemag.com). They can be a sentence or two, or a half-page with a photo if you dare. You get to bask in the glow that comes with all the adulation due from the masses who have benefited from your wit and wisdom. Best of all, the congregation will hold you in utmost regard, merely because you have helped fill this page, thus preventing Scace from going off on another one of his tirades about O Scale behavioral issues.

Let’s go Exploring!

Brian Scace

Easements for the Learning Curve

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All kits include brass etched grills, appropriate detailed parts, and preformed grab irons for indicated model. These kits include only the parts above the frame.
Interurban lines are usually thought of as people movers, as indeed most were. But a number of lines saw right away just how lucrative the freight market could be and positioned themselves to be competitive players in that market.

**Humble Beginnings**

Starting with small box motors such as #102, they carried packaged goods, milk cans, papers, fresh bread and all the stuff needed in the next town. When these small box motors proved to be inadequate, the interurbans acquired bigger ones or rebuilt passenger cars to motors such as #112, built Texas Electric style, with outside hung doors. Mail was also an important moneymaker, so they had cars (like #304) that also accommodated loose goods.

**Freight Cars & Freight**

Realizing that it makes more sense to let someone else do the loading and unloading, the interurbans began to acquire more powerful motors which were intended to pull interchange freight cars. Motors, such as #402 which was modeled after a steel motor from the Crandic, met that need. The bow-type trolley is just whimsy on my part as I have never seen one mod-
designed a loco like #412. This design was used subsequently by several other lines that needed extra power with the flexibility to negotiate those tight interurban curves.

Serious Freight Haulage

When the trains were long, the tunnels longer, the mountains steep and the revenue large, even some major steam lines tried out electric locomotives. A couple of examples shown here are #437, a Boston & Maine early locomotive, and #417, a GE locomotive made for a Mexican railroad. Yes, it really did have three trucks, as does the model.

The Models

These models are all O Scale, made from a variety of materials. Several started out as LaBelle body kits, which are easy and fun to modify. Quite a few have Q-Car trucks, the best in the business. Others are scratchbuilt, with trucks that incorporate NWSL motors, gears and wheels and sometimes have Q-Car sideframes and parts. My motto is not just "light-rail", but "light-amperage" also. These engines provide that. I also run with DCC decoders in all cars and engines. "Light-amperage" means I can use HO-size decoders. These engines have provided me with many years filled with the fun of design, historical research and the pleasure of sitting at a workbench, which has got to be the best of any leisure activity. I use the name of a fallen-flag railroad which ran from my home in Rapid City to a town called Mystic. About 35 miles long with over 100 bridges, the Rapid City, Black Hills & Western provided a bridge route through the Black Hills between the CB&Q to the west and the C&NW to the east from about 1907 until 1947. Yes, I know it was a steam railroad, but in my world all the trains are electric. We interurban modelers should be thought of just like the live-steam guys. We do it the real way.

References

"Texas Electric Railway", Johnnie J. Myers, CERA Bulletin 121, p 74-75
"Iowa Trolleys", Norman Carlson Ed, CERA Bulletin 114, p 12
Cars of Sacramento Northern, Interurbans Special 32, p 82
Piedmont and Northern Fetters & Swanson, p 26 & p 170
Illinois Terminal, The Electric Years, Paul Stringham, p 112
Electric Locomotive Plan & Photo Book, NJ International
When the Steam Railroads Electrified, 1st Ed, William Middleton, p 379
The times, they are a-changing. Recent events in the railroad business have proven that people still can make tragic mistakes. Whatever the circumstances may be, system wide changes to operating rules have taken effect. Railroads that try to operate “in the black” cannot maintain a seamless integrated network to monitor every switch motor on the rail system. It would cost millions. When it comes down to getting cars spotted in sidings the best and cheapest old-fashioned way is the train crew. I say “old-fashioned” because, in the high-tech and highly competitive world of railroad equipment, there are several ways a railroad can now keep watch on remote switch movement. The question is how can the average O Scale modeler capture the feel of a realistic scene if there are no physical switch stands or ground throws present? Well, there are, but not in the traditional sense. This kind of modeling means your turnouts will probably be thrown from under the table by DC motor or mechanical means.

Satellite telemetry is the upper end of switch motor technology. In extremely remote locations, switch motors can be monitored and controlled via satellite. The switch direction can be seen, system-wide on computer screens at every railroad operations center, in real time. This is the modern version of Centralized Traffic Control (CTC) in a nutshell. A switch motor in Atlanta, Georgia, can be operated from the CSX office in Jacksonville, Florida, by sending an encoded satellite transmission. This is a common practice on Class 1 railroads. The switch motor itself is not very different than a normal mainline switch motor. There would be an adjacent relay cabinet, power line connections, and an antenna connected to the relay box. You, as the modeler, can make it look as high-tech as you want, but these would be the minimal requirements to depict the scene. One antenna would cover a yard of switch motors. Switch motor and relay cabinet models can be purchased from several manufacturers. I have used Keil-Line Manufacturing’s metal castings for mine. Look for their ad in this issue for contact information.

One step down on the technology ladder is localized remote control. This approach is similar to CTC control of a mainline, but this is territory where no computerized CTC is present. A locomotive, equipped with 2.4 GHz wireless signaling equipment, can activate a switch motor from the cab either by dialing a phone number and then a select sequence of numbers or by typing switch numbers onto a keypad/remote control. It can be done with the same electronics that are inside your cordless home phone. It’s just that simple. All the while, the switch indicator is connected to a phone line or cellular repeater at a given location and a distant dispatcher can now see the switch is thrown for a diverging route. What is more important here is to know a computer can also track this switch, which is now set to a diverging route, and alert an approaching train that the track ahead is not clear. There is a reason for all those short antennas on a modern Diesel. Safety is what it’s all about. Modeling this scene is straightforward. A switch motor and small relay cabinet can suffice. Again, connect the relay box to power lines for added realism. The action of this scene is handled from inside the relay cabinet. By including a small piece of wire protruding from the top of the relay cabinet to represent an antenna, your work is done.

Solar powered switch machines are going to be harder to explain to your friends. The device doesn’t really appear to be a switch machine at all. As you might be thinking, the scene looks pretty plain. A simple metal box, measuring 2.5” x 2.5” x 1.5”, houses the entire unit. A pole, approximately four to five feet tall with a flat plate on it, represents the solar cell panel. The solar panel simply recharges the batteries that power the switch motor, whether remote control as described or operated by local manual input. As you might guess, this switch machine is for remote locations where there is no power. Use it in the mountains or any extremely remote location. These switch machines can get fancy by continuously tracking the sun throughout the day, and pointing the solar panel towards the sun as it moves across the sky. Pretty neat. These machines require batteries, and I used a large battery vault casting from Keil-Line to represent this feature.

Next time, what is a modern freight car from 1966 doing on the road today? We’ll take a look.

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Carl Cornish

[Publisher's note: We received a nice letter and a couple CDs full of photos from Carl a while back. His buildings are so spectacular we had to share at least one with you.]

After a ten-year absence from model railroading, my longtime friend, Gary Patterson (Cherel Valley RR, O ST#16), called and suggested I return to model building. I took his advice and have decided to build custom O Scale structures. With my love for building and railroading, this was an easy decision. I decided to call this new venture “Timeless Structures”.

Having been in the construction business for a number of years, I decided to institute many of the same building practices in the construction of my custom structures. I design buildings with as many different elevations and separate additions that I can to make them functional and pleasing to the eye. I then draw scale prints to take the measurements from during the construction layout.

I start building the foundations on ¼” board, which will make installation on the layout location easier when the time comes. The foundation is then laid up one stone at a time. The stones are then grouted in the same fashion as you would a tile project. Next the exterior walls are constructed with the proper siding selected by myself or the client. I use board-and-batten, lap, scribed and board by board. I glue all the sidings on ¼” poster board to avoid warping later. The windows and doors are cut in before the roof is installed so that the glass and any protrusions such as cranes and lights can be anchored through the wall on the inside. I use scale 2 x 6 lumber to construct the various roofs, much like any full size buildings. The roofing material is then glued over the framing. I use cedar shingles, corrugated metal and roll roofing on the different structures.

When I finish the roofing, I install all the chimneys, vents, and smoke stacks. I then select the posters and proper signage for the various buildings or whatever is ordered by the client. Almost all of my building are circa 1930s through 1940s. I build them to look as weathered and as old as possible. I go to great lengths to construct these buildings crooked and out of square. The porches and loading docks always sag and lean, and the main building walls are out of plumb, sometimes as much as a quarter-inch. I pick-up samples of old wood and metal roofing and match my paints, stain, and chalk to them for realism. I’m not building prototype structures, but creating my own designs or the ideas of the client. This way I can make everyone’s dream come to life in a small way.

I make it a point to use the best materials available. The scale lumber is from Northeastern, roofing is by Builders-In-Scale, the windows and doors are Grandt Line, and castings from a variety of vendors.

If you would like to see more photos of the newest structures, go to my website at TimelessStructures.com. Anyone who would like to share their dreams and ideas of structure building may contact me by e-mail at [carl9005@msn.com].
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So, if you’ve had bad postal service in your area, you may want to upgrade your subscription.
In Part 3, you learned how to spike rail. Since a turnout is really only a bunch of rail that is spiked down, you should be ready to tackle one here in Part 4. Now I admit there are a lot of parts to a turnout, stock rails, wing rails, points, guardrails and frogs (See Fig. 1). In the old days (and even today), some modelers will toil away at filing the frog, points and stock rails. I take the easy way out, using frogs, guardrails and points that are ready made for you with all the detail of the real thing. For the turnouts on this layout, I use the components made by Right-O-Way.

With all the nice rolling stock and engines coming out with all sorts of great detail, doesn't it make sense to have your track work looking as good? Now, let's get started building a turnout. **List of Materials**

First, gather up all the parts for the turnout. I have put a list together as follows:

- Points, part # P25-16 (one set)
- Throw rods, part # TR (two sets)
- Frog, part # FB25-5 (one)
- Guard rails, part # GR25 (one set)
- Rail braces, part # RB25 (one set)
- Gauge plates, part # GP25 (one set)

I've shown everything listed in Photo 1. You will also need the tie plates for turnouts (part # TPF4), some regular tie plates and four of the insulated joiners. If you remember, back in Part 3, I said to take photos of some prototype turnouts. This is where they become a handy reference, to see where each part of the turnout goes.

**Making a Point**

The first thing I did was to build the point assembly, using all the parts shown in Photo 2. Shown are the left- and right-hand points and the throw rods. I like the points manufactured by ROW, as they are made to look and work like the prototype. They fit perfectly into the stock rails, so you don’t have to file notches in the stock rail to accommodate.

Assemble the throw rods per the manufacturer’s instructions. On one set, cut off the casting on the side (see Photo 3). Once the throw rods are assembled, drill a hole large enough for a straight pin to go through, in the center of the two wings that come out from the side of the points. Do this on both points.
Insert the wings into the pivot part of the throw rod, then insert a straight pin through the hole at the bottom so that the pointy end is sticking out of the top. Do this on all four wings, as shown in Photo 3. Next, put a drop of ACC glue at the point bar connect. I usually make about four point assemblies at a time, so I have them ready for a tracklaying session.

Now that the point assembly is ready, start filing any casting flash from the frog, guardrails and rail braces. Next get the gauge plates ready, per the manufacturer’s instructions. All your turnout parts are now ready, as you can see in Photo 5.

**Building a Turnout**

The ties have already been glued in place and painted, so you are now ready to build your turnout. Place the turnout template on the ties, and align the mark that shows the start of the points with the center of the first long tie used for the switch stand (See Photo 6). The straight side of the template should be aligned along the guideline. With a colored pencil (I used a white one), mark the V at the back of the frog on the other end of the template. This will give you the location of the back of the frog.

Put the straight stock rail along the template, using map pins to hold it in place. Do the same with the curved stock rail. (See

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**Photo 3**: Diagram showing the assembly of the wings and pin into the pivot part of the throw rod.

**Photo 4**: Illustration of ACC glue being applied at the point where the head of the pin and the throw rod touch.

**Photo 5**: Display of turnout parts ready for assembly.

**Photo 6**: Template placed on ties with marks for the start and back of the frog.

**Photo 7**: Straight stock rail along the template.

**Photo 8**: Curved stock rail along the template.
Photos 7-8). Remove the template and put map pins on the other side of the stock rails to keep them in place.

If you are going to use a turnout motor (I use Tortoise slow-motion machines on my layout), you will first need to drill a hole for the connecting rod from the machine to the throw rod (See Photo 9). Once drilled, paint the inside of the hole so it doesn’t stand out.

Now you can start to install the frog. Before spiking it in place, solder an electrical feeder wire to the bottom of the frog (See Photo 10) and feed the wire down through a hole drilled in the roadbed. Make sure the hole is actually under the frog so the feeder wire remains hidden. Align the frog, using the guidelines and the V you marked, on the ties. Spike it in place using the long tie plates.

Next, install the regular tie plates under the straight stock rail and spike it in place, making sure to check the gauge between the frog and the stock rail. While spiking the stock rails, remember to accommodate the contact area between the points and the stock rail. Find the first long tie for the switchstand and count ten ties toward the frog end of the turnout (See Photo 11). Do not spike or put ties plates in this section. Here is where we’ll use the gauge plates, rail braces and long tie plates. I will talk more about these later.

Now, attach two insulated joiners between the frog and the rails closest to the points (See Photo 12). As the frog must remain insulated from the rest of the turnout, you’ll need to attach insulated joiners at the other end of the frog as well, before you start laying rail past it.

Slip the point assembly into place and cut two lengths of rail to make the wing rails that fit between the frog and the point assembly. Bend the curved wing rail to the radius required and then put both wing rails in place. Using your three-point gage, spike the straight wing rail (Photo 13) between the frog and the joiner on the pivot part of the points. Then, spike the curved stock rail (See Photo 14), again leaving the contact area for the.
points clear as we did for the straight stock rail. Using the three-point gage, spike the curved wing rail (See Photo 15). Install the two guard rails, checking that the back-to-back clearance checks with your NMRA gage (See Fig. 2). Apply ACC glue on the ends of the four spacing taps to hold the guard rails to the stock rail.

Your turnout is now in place. Roll a truck (Did I mention that you would need a truck?), through the turnout to see if any adjustments are needed (See Photo 16).

At this point, all that is left to do on the turnout is to add the details at the point end (See Photos 17-23). This includes the gauge plates, rail braces and long tie plates. This is why I said not to put any regular tie plates or spikes in this section. Gather up all these parts and have them handy. To start, we will install the two sets of gauge plates on the two long ties. The flat part of the gauge plates slide under the points and stock rails with the bolt detail parts meeting in the middle of the ties. Insert a piece of thin cardstock in between the halves as an insulator. Glue the gauge plate and cardstock in place with ACC.

Next glue the six rail braces along the side of the stock rail, as shown in Photos 19-22. The last thing we have to do is install and spike the long tie plates as shown in Photo 23. For electrical power to the wing rails, solder jumpers from both stock rails to their corresponding wing rails, as shown in Photo 24. Glue on the fake joint bars where needed, file the groove and then do the final painting as we did on the other trackage in Part 3.

Congratulations. You have installed your first turnout. Now you know how easy it is. On the average, it will take about three hours per turnout to install.

Wiring the Layout
What type of control system you use on your layout is up to you, be it conventional or command-control. On a layout of this size, if you decide to run with conventional DC, you probably won’t need to wire in blocks, given that you would only run one train at a time. I do recommend that you attach feeder wires to every section of rail to get the best current flow possible. This also goes if you decide to use DCC or another command-control system. I am using DCC, as I had it all ready from my last layout and my engines have decoders and sound already installed. I ran two #14 gauge bus wires under the layout and have attached #20 gauge feeder wires to every length of rail. I do not rely on rail joiners to carry the current.

Well this is the last of the trackwork sections in this series. I hope you have enjoyed it and have learned something. Starting in Part Five, I will talk about ballasting and how to do basic scenery.

So until next time... Happy Modeling.

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My layout, the Bay Ridge Harbor Railroad (BRHRR), does not have a staging yard. Instead, off-layout traffic relies on carfloats to feed the railroad.

Now, O Scale carfloats are not exactly small, and manhandling a fully loaded one off and on the layout is not for the fainthearted. Already, a couple of boxcars have ended up on the floor in pieces. A solution had to be found.

After looking at endless articles and fiddling with different ideas, from a large table down to a small trolley on wheels, my good friend and operator Bruce and myself were sitting in the room adjoining the train room imbibing in our favorite beverage. Suddenly, while glancing across the room, Bruce suddenly saw what proved to be the answer. There sat the wife's sewing machine, which disappears neatly away in a cabinet after use. If we could do a similar thing with the floats, we would have the problem solved.

The photos show the end result, built out of 5/8” thick laminated chipboard, standing 47” high, 56.5” long and 35.5” wide and sitting on four adjustable caster wheels.

The elevator can hold three carfloats, but I use the lower shelf for loads at the present time. We have plans to build a series of trolleys to hold carfloats that can be brought from under the layout to the elevator. This way we will have plenty of storage.

Now the publisher, Joe G., is a nice bloke and quite generously allows me a page every issue to let me share my ideas with you guys and a car float elevator would take many pages to describe. If anyone is serious about building this very handy device, I could supply you with limited additional information (genuine callers only).

(Of course, we would invite you to write it up as a feature article, Neville! By the way, was it Foster's that provided you guys with the illumination?—ed)

Thanks to Bruce Temperley for his idea, drawings, and for machining the metal parts.
We will take possession of our new home in two weeks and I will report on construction progress on my new Northern Railroad in the next issue.

OST Is Growing

With the good news from our publisher that O Scale Trains Magazine has increased to 72 pages, I hope that we will see more narrow gauge contributions and photos submitted from our readers. I urge you to practice with that new digital camera and take a few photos that you might share with us at OST. Taking photos of your work and studying them will help make you a better modeler.

If you have a home computer, I hope you will also check out some of the O Scale Internet communities listed at the end of this column. No matter what your O Scale interests, you will find a surprising number of people on the Internet who love to discuss their projects and share their knowledge. You will also learn how quickly and easily you can research almost any topic, if you’d care to submit an article for publication. This is my 21st consecutive column and OST is a great magazine to write for.

As an OST columnist, I have appreciated the opportunity to review several new O Scale locomotives and I am currently conducting tests on the Bachmann E-Z Command DCC System. It seems like a sensible and inexpensive way to operate a small one- or two-person layout.

BLI C16

In early 2003, Broadway Limited Imports began providing HO mainline steam locomotives at attractive prices, especially since they included the Quantum sound system right from the factory. The sound system featured two speakers and not only included a synchronized chuff, but also whistle, bell, squealing brakes, Doppler effect, air let off, air pump, blow down, pop off and blower hiss sounds. They operated on DC and introduced a lot of HO modelers to ready-to-run sound.

BLI followed up with more HO steam and Diesel power. Then, in August of 2003, they announced their first and only O Scale offering, the D&RGW narrow gauge C16 Consolidation, including Digital Command Control decoder and full Quantum sound at a MSLP of $270.

I welcomed this model because I felt it would attract many new modelers to narrow gauge, O Scale, DCC and sound.

The BLI 2-8-0 was available painted and lettered for #278 with fluted domes, for #268 with rounded domes, for #268 in the “bumblebee” paint scheme, and painted and unlettered. It was also available painted for Rio Grande Southern, New Mexico Lumber Co., Nevada County Narrow Gauge RR and Montezuma Lumber Co.

For some reason, the model was only offered in O30 and there was some talk about it being easily regaugable to O3. The models soon began appearing in hobby shops and at train shows. They were heavy and very impressive.

O30 has attracted a lot of new modelers to O Scale, but the largest locomotive of most has been the Bachmann 2-6-0 Mogul. Not many O30 modelers have layouts big enough to properly accommodate the large C16, nor do they own properly scaled D&RGW freight or passenger cars. Even so, BLI apparently produced four runs of this model.

Recently, the BLI C16 has been advertised for $120 by one of the big hobby discounters and, when I learned of that price (with DCC and sound), I had to order two of the undecorated models.

The BLI 2-8-0 will readily negotiate track with DCC and sound, at a reasonable price.

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Recently, the BLI C16 has been advertised for $120 by one of the big hobby discounters and, when I learned of that price (with DCC and sound), I had to order two of the undecorated models.

The BLI 2-8-0 will readily negotiate my 12" radius test curves, although it looks better on 18 inches. It has constant directional lighting and operates nicely at slow switching speeds. The sound is superb and there is a special tool that you can use to adjust the sound volume through the water filler pipe. It is simply amazing to me that so many different sounds can be heard in random mix while the locomotive sits there, not moving. The whistle sounds better than any other whistle I have used on several different sound systems, and the bell is also far superior. With the built-in DCC decoder, operation is nicely enhanced by the sound.

Most of the piping on the boiler is cast on, but that is not apparent from normal viewing distance. The finish is excellent and the undecorated locomotive looks good with a string of Bachmann freight or passenger cars.

It is great On30 model of a Baldwin Consolidation locomotive, however, it is not a great model of a D&RGW three-foot gauge C16 due to the gauge. Modelers have told me that it was not easy to regauge.

On the tender, the rear HO knuckle coupler is set at HO height, about 19" in O Scale. The front coupler is a dummy O Scale coupler set higher at the correct 26" height. O30 models should be designed so that HO couplers can be used on both front and rear at either the HO height or the regular 26" height, and it should be a simple matter to substitute O3 couplers.

Despite these minor faults, the BLI On30 2-8-0 Consolidation is an excellent example of what can be built, with DCC and sound, at a reasonable price.

Bachmann E-Z DCC

Coincidently, just about the time I ordered the two Consolidations, I was afforded the opportunity to review the Bachmann E-Z Digital Command Control system. The DCC equipment arrived first. Down on the floor went a bunch of Bachmann track from several O30 sets and I got my first introduction to command control.

The Bachmann DCC introductory set includes an HO GP40 with decoder, so I quickly got used to operating the Diesel and its lights. The next day, I received a DCC-equipped Bachmann Davenport, that I had purchased from a friend, and I enjoyed learning how to operate two powered units independently on the same track, even if they were two different scales. It was especially unique to see one locomotive running eastbound to clear the main line while a train approached the turnout running westbound.

Two days later, the C16’s arrived and I entered the fascinating world of DCC and sound. After a few hours of testing and sharing with a few friends, we agreed that the next step has to be to get some Diesel sounds for the Davenport and some of my other On30 locomotives. Once I get it up off the floor and moved to our new home, I will be installing some decoders in my standard gauge Diesels and running some tests to share with you in my next column. Also, after we get settled, I will be testing and reviewing several Fast Tracks tracklaying products described at www.handlaid-track.com.

In the meantime, I hope you did not miss out on the fantastic price for the BLI C16 and that you will think seriously about sound and DCC for your O Scale trains.

Happy rails to you, from Bobber.

http://groups.yahoo.com/group/omule/
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.
Are you looking for a simple rolling stock project on which to cut your scratchbuilding teeth? Well, here's a project that a neophyte O Scaler can build from the rails up, from basswood and/or Styrene, with a basic set of modeling tools. Also, you'll have some fun in the process. Over the years, I have relied on four golden rules of scratchbuilding. I'm sure there are others. 1) Measure twice and cut once. 2) Make repeated light cuts into the material rather than one heavy pass, and always use a guide such as a cork-backed steel ruler. 3) Keep a fresh blade in your modeling knife. 4) Use glue sparingly. Come to think of it, plenty of light at the bench is a good thing, too.

All the materials to build my car are available from well-stocked hobby shops, catalog houses, and online sites. A few evenings, and some time spent behind an airbrush or spray can, will net you a nice looking car for a minimal amount of expense and time invested. Also, you'll hone your modeling skills in the process. Perhaps this project will inspire you to attempt a more complex car or structure. So, assemble your tools and let's get on with it.

I've always been attracted to the look and simple construction of the Pennsylvania class GR and GRa gondolas. Years ago, I copied and filed away an O Scale drawing of the GR gondola from the January, 1948, issue of Model Railroader. I knew someday I'd build this car and that day has finally come to pass.

First built by the Pressed Steel Car Company in 1902, these composite gons became so popular that, by 1930, over 30,000 GR class cars were in service. Approximately 14,000 GRa gondolas were also built. You can correctly run this car with arch bar trucks behind early steam, or operate it well into the fifties with steam or Diesel power and Bettendorf trucks. There were two nearly identical classes of this car, class GR and GRa. The only difference between the two classes is overall length. The GR is 40' and the GRa is 43' long.

The Pennsylvania Railroad termed this car a tight-bottom drop-end gondola. The drop ends and a removable brake staff allowed the car to be end loaded with pipe, farm machinery, telephone poles and the like. Over its history, I imagine this car carried just about every kind of lading. By the fifties, many of these cars were operating in Pennsy work train service. Virtually identical cars saw service on the Philadelphia and Reading Railroad.

The Pennsylvania gon is essentially a flat car with a planked deck and pressed steel side sills. The 30" tall board sides were mounted on the car with pressed steel braces. The side sills are unique in that the top and bottom edges are radiused by the pressing and forming process. The three boards making up each side are 10" high and 3½" thick. There are no stake pockets to attach the
The publisher and author grant permission to reproduce these plans for personal, non-commercial use. To use these plans at full size for O Scale have them enlarged by 125%. All dimensions shown are actual size for an O Scale model.
sides. Pressed Steel Car, instead, utilized pressed steel braces that were riveted to the side sills and boards. Both classes initially carried stake pockets mounted on the wood sides that allowed the sides to be extended. In the 1930s, these stake pockets were removed. I left them off my car, as I’m operating my car in the mid-1950s.

There are many sources of prototype data for this car. I have listed the online and magazine sources that I used to build my car. I’m sure there are other sources as well. I chose to build the G Ra class for this article, however, you can easily build a model of the GR class by simply removing a scale three feet (¾” in O scale) from the center of the car and shortening the sills and sideboards accordingly. Let’s get started. We’ll begin with the center and side sills.

To replicate the side sill riveting, I riveted and then laminated 0.010” Styrene sheet to smooth 0.040” Styrene sheet. This yielded clean rivets and the correct sill thickness. Using a 0.5 mm lead pencil, I drew the side sill outlines and rivet lines onto 0.010” Styrene sheet. See the sill drawings. Do not cut out the side sills until after you have done your riveting. The plastic will stretch and curl as you rivet. Doing the riveting on a large sheet will minimize the stretch. I use a seamstress’ pounce wheel with 0.070” tooth spacing to make my rivet rows. Place a few sheets of paper under the Styrene to enable the rivets to fully develop under the wheel. You’ve never done this before? Practice a few rows, and keep an even pressure on your pounce wheel as you go.

When the side sills were riveted, I left a generous outline around each sill and then glued the 0.010” sills to a large sheet of 0.040” smooth Styrene. I used Plastruct Plastic Weld liquid plastic cement and a soft brush to bond the 0.010” Styrene to the 0.040” Styrene. Press the 0.010” Styrene firmly onto the 0.040” Styrene substrate and let the side sills cure overnight. Using a cork-backed steel straight edge as a guide, I then cut the finished side sills from the 0.050” laminate. Remember to cut lightly and make several passes. There you have it, a pair of riveted side sills. They didn’t turn out as well as you liked? No problem, just make another set. It’s no big deal and only a minimum of time is needed to repeat the process. I block-sanded a radius into the top and bottom edges of the side sills to simulate the rounded edges on the prototype.

The two center sills are cut from 0.040” Styrene sheet, just like the side sills, but no riveting is required. The center sills are notched at the ends to accommodate Kadee 804/805 couplers. Set the four sills aside for now, and we’ll make up the end sills.

The end sills are simple ⅛” channels. I was unable to find
so longer than my car. I edge-glued the deck halves together using a CA glue (see Photo 4). Make sure the glue doesn’t seep onto the deck face. I taped the completed deck, scribed face down, to a flat surface. Then, I positioned and held the upside down frame

flowed Plastruct cement into all the joints and let the frame cure overnight. Yours should pop right off the waxed paper when you remove the pins.

I inserted basswood filler blocks between the center sills at the coupler and bolster locations for the trucks and couplers. I used Red Caboose trucks, which required ¼” thick bolster pads to set the car at the correct height above the rails. You may have to tweak the pad thickness for other truck brands. The rail-to-deck height is 46”, or 3 1/32” in O Scale.

The center sill and bolster flanges are added next. I used 0.020” x 0.125” Styrene strips. The bolster flanges are cut in wider pieces from 0.020” stock. I didn’t add brake parts or piping as they are invisible at my layout viewing height (see Photos 2 and 3).

Decking is next. I used 3/8” thick ¼” scribed basswood for my deck. The basswood contrasts nicely with the steel look of the Styrene sills. I cut two lengths of 2 5/16” wide basswood an inch or

so longer than my car. I edge-glued the deck halves together using a CA glue (see Photo 4). Make sure the glue doesn’t seep onto the deck face. I taped the completed deck, scribed face down, to a flat surface. Then, I positioned and held the upside down frame
Pressed steel brackets riveted to the boards and the side sills were used to mount the sides. My drawing shows how I replicated those unique pressed steel braces. I thought for a long while about the best way to make the pressed braces before I actually began construction on the car. For me, pre-planning, lots of sketches, and mocking up sub-assemblies pave the way to simplified construction and a pleasant lack of surprises along the way. I also enjoy the creative challenge of engineering ways to turn the prototype into modeling reality. Perhaps that’s the essence of scratchbuilding.

I found the construction of the pressed steel side braces to be the most challenging, and rewarding, aspect of this project. I made my braces from 0.010" Styrene sheet and 0.060" x 1/8" Styrene strip. The 0.010" sheet requires some rivet rows, which are done by drawing 1/8" wide strip outlines on the material, then adding two rivet rows before the strips are cut from the sheet. It would be practically impossible to add two rows of rivets to a 1/8" wide strip. Its much easier to do, and there's no curling, if you rivet the 0.010" sheet and then cut the 1/8" wide riveted strips from the sheet. The rivet lines should be centered 1/16" apart on the 1/8" strips. Make your strips as long as the Styrene sheet will allow, then mark off the length of each brace. You'll need 24 strips 1/4" long, and four strips 1 1/8" long. Take your time. If you mess up a rivet row, draw and rivet another strip. Don't cut the strips from the Styrene sheet just yet. We'll make up the gussets and glue them in place before the finished braces are cut from the 0.010" sheet.

The 1/8" thick pressed steel gussets have a tapered outline. To make 28 identical upper angle cuts, I used a Northwest Shortline Chopper. I taped a plastic cutting guide to the Chopper surface, which matches the angle of the upper cut. Then I fed a length of 0.060" x 0.125" Styrene strip under the Chopper blade, cut the angle and left about 1/8" excess to allow final trimming of the gusset to the correct length. I cut the lower angle by hand with an X-Acto knife. When all the angle cutting was done, I rounded the outer edges of the gussets with a 1/8" wide flat file and polished away the file marks with progressively finer grades of sandpaper. A final spiff with 400 grit will leave a clean smooth radiused finish to the Styrene. When you're satisfied with the gussets, glue them to the centers of the 1/8" wide 0.010" Styrene strips (see Photo 6). Let the glue joints cure for a few hours before you gently cut out the finished braces with a fresh blade and a straightedge.

To be honest, the pressed steel side braces are the most tedious part of the car assembly. Follow the drawing (with a willingness to discard less than optimal brackets), and you’ll end up with the next best thing to Pennsy pressed steel braces. Your spouse may even ask you how you did that.

The sideboards on the prototype are 3 1/2" x 10" boards, three boards per side. These scale out close to 3/4" x 3/4" in O Scale. To get the correct board height, you’ll have to strip the boards from 3/8" thick basswood or Styrene sheet. I used basswood.

Cut the six boards an inch or so longer than needed, so they can be taped down for assembly and addition of the side braces. I edge-glued my boards using Elmer’s white glue. I like these little bottles because I can control the amount of glue flowing from the adjustable tip. Use the glue sparingly. You don’t want it running onto the board faces. If you do get a smudge or two, wipe away the glue with a damp cloth. To minimize the chance of warpage while the white glued dried, I pinned my board sides to a piece of ceiling tile to ensure the boards didn’t take on a twist. When the boards were dry, I taped them to the bench and drew the pencil lines on both sides to locate the side braces.

The assembled side braces are glued to the board sides using a pair of tweezers and some slow setting CA glue. Use the CA sparingly; only a very thin film is required. The tops of the pressed steel braces are aligned and glued flush with the board tops. The overlapping ends will be attached to the side sills and will hold up the sides just like the prototype. After all of the braces were attached, I cut the two sides to their final length of 10 1/2" (see Photo 7). I made a tick mark on the deck at one end of the car to indicate where the board sides end. Be sure you do this before you attach the sides.

I considered different ways to attach the board sides to the car before settling on building up the sides as braced sub-assemblies.
The neat thing about this method of assembly is that the car sides are not attached to the decking, which follows the prototype. Incidentally, this car can be built with either the more modern steel ends that I used, or the earlier three-board end. Both styles are drop-end. My drawing shows the steel end.

After making sure all the brace-to-sill joints had cured, I built up and installed the 0.020” Styrene ends. A tiny amount of CA glue along the outside bottom edge of the car end and at the side-to-end joints will hold the car sides square to the ends. Don’t be concerned about these joints. The joints are hidden beneath reinforcing angle strips of 0.100” Styrene (see the drawing and Photo 8). All that’s left is to add the hardware, such as the brake wheel and staff, grabs, coupler cut levers, and stirrup steps.

I bent up all my grabs from 0.015” brass wire. They are 3⁄8” wide. See the side and end drawings for the locations of the end sill and car side grabs. I drilled 0.018” holes and locked the grabs in place with minute applications of thin CA glue. The distinctive Pennsy coupler cut levers were bent up from 0.015” wire and held in place with some handrail stanchions I had on hand. The brake wheel staff is 0.030” brass wire. I drilled a 0.030” hole in an Intermountain brake wheel and CA glued the wheel to the top of the staff. The stirrup steps are also from Intermountain, and are CA glued to the inside faces of the side sills. The car is now ready to be rolled into the paint shop for painting and lettering (see Photos 9 and 10).

I shot the entire car with a prime coat of Floquil spray can primer. To maintain rivet detail and individual board outlines, I sprayed a thin coat, just enough to color the car an overall gray. Several days later, I airbrushed the car with Badger Model Flex Light Tuscan Oxide Red acrylic. I sprayed, as recommended by Badger, straight from the bottle. I applied three or four light coats, curing each coat thoroughly between passes with a hair dryer set on low heat. While I was at it, I shot the Red Caboose truck sideframes. After the car had cured for a few days, I shot the sides with a spray can of Testors Gloss Cote. If you’ve made your sideboards from Styrene rather than basswood, you can probably skip this step. Badger Model Flex paints, over Styrene, cure with enough sheen to accept decals without the Gloss Cote.

The Pennsy decals came from a Walthers O Scale Pennsy Freight Car set. The lettering and keystone logos scale out perfectly for this car. You’ll have to piece the Pennsylvania lettering in three-letter sequences between the braces. It’s a bit of a pain, but worth it when you’re done. To keep my three-letter sequences aligned, I rested a steel straightedge on the braces. The car number I used may not be exactly correct, but it is pretty close to the prototype series, and you can cut this number in one piece from the Walthers decal sheet. I used Micro Scale decal solvents (first the blue label, then the red label) to snuggle the Pennsy lettering and logos into the basswood grain. It took a few applications of the red label to eliminate the last bit of decal silvering.

I weathered the car with a medium I hadn’t tried before, CMK Star Dust weathering pigment. This finely ground pigment is applied and spread with a soft brush. I understand it can also be mixed with acrylic thinner and sprayed on. There are probably many ways to apply it. I brushed it on into the areas I wanted to darken and streak. I found the more I loaded up the brush the quicker I darkened the work. A little of this pigment goes a long way. Don’t over do it. Unlike weathering chalks, Star Dust pigments don’t lighten up when over-sprayed with a flattening coat. What you see before you spray the flattening coat is what you get after you spray.

I used a Star Dust color called “Black Smut” for most of my weathering. Honest! That’s really what it’s called! Odd name, but it works well. My car is probably a bit over-weathered, but hey, it was built way back when and it’s now 1955. After hauling its share of machinery, pipe, coal, pig iron, scrap steel, and who knows what else across the country, this car has earned it’s old and weary look. Next time you see it, it might be coupled to a Pennsy big hook in work train service. I shot the car with Testors Polly Scale Flat, which Testors recommends thinning 10% with water before applying with an airbrush. I shot three coats. In between, I hastened the curing time with a hair dryer set on low heat.

After installing a pair of Kadee couplers and Red Caboose trucks, I added the car to my layout roster. It’s now hard at work hauling Wisconsin-built John Deere tractors and other farm machinery from my CNW and Soo interchange across the heartland to all points East and West. It seems like you see these Pennsy cars everywhere.
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www.centrallocomotiveworks.com

Decals and Weathering

Walthers Pennsy Freight Car decal set #77001
CMK Star Dust weathering pigment
Black Smut #SD10
CMK Star Dust weathering pigment
Dark Earth #SD08

Pennsy GR and G Ra G on References

Internet
Ted Culotta’s freight car site - http://www.steamfreightcars.com/gallery/gon/prrgon
Rob’s PRR Page, Pennsy Freight Car Diagrams - http://prr.railfan.net/

Magazines
Model Railroader January, 1948
Railroad Model Craftsman October, 1988
Mainline Modeler February, 1990

Paint
Floquil Gray Primer #130009
Badger Model Flex Light Tuscan Oxide
Red #16-14
Testors Gloss Cote #1261
Testors Polly Scale Flat Finish #F404106

Bill of Materials — PRR Gondola

Evergreen Styrene
0.010” sheet
0.040” sheet
0.020” x 0.125” strip
0.060” x 0.125” strip
0.100” angle
5/16” channel
Northeastern Scale Models Basswood
1/16” thick 1/8” scribed siding
1/16” x 7/32” strip

Hardware
0.015” brass wire
0.030” brass wire
Intermountain stirrup steps
Intermountain brake wheel
Kadee 804/805 couplers
Red Caboose trucks

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T-Bone Models, James Christensen
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Cottage Grove, OR 97424-9381
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Schomberg Scale Models
PO Box 88
Schomberg, Ontario
Canada L0G 1T0

905-939-0694

Decals and Weathering

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**Steam, 1st place**
Louis Bartig, Rutland Pacific, scratchbuilt with handmade drivers.

**Steam, 2nd place**
PRR K2sa w/70P78 tender built by Frank Miller, entered by Ray Machler

**Traction/Electric, 1st place**
Tom Froehlich, North Shore Line Merchandise Car

**Traction/Electric, 2nd place**
Myron J Weber, freelance electric switcher

**Freight car, 1st place**
Jim Zwerneman, scratchbuilt Chicago, Illinois & Midland 40 ton Mather boxcar

**Freight car, 2nd place**
Robert Leners, scratchbuilt Swift Reefer

**Passenger Car, 2nd place**
William Flint, scratchbuilt GN baggage car #340

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**Chicago O Scale Meet Contest Winners**
Structure/Diorama, 1st place
Marc Knou, scratchbuilt C&O switch tower at KC Junction

Structure/Diorama, 2nd place
Brady McGuire, double-track deck truss bridge

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Compact and interesting

The Scranton terminal is large enough to be interesting, but compact enough to be practical. I could see the terminal created in an area about 12’ long and about four feet deep at its widest point, becoming narrower after the station throat. The track arrangement is basically a return loop with three storage sidings located at the end of a double-track section of mainline. Although relatively compact, and do-able (since only six turnouts are required to get started), this arrangement was designed to handle multi-car trains running on 20-minute headways. The following operating scenarios are possible:

Continuous operation—trains enter, loop, and immediately depart.
Storage—after arrival, trains complete the loop, and back into one of the three storage tracks located within the loop area.
Configuration—cars can be added or removed from trains to accommodate changing traffic levels.

Empty trains have to get out of the way of new arrivals and departures, while showcasing several cars on the storage tracks.

Pleasing context

Although compact, the Scranton terminal is dwarfed by its urban environment in a very convincing way. The terminal is nestled under the adjacent Delaware, Lackawanna, and Western railroad station on a viaduct, and backs up against the positively huge shops of the DL&W.

Adding visual interest is the fact that the DL&W shop building is not perpendicular to the traction terminal. Instead, the building is at an angle, which draws the viewer’s eyes to the left. In addition, the DL&W station’s platforms and tracks are curved to the right, which further draws the viewer’s eyes away from the terminal, making the setting appear even larger. In addition, there is a long ramp extending the length of the Lackawanna’s station, leading to the freight interchange with the traction line. The contrast between the level station tracks and the graded interchange adds yet another visual element to the scene.

Best of all, the setting could primarily consist of a combination of painted backdrops and very shallow buildings. Since the curved station platform and roof is so prominent, only a few inches of the Laurel Line’s terminal building would need to be created.

Options

The Lackawanna and Wyoming Valley’s terminal could be built in stages. Stage One would consist of the original passenger terminal. Stage Two would add the six-track car barn at the end of the line’s double-track terminal trackage. Stage Three would model the line’s freight house and active interchange with the DL&W.

Freight played a large role in the Laurel Line’s Scranton terminal operations. Incoming traffic consisted of manufactured goods and empty hoppers. Outgoing traffic consisted of filled hoppers and gondolas. The line’s motive power included several freight locomotives of unusual design. Frequent five- and six-car freights would be appropriate, mixed in with the passenger operations described above. This could be definitely a traction “hot spot,” serving several purposes:

- Interchange of passengers with mainline trains
- Passenger train assembly/breakup/storage
- Interesting mix of local and express passenger trains
- Interchange of incoming and outgoing freight traffic
- Optional express traffic

Conclusion

All in all, I’m pretty excited by the potential offered by the Lackawanna and Wyoming Valley’s Scranton terminal. It’s not so big that it’s unmanageable, and it can be built in stages. Most important, the setting provides a logical reason for the terminal’s existence as a freight and passenger interchange point with a larger steam railroad (permitting static display of favorite models).

For more information, locate a copy of James Henwood’s and John Muncie’s Laurel Line: An Anthracite Region Railway, published in 1986 by the Interurban Press. This “classic” traction book contains several photographs of various cars in the terminal, as well as a detailed track plan on page 79. Although out of print, an online search at www.alibris.com and www.amazon.com reveals that used copies are available at a premium. (The book is so useful, however, that it’s worth it.)

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Precision Crafted
**NEWS:** Atlas-O, 378 Florence Ave, Hillside NJ 07205 908-687-0880 • www.atlaso.com

AtlasO has announced a new lower-cost line of O Scale products, TRAINMAN™. The initial TRAINMAN™ offerings include an RSD-4/5 locomotive, 40' sliding door boxcar, 40' plug door boxcar, 40' stock car, 52' gondola, and an extended vision caboose. The Diesel will cost between $370 for 3-Rail with TMCC and $230 for 2-Rail DC operation. The cars run $40 for 3-Rail and $43 for 2-Rail.

**NEWS:** DSL Shops Cast Urethane Kits
DSL Shops • 630-858-1803 • dsl@dslshops.com

Kit #O206, The Riverside Apartments, is a 1¼" relief kit in urethane. Overall size is roughly 12" x 12". The kit features separate windows for easy painting, ornate brickwork, a unique architectural style and decorative entranceway. It includes Styrene for roofs, clear plastic for windows, and paper window dressings. MSRP: $99.95.

Kit #O207, The Music Store, is a nouveau brick two-story with TMCC and $230 for 2-Rail operation. The cars run $40 for 3-Rail and $43 for 2-Rail.

**NEWS:** Clever Brothers Models
1205 W Sherwin #810, Chicago, IL 60626 773-844-3072 • www.clevermodels.com

Thom and Dave Miecznikowski, partners and owners of Clever Brothers Models have released their first six highly detailed card model kits and over 30 high resolution textures under the Clever Brothers Models label. “Card modeling is addictive, plain and simple,” says designer Thom Miecznikowski, “At the recent Midwest O Scale Meet we sold everything we brought, including our built-up samples. People kept reaching out to touch the models. They couldn’t believe they were made of paper. We encouraged people to pick them up because, even though they are paper and have no internal structure other than more paper, the models are not fragile. Amazingly, once you start folding, the paper becomes very rigid. We go through a lot of design and testing to insure that the kits are fun and easy. The end results are structures that have great dimension and character. Because our kits are created photographically it would be impossible to achieve the finish of our kits with traditional techniques. Paper is a superior modeling material, easy to work with and in most cases more scale than wood or plastic. Add to that the original photographic sources we use. It's a whole new way to think about modeling.” Clever Models kits are available online from the Clever website and range from $2.50 for a heavy timber loading ramp to $28 for the newest kit, the Jefferson Ice Co. Kits are printed on heavy card stock. The library of textures are printed in high resolution on acid-free self-stick paper and are $2.50 each.

**REVIEW:** Code 148 Rail Insulators, $2 for a pack of 25
Irish Tracklayer
2682 W Palo Alto Ave, Fresno, CA 93711
john@irishtracklayer.com • www.irishtracklayer.com
reviewed by Joe Giannovario

Every once in a while you stumble over a product you didn’t know you needed. These rail insulators are one such product. You see, I’m about to lay track and install both AtlasO and custom-built switches on my layout.

Now, track switches require electrical isolation to avoid short circuits. On the AtlasO switches an air gap is provided at the frog area. However, the gaps are inconsistent in width and temperature changes over time can cause the rail to creep resulting in an electrical short circuit. This can be one of the most difficult shorts to locate because one rarely thinks to look for two rails touching each other. The Irish Tracklayer Rail Insulators provide the positive separation needed to insure the elimination of electrical shorts from this hidden source. I opened each gap with a razor saw and then inserted the IT insulator with a dab of plastic cement. Now I don’t have to worry about the gaps closing. The custom-built switches will get the same treatment. In fact, I’ll be using the IT insulators wherever I need to isolate rail blocks.

Each package contains 20 white and five orange rail insulators. The orange insulators are recommended for use in signaling blocks.

Visit the Irish Tracklayer website and find out about the other great products they offer for O Scalers.
REVIEW: Proto-48 Frogs and Points, MSRP $10 per pack
American Switch and Signal, 1945 North Highway 300 West, Winamac, IN 46996 574-946-7667
reviewed by Brian Scace
John Pautz, of American Switch and Signal, stopped me at the Chicago Show back in March (It wasn’t hard. I was in the bar.), and handed me a little package with his latest additions to his P48 product line. For those of you who don’t know, John makes some of the nicest and most neurotic switch (er, turnout) components available. Here’s what was in the bag, from top to bottom in the accompanying photo:

- A set of Code 125 Points P-25-16-6
- #7 Code 100 Bolted Frog FB-10-7
- #7 Code 125 Bolted Frog FB-25-7
- #7 Code 125 Manganese Insert Frog FRB-25-7
- #8 Code 125 Manganese Insert Frog FRB-25-8
- #10 Code 125 Bolted Frog FB-25-10
- #10 Code 125 Manganese Insert Frog FRB-25-10
- #10 Code 138 Manganese Insert Frog FRB-38-10

As you can see in the photo, the pattern work is highly detailed and the casting is extremely clean. These come ready to spike down, with no tweaking or filing away at residual flashing.

John also showed me a completed turnout built using these components. It doesn’t get more convincing than this.

REVIEW: Athearn O Scale Ford C Series Tractor, Van, and Fire Engine
Athearn products are available through your local hobby shop and are distributed by Horizon Hobby
reviewed by Carey Hinch
Athearn has now produced a Ford C Series Tractor, Ford C Series Box Van, and Ford C Series Firetruck–Pumper in diecast 1/50 scale. The sample vehicles I was able to look over were very impressive. The detailing on all three models is very well done and, while not overly ornate they are very realistic. The Ford C Series tractor model has a diecast cab and frame. The tires on all three models are rubber. Plastic is used for the side mirrors, fuel tank, mud flaps, fifth wheel, and drive shaft detail. All three vehicles are 1/50 scale. When paired with a 1/43 figure the look is correct. A 1/32 figure will be noticeably larger than the vehicle, as expected.

The Ford C Series box van is similar to the C Series tractor in detail, but the box van has a longer frame and wheelbase to accommodate the diecast box. The addition of this diecast box makes the vehicle heavy and it really is nice and solid. The van includes cast-on safety placards that read “Please Drive Safely”. The Ford C Series firetruck model uses the same frame as the box van. The entire body is diecast and most of the detail is cast on the body as well. A few extra plastic details decorate the firetruck. The ladder and fire hose details are not removable. Something I have seen at model train shows is a set of LED lights that mimic the modern strobes of bar-type emergency lights. Also simple 1.5 volt slow flashing lights could also be added to the main light bar and rear lights with a little modification to the body.

Purists among us may snort at the disproportionate size, but most O Scale modelers will welcome the Athearn vehicles. Athearn produces the Ford C Series tractor lettered and painted for CF, Advance, Delta, DiSalvo; coming soon are D&RGW, Rhode Island, Fredrickson, and Branch. The Ford Series C box van is lettered and painted for Great Northern, Southern Pacific, Penn Yan, Western Pacific; coming soon are D&RGW and Rhode Island. The Ford C Series firetruck is lettered and painted for Riverside, Chicago, Washington DC, Boston; coming soon are San Francisco, and Detroit.

NEWS: The W&A General 4-4-0, $1249.95 (3-Rail); $1299.95 (2-Rail)
SMR Trains Inc.
PO Box 753, Mount Laurel, NJ 08054
www.smtrains.com

Dave Schneider, CEO of SMR Trains, stopped by with Serial Number 1 of the production run of the Western & Atlantic General. This is the locomotive of Civil War historical fame that started what is known as the Great Locomotive Chase. Unlike other models of the General that have been offered previously, SMR’s version is of the locomotive as it was on the day the chase took place on April 12, 1862. SMR is also offering W&A box cars at $280 each or $530 a pair. Two-rail O Scalers will need SMR’s two-rail conversion trucks at $33 a set. As of this writing, only nine of the initial 20 two-rail General’s were still available.
I just can’t resist this sort of review. The folks at K-Line have recently released a little industrial switcher that bears looking at. This is a small four-wheel industrial Diesel with a diecast body and frame, only available in 3-Rail. Since it has promise, we’ll look at it much like the Lionel 0-6-0T review we did last year. Like the 0-6-0T, we wanted to check out one of the folks who do conversions to 2-Rail; this time it was Joe Foehrkolb of Baldwin Forge and Machine.

First, let’s look at the locomotive as it comes from K-Line. This is a hefty little guy, and crisply done. The steps and such on the ends are much improved in treatment over the Shay we reviewed recently, and it comes out of the box with Kadees installed (for those who want them, the typical three-rail couplers are also provided). This is touted as a Plymouth switcher; a quick look through my meager Diesel library failed to come up with a prototype, but it has a good generic “critter” feel if it doesn’t precisely follow one of the myriad of FRH designs. Certainly, it is a vast improvement over the absolutely huge AHM or Roco Plymouths we’ve been used to.

As it comes, there is a tiny little fan-driven smoke unit (Joe and I talked about a diode array so that the smoke unit could be still used after conversion; the fan has to rotate in the same direction regardless of the direction the locomotive is traveling). Also, there is a certain amount of circuit board stuff inside to deal with the AC operation in 3-Rail. The issue, for most of us, is that K-Line only offers this model in 3-Rail. No big deal, as Joe was playing with one at the same time we got our sample. He graciously allowed us to borrow his prototype after he finished it, so we could compare it with an un-modified version for your benefit.

Here’s Joe’s comments: “I had the Plymouth running on my layout yesterday. Today I plan on getting the Kadees properly mounted and perhaps installing a lighting circuit. Your diode idea would work for the fan motor. However, as an experiment I plugged the smoke unit boards back in and tried running the engine on straight DC. A small component on the smoke unit actually exploded! I have no interest in the smoke feature (especially now!) but some modelers may want to try to keep it operational. I don’t know if K-Line would provide a suggested wiring diagram for a two-rail conversion of the smoke unit electronics but, without an understanding of the circuitry, it is not going to be an intuitive thing to do. On a positive note, the little engine is pretty quiet and, running light, my amp meter does not even register a current draw. I think it will require clean track for proper operation since it only has two wheels picking up on each rail. Wipers could be added, but I can live with it as it is.

“The (conversion) cost would be $70.00 including wheels, electrical pickup and Kadees. The lighting circuit would be yours to do. This estimate is based on three hours of labor and the rest is parts. So, as I mentioned to you on the phone, the conversion labor makes the cost of the engine almost double and a lot of modelers will balk at paying that much.

“As an alternative, I could provide the NWSL wheels bushed for the K-Line axles, and the pickup block with mounting screws and pins (the modeler can use his own spare Kadee springs) for $25.00 I use Micarta for insulation of the wheels. NWSL provides a plastic bushing for insulation of their wheel sets but I feel that the material they use is too slippery for use on drive wheels and could begin to slip under load. The Micarta bushings work with the Loctite 609 Retaining Compound and, once the wheel is place with this treatment, I believe it will stay there permanently. A bottle of the Loctite will cost a modeler about $13, so that adds to his cost of the conversion also. He will only use about two drops to do the job and will have plenty for other uses.”

I like Joe’s conversion because of the simplicity and robustness of the pickup system he has designed. Also, I think he sells his conversion a little short here, as I took his switcher out for a spin on my railroad. I found no ill behavior regarding stalling at all, even with only two wheels per side. It trotted nicely over my old Roco #6 (dead frog) turnouts with nary a hesitation. The pickup block design works extremely well.

Back to the switcher, itself. I found the operation to be quite controllable using an MRC Controlmaster 20. The top end is (as expected) a bit frisky, but the 0-10 Volt range yields good operating characteristics using a commercial “electronic” throttle such as the Controlmaster. By the way, this thing is a little horse, kicking six or seven brass freight cars about with aplomb. Not bad for such a little guy!

Here is another opportunity to add a decent industrial sized locomotive to our bag of tricks. It needs no apologies and is easy on the wallet.
**REVIEW: USRA 0-8-0 & PRR H3 2-8-0**

M.T.H. Electric Trains
7020 Columbia Gateway Drive,
Columbia MD 21046 410-381-2580 • www.railking.com
#20-3149-2, NKP, 0-8-0, $599.95 - C&O, NKP, VGN, NH & UP
#20-3141-2, PRR, H3 2-8-0, $699.95 - PRR or Long Island RR
with two different cab numbers and paint schemes.
reviewed by Joe Giannovario

O Scalers have been clamoring for smaller locomotives. Well, their pleas have been heard by M.T.H. Offered here are two small locos that will fit any size layout.

**NKP USRA 0-8-0**

First up is a standard USRA-design 0-8-0 switcher offered in five different road names. The locomotive has a diecast boiler and tender and is built to 1/48 proportions. The model is accurate to the drawings in the MR Cyclopedia, Vol 1. The M.T.H. promotional material for this switcher says it was designed so that the tender deck can be swapped out to model different tender styles, but the tender is the same for all five road names offered. The review model is painted and lettered for the Nickel Plate Road. Both paint and lettering are excellent.

The USRA 0-8-0 was the basis for C&O’s C16 class switcher, which later was copied by the N&W (you knew I’d go there, right?). I hauled out my Precision Scale Company brass N&W S1a 0-8-0 (retail about $1800) and compared it to its diecast cousin. Both locos have opening smokebox fronts. Both locos have sliding cab hatches and cab windows. Both locos have removable sand box hatches attached with chains. Both locos have truck chains on the tender trucks and both tenders have opening water hatch covers. Both also have a wealth of added hand-applied details. The M.T.H. loco is painted and lettered. The S1a will have to be disassembled for painting. The M.T.H. has chuffing sounds, brake noises, pump sounds and smoke while running on straight DC. The S1a is silent. (Hmmmm, how much does this thing cost?)

**PRR H3 2-8-0**

Next we have a diminutive 2-8-0. The prototype for this model is a PRR H3. The only remaining example of this locomotive resides at the Pennsylvania State Railroad Museum in Strasbug, PA. The H3 was the first PRR steam engine to receive the trademark PRR Belpaire firebox. It was built in 1885 at the Strasburg, PA. Production of the H3 continued until 1897, when they were superceded by the heavier H4.

I did not have drawings for the H3, but this loco is a dead-ringer for (wait for it!) an N&W G1 2-8-0. I gathered up my N&W info to compare to the PRR model. Both the H3 and G1 have 50-inch drivers. The driving wheelbase on the H3 model matches the G1 drawings as do nearly all the other dimensions. I have to wonder how the N&W came to own a locomotive so close to a PRR design. Perhaps it was Baldwin (from Philadelphia), with their close ties to the PRR, who copied the design for the N&W in 1897 after the PRR had moved on to bigger and better 2-8-0s. It’s a mystery.

The one big difference I can see in the H3 model, comparing it with photos in Al Stauffer’s Pennsy Power, is the tender. The restored locomotive at the museum has a low-side tender. The model has a high-side tender that was more typical of the type delivered with the H3 when they were originally built. Other than that, the model looks excellent. I have the fancy striped version and it sure is purty! It’s going to be a shame to strip it for conversion to the N&W G1, but a man’s gotta do what a man’s gotta do.

The H3 is all diecast with added details and all the same opening and sliding features as the 0-8-0. Both the H3 and 0-8-0 have blackened wheels and axles.

**Performance**

Two things finally came together so that I can do testing myself and not have to send M.T.H. locomotives off to someone else. I have some track down on the layout (I’ll have a progress report later) and I managed to latch onto an M.T.H. DCS system.

First, I ran both the 0-8-0 and 2-8-0 on straight DC. Well, not as straight as I’d like it to be. All I had on hand was an old MRC power pack from the ’70s. Nonetheless, both locos ran off this unfiltered anemic DC power supply. At about eight volts, the sounds came on and the front headlights lit. As I increased the voltage, both of the locos started to creep forward at around 9 volts. The 2-8-0 ran smoother and slower than the 0-8-0, which seemed to have a very minor hitch in the giddyup at slow speed. However, the 2-8-0 experienced a minor short circuit while traversing an Atlas #5 switch. One insulated driver tire touched the brake cylinder on the frame while going through the switch frog. This will need to be addressed later, but isn’t a serious problem. I also noticed, while running the 0-8-0 for the slow speed test on DC, that the smoke units on these MTH locos suck up quite a bit of current. I turned off the smoke unit, with the tender switch, while the loco was running and the speed picked up immediately.

Next I switched over to the M.T.H. DCS system and put both locos through their paces. I have to say I was impressed with all the functionality provided. Just about everything is controllable from the handheld wireless controller. Interestingly, once I put the locos under DCS control, all the manual settings I made for sound volume and smoke production were overridden by the remote. I had to dial back everything on the remote, especially the smoke volume (which was prodigious). Both locomotives have the same
generic sounds for steam exhaust, whistle and bell. Most O Scalers do not care about the top speed of a locomotive as most models usually run too fast anyway. Both the 0-8-0 and 2-8-0 were programmed for a top speed of 120 scale miles per hour (smph). Both of these prototypes would be lucky to hit 30 mph! I dialed them back to a more prototypical 25 smph. I then set about to determine their best slow speed. The 2-8-0 came out better in this test, since the mechanism seem more finely tuned. The H3 started to move with the remote set for 1 smph. The 0-8-0 needed a setting of 2 smph to move and 3 smph to run smoothly. I calibrated the remote's readings by timing the locos run over a measured distance. I found the remote's display to be very accurate. The slowest I was able to run the 0-8-0 on straight DC was 2.5 smph.

Just for grins I made a “lash up”, as M.T.H. calls it, with the 0-8-0 and 2-8-0. Without referring to the manual, and using only prompts from the handheld, I was able to “consist” the two locomotives in about a minute. On application of power, they ran in sync up and down my test track. Cool!

Impressions
Well, for someone who owns more than a dozen brass steam locomotives, I can say that I am very impressed with both the level of detail and operating performance of these less-than-$700 models. The paint and lettering are excellent. Both slow- and medium-speed operations are smooth. The blackened wheels (including the tires) and axle ends are a nice touch that brass importers would be smart to copy. The level of detail is every bit as nice as a brass import and from two feet away you cannot tell the difference.

One thing I’d like to see added is a deck plate between the cab and tender. That means getting rid of the fat cable running between the tender and the loco. There has got to be a better way to bring power from back-to-front.

Both of these locos have removable cabs. I’d like to see some enterprising company make replacement cabs. A new cab is all the H3 needs to make it a reasonable facsimile of the N&W G1. A new cab and tender deck for the 0-8-0 would make a C&O C16 or N&W S1 feasible. Other cabs would be appropriate for other roads.

The DCS command system works very nicely, but is problematic for those of us with non-DCS equipped locomotives to run. Where do you get new DCS receivers to install in those locomotives? That's a question I posed to M.T.H. that has not yet been answered. It would also be nice to have specific sounds for each loco. Also still an issue for those with reversing loops are the polarity-reversing characteristics mentioned in previous reviews.

Overall, these are outstanding offerings that will fit any budget and layout in a field usually swamped by Big Boys and Alleghenys. I’m keeping the H3 for myself. It’s a jewel.

REVIEW: Scenic Accents figures
A2723, $17.98 set of six figures
Woodland Scenics
PO Box 98, Linn Creek MO 75052
573-346-5555 • www.woodlandscenics.com
reviewed by Joe Giannovario

Woodland Scenics sent along a pack of their new O Scale figures from their Scenic Accents line. Since the figures were trackworkers and I’ve been getting ready to lay some track I posed them on a section of test track I had laying around. You can see the results for yourself.

These are great figures that will spruce up any scene on a layout. There are a dozen different sets to choose from ranging in price from $17 to $18. Ten of the sets are people. The other two are cows and tombstones. Go figger!

NEWS: The Laifong Store, Kit #1, $179 plus shipping.
Wright Model Works, c/o Dwain Wright
1139 Missouri Flat Rd, Grants Pass, OR 97527
541-846-4125 • www.wrightmodelworks.com

The Laifong Store represents a real structure of the past. It was typical of gold mining and timber towns of the West. Kit #1 is cast in Hydrocal with soldered and rolled roofing, Grandt Line windows and doors, Jaks pewter castings, special decals made from historical magazine ads and much more. The building has a bordello upstairs, a drygoods store downstairs, storage, laundry, water and benzine for the then-new horseless carriage. The roof can be made removable so that an interior can be constructed if desired. The kit comes with complete instructions, email and phone support, painting instructions and the history of the building.
Atlas-O has brought out a new body style to complement their GP60, previously reviewed in OST. This version, the GP60m, was the wide-cab modification ordered by the Santa Fe, originally for use on the crack intermodal trains headed east with all those nifty Pacific rim products we love.

Our sample arrived painted in the original Santa Fe warbonnet scheme; very classy. Packaging, paint, and detail levels are all up to the standard we expect from Atlas-O. Since the mechanics are the same as those found in the standard-cab GP60 we reviewed, there really wasn’t anything new to report here, either. For those who are joining us here, these are highly detailed, well painted, and tightly assembled models. Atlas-O is a benchmark in the O Scale Diesel-era niche.

Since our very snappy sample is the straight DC/DCC-ready version, an opportunity presented itself for some experimentation and this slightly “off-axis” review. There has been much discussion and debate about the behavior of the current twin-motor “power-truck” drive design on existing railroads with conventional DC cab control.

I’ve been a proponent of the older single-motor prop-shaft drive, and I still am, however a theory came to mind about the current twin-motor drives, such as used by Atlas-O.

My railroad is designed so that the various control systems I need for locomotive reviews can be clipped in and out with relative impunity. First, I clipped in an older Variac/rectifier system, and fired up my GE/IR boxcab that Jerry Snow repowered with a nice horizontal drive. Although perhaps an unfair comparison, it was the only other Diesel drive I had on hand. The single horizontal motor drive behaved as we would all expect, and the twin (vertical) drive fairly leapt out of the starting gate. Score one for the single drive.

Next, I took one of my MRC Controlmaster 20 commercial throttles and clipped it in. Here is where things got interesting. Using this supply, I found the GP60 to be very satisfactory in its behavior. The high end was still, as expected, a bit frisky. The starting behavior was quite tame and controllable, something that my old Variac system just couldn’t manage.

Just for fun, I then re-wired the twin motor drive from series to parallel, as some suggest as a solution to the speedy-syndrome. What I found was, although top speed was reduced, starting behavior was not really affected with either the Variac power supply or the Controlmaster. My conclusion? Look at a more modern power supply as a possible means to satisfactorily operate these twin-motor drives. If you insist on keeping that old Marn-O-Stat you’ve been happy with for fifty-odd years, yet you like these new modern Diesels, you might prefer to buy the unpowered versions from Atlas-O and have Jerry put horizontal drives in them. Although I still prefer single motor horizontal Diesel drives, I find that a little thought in tailoring power supplies to the task yields quite decent operating characteristics with the newer twin-motor designs.
REVIEW: Troop and Express cars
Weaver Models
PO Box 231, Northumberland, PA
570-473-9434 • www.weavermodels.com

Troop Sleepers and Kitchens, $89.95
MOW cars, $79.95
Express Cars, $64.95
reviewed by Brian Scace

Let’s talk a little history here. During WWII, the majority of troop movements were by rail, whether to training areas inside the United States or to ports of embarkation for deployment overseas. This put an incredible strain on the supply of passenger equipment on US railroads. One solution was the manufacture of the Troop Sleeper and Troop Kitchen cars featured here.

Unlike standard passenger equipment, these cars were based on a 50’ boxcar design. The sleeper version had bunks tiered three-high and placed laterally, water tanks placed just under the roof, and weighed significantly less than their civilian counterparts. Allied “Full-Cushion” trucks were applied to make the ride tolerable, though these cars were famous for their rocking ability while traversing less-than-optimal bolted track. They were operated for the Government by the Pullman Company and freely intermixed with the more traditional designs of sleepers and day-coaches that carried the majority of troops during the war. The kitchen cars, based on the same design, were operated by the various railroads, and staffed by the traveling military unit’s cooks and KP’s, rather than by railroad dining car personnel. After VJ Day, these cars remained in their intended service until after the troops had re-deployed back to the US and had traveled to the various military posts for release from the service.

That task completed, most of these cars were sold off to the various railroads, who converted them into express boxcars and MOW equipment (bunk cars for track crews, for example). Some kitchen cars were retained during the Korean conflict, re-equipped for use in hospital trains. As express cars, they were quite successful; the only issues involved the Allied trucks, which were declared not acceptable for interchange in the 1950s. Cars remaining in interchange service had them replaced, usually with a high-speed “bettendorf” design.

These models are very intricate. The troop versions have full interiors and flush-fitting windows. There are lots of parts that required a lot of assembly to make these up into the ready-to-run models you’ll pull out of the box, hence the (at first blush) rather stiff MSRP. On examination, the price is not only reasonable to me, but a bargain compared to the work involved in assembly and the complexity of the die-work. These are premium cars.

Our samples, the troop kitchen and a postwar express conversion, were painted and lettered cleanly and appropriately. Assembly is clean, squared, and tight. Although they are as heavy as Weaver’s Osgood Bradley coaches, they roll smoothly and freely. Now that I mention the Osgood Bradleys (the so-called “American Flyer” cars), I’ll make a point. Although they were welcome and excellent cars, I was disappointed in the windows, which were merely a sheet of thin plastic glued against the inside of the carbody. One of the hallmarks of the Flyer coach was the flush-fit windows that added to the streamlined appearance. Of course, I whined a bit, replaced them in four cars with Chooch flush fitting window kits, then regained my composure with the aid of strong drink. The good folks at Weaver took the whining most graciously. What makes this tirade germane to our discussion is the fact that Weaver didn’t repeat this method here. Rather, they bit the bullet and made dies for flush-fitting windows (a significant investment, by the way) for this series of cars. I like to have the ability to say this sort of thing, and I like to see a company who is progressive about improvements with new offerings.

There are lots of add-on details on these cars. The dual brake system is very nice, another improvement. Kadees are supplied, again by customer request (Weaver has their own design of knuckle coupler). The whole car feels solid, looks good, and is a good representation of a historically significant prototype. Also, they represent a noticeable and significant notch-up of the fidelity and attention to detail of the plastic offerings from the Northumberland crowd.

A field day can be had with these cars, for the inveterate kitbasher and tinker. Some express conversions had outside-hung corrugated boxcar doors, some had the ends replaced with boxcar ends and the end-doors removed, and those of you modeling the post-Allied truck years will want to experiment with appropriate replacements. Meanwhile, those of us who model the WWII era are drowning in our own drool. Sorry, Joe, I got my hands on the troop kitchen first!
Vince Waterman

It is appropriate that, among the product announcements and reviews found on these pages, we bring to your attention the passing of Vince Waterman, the long-time proprietor of Trackside Specialties. Trackside was always one of the vendors I visited at any show, rooting through the array of castings, parts, wheels, and all the other parts we O Scalers thrive on. If Vince didn’t have a particular part, he’d find it for me. It always amazed me how he could remember where any part was, in and among all the little boxes and bags of castings, screws, and trucks.

I guess it was about ten years ago or so, when the Watermans sold the HO inventory to Greenway, and reduced the scope of Trackside to just O Scale. After something like 50 years in the business, the remainder of Trackside Specialties was sold to Dave Clendenin. Vince retired at that point, though he (with his darling wife, Edith) continued to hold forth with Dave at most of the major meets. Vince is a member of the O Scale Hall of Fame, inducted at the 2004 O Scale National in Washington, D.C.

Vince passed away on May 8, at age 78. Our very best wishes to Edith and the rest of Vince’s family, from the staff at OST and the O Scale community. — Brian Scace, Editor.
They always seem to be available. Whether on Ebay, at model railroad swap meets, or even through a dealer who is liquidating used equipment or eliminating old store stock, the old 70s-era AHM line of rolling stock still can be easily found today.

This line included a 40’ boxcar, gondola, reefer and a flatcar. AHM, in competition with the old Atlas/Roco line, produced some very useful items in those days, although the AHM cars made no attempt to follow a particular prototype. While it appears that AHM imported their line (made by Rivarossi) in only one huge batch, the Atlas line of rolling stock was re-issued by Bev-Bel Corporation and P&D in the 1980s. The AHM rolling stock was always viewed as a cheap alternative to the more expensive Atlas rolling stock of the era. As bad as these cars tend to look out of the box, they are a source of great kitbashing material. One AHM car-type, the flatcar, did not have its opposite number in the Atlas/Roco line.

The AHM 40’ boxcars weren’t so bad once you made some detail changes, and at least offered a little roof-height variation in the average man’s consist of Atlas, Athearn, and All-Nation cars. The same was true with their 40’ reefers, which weren’t really mechanical reefers at all. You could easily add those details to change all that, though. Then there were the gondolas, well detailed for what they were. Although they could stand some detail upgrades as well, the gondolas were the best detailed of the entire AHM line, with the possible exception of the caboose. AHM also offered a four-wheel bobber caboose, along the lines of the Atlas caboose. The two are almost identical, with very minor detail differences, and the AHM caboose didn’t have a removable cupola.

Then there is the flatcar. Spare in details, of course, such as lack of a brake wheel and staff, they are quite fixable. We will be doing that with this latest project car, a stretched version using two stock AHM 40’ flatcars (see Photo 1). You will notice that both cars are marked for cuts, since I wanted to end up with a 53’ car. I merely measured off 26.5’ on each car, and used a Sharpey marking pen to make the marks. The resulting lines are easy to see as I’m running these cars through my small table saw.

First things first. Let’s disassemble the cars, which is fairly easy to do. Like most AHM cars, the entire frame assembly pops right out. If your AHM car came still in its original box, there will be some type of plastic wooden crate sitting on it for a load. You will need to remove this as well. Once the cars are disassembled, we are ready to make the all-important cuts (see Photo 2).

I used a very small table saw that I got from Harbor Freight; it only uses a four-inch blade. A similar one can be purchased from...
Micro Mark. I like this method instead of trying to use a hobby knife. This little saw cuts through plastic like butter, and I'm able to better control my cuts, and the result is very clean and square. Any of my future projects involving major body modifications to plastic rolling stock will involve the use of this saw. For those of you who don't have access to a power saw, you're going to have to use the good old hobby knife or hobby saw. The old method isn't bad, of course. It just isn't very quick or as precise. Whatever method you choose, be careful and make as straight a cut as possible through both bodies (see Photo 3).

Back to our sawcut cars, you will notice the reason that straight clean cuts make our life a bit easier. When you butt the two parts together, you'll have much less of a seam to worry about hiding during re-assembly (see Photo 4). You will, of course, have some sanding and fitting of the pieces to be joined, but utilizing the saw in this instance made for much less work. By the way, if you have a ten-inch table saw, that also can be used to cut plastic. Just be sure you use a blade made for the purpose. Above all else, be safe with it.

After you've cut the body shells, reach over and grab one of the frames. Cut the frame in two places, just behind the bolsters (see Photo 5). You will need both of these ends for this conversion, and they will provide the bolsters. Although I re-used the original trucks, you may use whatever trucks you wish. For me, the AHM trucks work just fine, especially when properly screwed in place.

The next step is to glue the short pieces of underbody ends back in place under the car halves. Be sure to clean up the raw cuts where the saw did its work, then snap the ends back in as if they still constituted the full frame on a 40-footer. Next, glue them down. The reason for gluing them down is because we will be removing that little tab they snap to later on when we add the couplers.

Now, it's time to glue the body halves together. This should be an easy step. If you made your cuts correctly, the body will go together and fit like a glove. If not, then you have more cleanup work to do to get everything straight, clean and true.

As you can see in Photos 6 and 7, I was able to do it with a minimum of cleanup work. Once I had the body halves glued together, I glued a couple of pieces of scrap Styrene over the joint to help hold everything together and to provide some additional strength. I set it aside and surfed the Internet for a little while, while everything dried.

The next part of this project is to add a sub floor. I had originally intended to use Evergreen Styrene car siding; I do have some around here somewhere. I also had a brand new package of Plastruct planking. This material comes with two sheets to a package, and several varieties of plank widths are available. I had just picked up a package at my local dealer, thinking that I
could use it one day. I guess I was right.

I knew how I wanted it to face, with the planks going across

the bottom of the body (see Photo 8). Since the planks run the
long way on the sheet, I had to use two pieces. I used the full
8.5” of width for the first piece, which lapped well past the joint
in the body shell. The shorter piece was added to complete the
job. At this point, I wanted everything to set up and the joints to
dry properly, so I set everything aside.

After letting everything dry for a few hours, I checked the assem-

bly for visible flaws and seams. The main seam for the body shell

was almost invisible, however, it could still be seen. I decided to
fill it in with putty (see Photo 9/9a). I didn’t have a readily avail-
able source for Squadron Green or White putty, so I used the next
best thing, automotive glazing putty. This can be found at any auto
parts store, or at Wal-Mart in the automotive department.

You will also notice the mounting holes that were made at
the factory to attach that horrible plastic wooden crate. It’s time
to fill those in as well. Since we now have a sub floor under-
neath the deck, filling these holes is fairly easy. Just use your
putty. Although it usually takes about thirty minutes for the putty
to fully harden, I would give it several hours in case you gobbed
it in a little heavily.

Now that the putty is completely hardened, it’s time to trim
and sand it (just like doing bodywork on your automobile). Now,
I don’t have a miniature Sureform tool to contour the
putty, but with my picks and my #2 hobby knife with a chisel
blade it’s not very difficult to work the putty to conform to the
contours of the body shell and deck.

At this point, I also removed the tabs that normally hold the
frame to the body shell. It’s a fairly easy part to remove; just
score it and snap the piece off. This will enable you to install

Kadee couplers, and will provide a nice little place for the cou-
pler to nestle against (see Photos 10-13).

Now it’s time to install a new underframe. This will accomplish
two things. First, it will add the strength needed to insure
that this flatcar will be able to handle any weight added to it,
for example the loads available from Chooch Enterprises. Sec-
ondly, it will be easier to sleep at night, knowing that the frame
is under the car with all the details you would expect to see.

One route you could take, if you’re not particularly interested
in scratchbuilding the frame, is to use the center section cut out
of the old underbody. It would serve the same purpose, adding
the needed strength, but it just wouldn’t stretch all the way from
bolster to bolster. For cars used in operation, this is perfectly
acceptable. For those who want all the detail there, it probably won’t cut it, especially for those who just want to have that peace of mind from knowing its “all there”.

Here’s the way I normally do this. Start with fairly thick sheet Styrene, say 0.060” to 0.080” thick strips from Evergreen or Plastruct. Since I don’t have a real close supplier of Evergreen or Plastruct, I often use some of the scraps I buy from a local plastics dealer. For this project, I cut mine out of 1/8” thick Styrene sheet, using my little table saw.

I started by cutting two ¼” wide strips from the sheet. I then cut both pieces to fit between the bolsters. Oops, it looks like I didn’t cut these pieces very straight; I’ll have to sand them down a little to even them out. After sanding and forming the frame rails, I glued some Evergreen C channel face down over the frame rails (see Photo 14). After they’ve dried, I added the cross members. I used some smaller I beam strip for the larger cross members, and flat strips for the rest of the smaller cross members.

The next thing to add is the brake hardware. I’m sure almost everyone has some brake hardware sitting in the scrap box somewhere, but (of course) I couldn’t find any in mine. Luckily, while I was building this car I was also building an All Nation boxcar. I copied those particular pieces by making a mold and casting them in resin (see Photos 15 and 16).

For my purposes, the bottom detail could remain very limited. This intended as an operating car, not a museum piece, so the detail didn’t need to be everything that would normally be found underneath a real flatcar. As you proceed, just remember that certain brake parts must be oriented in relation to the “B” end of the car (“B” end as in brake wheel end). I used flat pieces of Styrene sheet to make the platforms for the various brake components. You, of course, can detail the underbody to whatever level is satisfactory.

Once the brake system is in place, turn the car over and we’ll proceed with some more plastic surgery. In this instance, the cast-on grabs, which look unsightly by today’s standards, need to be worked off. Then, you can replace them with some decent wire grab irons (see Photo 17). I used an #5 hobby knife with a chisel blade, and lightly shaved the cast-on grab irons off. I then drilled out the holes for new grabs bent from ⅛ wire. I would normally use smaller wire, but I’m a little short on the smaller wire at the moment. Use whatever diameter pleases you. As you
can see, it actually turned out pretty well (see Photo 18).

Once I had all that done, it was time to mount a brakewheel. I used a common brakewheel normally used on boxcars. I imagined the prototype does the same thing. I mounted it sideways on the “B” end of the car (see Photos 19 and 20).

Now it’s time to paint the car. As you can see in Photo 21, I painted the underside black. I didn’t really worry about doing all the undercarriage detail, since this car is for operation, not for winning contests. I wasn’t overly concerned about how the frame looked, since my main concern is the appearance of the visible parts of the car.

On the topside, I used gray primer to see how well I did with the seam work. As you can see in Photo 22, the seam is invisible, which is exactly what I was looking for. Had there been any parts of the seam still visible, I would have had to do more filing and sanding. Fortunately, that wasn’t necessary this time.

Now it’s time to mount the trucks and couplers. For the trucks, I used the original equipment (those AHM trucks don’t look bad at all). When properly mounted, they work well. I recommend that you use screws to mount the trucks, but make sure you mount your couplers first. I used Weaver couplers this time, however there is always a chance that I will change over to Kadee couplers in the future.

To mount the couplers, I first laid out the screw placement using the top piece of the coupler box as a template. I then drilled the hole all the way through the body. This may sound like a sacrilege, but I was using a fairly small drill. I only reamed it out on the bottom side to get things started, then mounted the first coupler. Then I mounted the truck and checked for adequate clearance between the wheels and the coupler box. I then repeated the procedure on the other end of the car, and then checked for proper coupler height.

The height turned out to be high (of course). I don’t have a coupler height gauge, so I check it against my “standard car”, which I know to have the correct height. Off with the couplers! Glue a couple pieces of scrap Styrene sheet between the small frame rails and the coupler box until the knuckle height is just right (see Photo 23).

At this point, finishing the car is a matter of individual choice and taste. The management of my freelanced Withlacoochee Railroad debated long and hard about what colors our flatcars should be. Finally, they decided on a dark green body and yellow or Dulux gold lettering. The only green I had on hand was Pullman green, however, so I painted the car with boxcar red for the time being.

The deck of a flatcar, or any car with a wood floor, for that matter, is fairly easy to simulate with some painting tricks. I started with a base coat of Floquil Foundation. You can find any other wood simulation color that works for you. Since we are simulating wood using plastic, we only need to start with an overall wood color; the weathering effects will take care of the rest. I used thinned washes to weather my car.

Here are a couple of ways to make a black wash. One way is to use a good airbrush thinner, such as Testors Model Master, and Model Master flat black. Mix about one part flat black with ten parts of thinner; you can add a few more parts of flat black to the mix if you want to add more black highlights. Another way is to use the same mixing ratios, only using water based chemicals such as black India ink and denatured alcohol. The same ratio changes apply if one wants to enhance and highlight the details a little more, and make the deck look more like wood that has suffered the ravages of time and nature.

For those who are a little more adventurous, there are kits on the market for replacing the plastic wood floor inside of Intermountain boxcar kits with a real wood floor. It works as a laminate. It is very possible to do the same thing to this car. Scribed sheet wood or individual planks can easily be used, should you decide to go this route (Sounds like another job for our little table saw!). Then, it’s just a matter of staining the deck to look real.

This has been a fun project. It’s not difficult, and certainly is easy on that meager train budget! I still need to get some lettering for my car. However, I can’t resist putting this car into
No Tables Here

Enjoy your mag. When I get some areas sceniced on my O Scale layout will submit some pics.

In Issue #19 Carey [Hinch, Modern Image] begged the question when he stated “Every railroad, regardless of size, used [turntables].” At least one good sized railroad, the Northern Alberta Railways (900 plus miles) used wyes and didn’t have a single turntable anywhere on the system. (I’m in the midst of authoring a book on the system.) While many did use [turntables] they were a headache to maintain and even in the steam-era there were instances of a wye being used to replace a cantankerous turntable.

Keith Hansen (via email)

Keep An Open Mind

I found your article [Easements, OST #19] very interesting on the O Scale world. I am responsible for designing the control system used on the San Diego 3-Railers layout at the San Diego Model Train Museum in Balboa Park. Some would say, “Only a three rail’r; that’s a toy train guy”. I have been interested in O Scale for years. I did my turn at building scale model ships in 1/72 scale and found that just sitting on my bookshelf was not enough so I put remote controls in them. I have found that there is a big decision that has to be made by someone when building models. It is how much detail you are going to want to put into the project.

At the museum, I have found that there are those that want to help you learn about scale modeling and those that want to hold their talent to themselves and not share with the younger generation. I have always wanted to share my talents with the younger generation or those that just want to learn new skills. I may not know all the answers, but I am promoting a place dedicated my life by giving those that want to help you learn about scale modeling and he helped me build my first scale steam engine. It started with a Lionel scale Hudson and then detail was added, I wish I still had that engine but it is long gone. It was my first taste of scale and it has not gotten away from me. The engine was modified with scale couplers and ran on 3-Rail track as were some of the modified cars and, yes, some scratchbuilt cars as well.

I am moving to a new home and will have a room for my trains. Here is what it is going to be like. I am going to use MTH scale track (3-Rail) and my cars are going to be as close to scale as I can make them. I will kitbash all my cars and engines and add as much detail as I can. I have done some tests and find that the MTH scale track is as close as I can get to scale and still be able to run my 3-rail engines along with my 2-rail engines. Yes, I have found a way to have the best from both worlds. I have a train repair business and have converted 3-rail engines and cars to 2-rail with great success. But I do have some 3-rail engines that I do not want to convert. I want to run as much scale operation as I can so I have come to a compromise.

There are those that feel that this is dumbing down the hobby. I heard that same [argument] in ham radio about the reduction of Morse code. This move opened up the hobby and more people have come into the [ham radio] hobby. It is interesting to note that Morse code still has a place with these new operators. You have to be willing to accept change to see your hobby grow.

I had given my son the opportunity to learn about scale modeling and he was coming along very nicely until he passed on in 1994. In my memory, I have dedicated my life [by giving] those that want to get into the scale world a place to learn about scale modeling. I may not know all the answers, but I am promoting what I know. And you bet you can learn for the younger generation also.

I feel that it is important that those in scale modeling be open minded. I saw a ship scale modeling club die to almost nothing when its members did not want to share there talents with others because it would make them look bad at shows. Then there is “Museum Quality” which is a subject for another time as this will drive new talent out when every thing they do is knocked down before they can even get started.

My conclusion is to be open minded and welcome all because with change you can still have scale quality. I can be contacted and will be willing to do articles on what I call “Super High Rail” which is 3-rail with scale couplers and or wheels and scale rendering of cars and engines along with scenery. If you are open minded and would like me to write a column on this subject I would be interested in that option as I see that the blend of 3-rail and 2-rail will advance O Scale to new heights.

Daniel M LePage [dan@emeraldstationstudios.com]

Contest Entry?

As a loyal subscriber/reader of your fantastic magazine since issue #1, I am obligated to help you in the “2K5” photo contest and wish to do so by sending beautiful photographs for you to use. Since I do not have a digital camera at this time, I will gladly accept one from you.

Please send the bill to Scace, as he seems to have plenty of money for Scotch and other nefarious pursuits. I shall wait for your package along the mainline which will be known as the Reading Railroad.

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Choose Wisely

“Buyer Beware” is a phrase that is often used to alert prospective buyers of some unknown and lurking doom. It is a warning that someone or something is amiss and it is a flag of caution regarding shady business practices. You may have heard the caution at a train show, about a seller on eBay, or even at a local train meet. “Buyer beware”, in this context, is directed at you, the buyer. You need to “be aware” of what you are doing.

I am a HiRailer in transition, transforming my layout and trains in the direction to be more and more scale. Oh, I still run some HiRail, but I am learning that it is the O Scale trains that bring me the most pleasure. It is not an easy trip and at times the ride can be quite bumpy. Transition implies that you are changing. For a while, you probably will find that some of your old tinplate and HiRail friends aren’t as friendly. You may hear, “Now, why would you do that?” or, “Have you lost your mind?” Your new scale friends may not totally accept you either, at first. Because you once had trains that required an extra rail, you may be viewed as different. You may be the man in the middle for a period of time. This is not easy. It just takes time.

Buying O Scale items, like engines and rolling stock, is not easy either. That trip can be all uphill for someone who is in that same transition mode. It is not at all like purchasing 3-Rail and the HiRail trains in my past. A Hudson is a Hudson in HiRail. You know what you are getting. It is either mint in the box, test run, or used. I know how to buy and sell HiRail. I have done it most of my life.

O Scale Acquisition 101 is, by nature, much more of a science. It certainly is more sophisticated. Mention Hudson and immediately questions are raised. When was it made? Who made it? Who painted it? Who detailed it? Has it been modified? How does it run? Is it a good puller? Who has owned it? The old tinplate rules of “he who dies with the most trains wins” no longer holds true. You simply cannot even try to collect one of everything. Still recovering from a recent trip to York, I note a big difference between these groups. HiRLayers tended to fill their cars with trains... all great deals. Certain O Scale visitors were seen leaving with only a few purchases. Some did not purchase any trains. Here in the scale world words like “quality” and “fidelity” are used, instead of “quantity”. More is not necessarily better. This scale thing is a whole new ball game and I suggest it is major league. My observation is that this is not necessarily bad, just different. It requires a lot of thought and patience, but it can be rewarding. As a “buyer” you have to “be aware” of yourself, in the O Scale context.

I have come to appreciate my O Scale friends’ buying habits. Almost all of them practice selective collecting. They focus their buying power on one or two favorite railroads or even a regional theme. This helps them limit their purchases to what they can afford. Yes, some of them are fortunate to have some expensive brass, but it is something that they decided that they really wanted and it forced them to make some very serious decisions during the acquisition. My HiRail friends would brag they have 25-30 locomotives on their layout. I ask, “How many of those locomotives would they take to equal an expensive high quality brass scale locomotive? My answer would be, “About three-and-a-half!” It is all relative. Planning is required. It is your choice. You can afford the best. Just choose wisely. Think long-term. Make a mature decision.

Serious scale guys only buy exactly what they want. It may take several years to find a particular item. It is that age-old hunter instinct. They love the hunt. They learn everything they can about the item. Staying focused on that quest, they do not let themselves be distracted or purchase items just because it may be “a good deal”. Sooner or later the item appears and, because they have waited and not purchased a bunch of trains, they are able to acquire it. This is a much more mature approach to buying trains. They choose wisely and only buy that which they really, really want. Just because it is a beautiful big green giant, if you are not modeling that railroad it might not be a wise choice. It probably is not a good fit. Pass on that purchase. It is okay. Save your funds for what you really want.

In the third movie of the “Indiana Jones” trilogy, entitled The Last Crusade, an old knight guards the Holy Grail. All of the grails are on display, much like trains lined up on a table at a train sale. He cautions each explorer to “choose wisely.” Some choose the biggest and the best, the one with the most jewels. They let their eyes and emotions control their selection without any rational decision. This ends in failure. The hero, on the other hand, chooses rationally and very carefully. He chooses the one that he feels is most appropriate from his research. He remembers what advice he has gotten from his elders. This leads to success. The same rule applies here with O Scale purchases: “Choose wisely.”

“Buyer beware” and “choose wisely” are two principles I have come to appreciate, as I continue my transition into the O Scale world. It is a learning experience to be sure. After all, this is supposed to be FUN. Good luck in your quest, whether you are a HiRailer, a transitional hobbyist, or a member of the O Scale old guard, and always remember to choose wisely. It is quite an adventure. Stay tuned. This ol’ hobo will share more ideas in the next issue. ◆
Your Local Hobby Shop—II

World War Two disrupted model railroading as it did almost every other aspect of American domestic life. Historians have pointed out that although many of the austenities required by the Office of Price Administration and other Federal regulatory agencies were not really essential and contributed little, if anything to the war effort, the psychological effect of total involvement of the entire population contributed to maintaining the common commitment to ultimate victory. I am just old enough to recall meat rationing tokens, gasoline rationing, and saving tinfoil. Model railroading was one of many activities deemed non-essential to winning the war, and had the lowest priority for obtaining critical resources, primarily metals and the manufacturing capacity to machine them. Since plastics were in a primitive stage at the time (and Styrene would have been restricted, too, as it is a petroleum derivative), that meant only wood and paper were readily available for hobbyists. Even paper was not so easily obtained, nor of so good a quality; if you have copies of Model Railroader for the war years, you will note issues are thinner (partly from fewer advertisers) and the paper becomes steadily cruder.

Retailers found that stock that had been gathering dust on their shelves sold quickly. Some even engaged in speculation, charging higher prices on the grounds that when something sold out, it could not be replaced. There was a brisk market for second-hand trains, and the increasing level of detail that modelers had been growing to expect during the 1930's became less important. Those of you who have been around a while will have heard of Bill Walthers' famous barrel, for he loyally continued monthly advertising in his friend Al Kalmbach's magazine, even when he had no new products to announce. By scraping the bottom of that barrel, he found older stock, re-manufactured items, and substitutes from non-critical materials. At the time, model railroaders became less picky than they had been before (and certainly less than we have become since). Except for a handful of manufacturers whose lines were primarily of wood and paper construction, all of the usual model producers went entirely into war work as they possessed the specialized machine tools and skilled staff to produce precision components for defense contracts. Hobby shops eventually had little or nothing to sell. O Scale items from the war years tend to be collectible only as curiosities.

On the other hand, after the rigors of the Depression when many had little disposable income for a hobby, defense industry offered full employment for those who were not already in the armed forces. Even with strict wage and price controls and surtaxes on income, those who were working had considerably more funds than they were used to. Unfortunately, there wasn't much in the way of consumer goods to spend it on. Although a private or seaman didn't earn much (I suspect someone of the readers will recall being in that situation), his expenses were also negligible, and often his pocket money was greater than he had had as a civilian during the 1930's. Nonetheless, not only were there few model railroad items to buy, but frequent moves and limited personal space did not permit him much scope to practice his hobby (although the magazines of the period report some ingenious solutions to the problem). It has been suggested that the ascendancy of HO Scale after WWII (to the detriment of O) was a result of the smaller homes built by developers for returning GI's. I wonder if some part of the preference for a smaller size did not begin with the problem of how to move one's trains from one military post to another, or how to store one's tools and kits on a ship.

After V-J-day, there came the release of an enormous pent-up demand for all the consumer products unavailable during the war. Service members and defense workers had, for four long years, been thinking about and planning for what they could produce if the resources were available. Many new products appeared in short order, notably Gordon Varney's $100 4-6-0 (and his trucks) and Irv Atheam's line of freight cars, but with many other offerings as well. The pre-war stalwarts, ScaleCraft, Lobaugh, and Walthers, quickly resumed production of their lines and began adding new (and often improved) items to their catalogues. But this series of columns is about retailing, the place where the average modeler obtains the means to model, and it was here that some of the most striking changes occurred. Many of the veterans and former defense workers had saved their pay (there wasn't much to spend it on, anyway, other than riotous living) and, although some used it to begin the manufacture of hobby products, others decided to open a hobby shop. Hence, the late 1940's through the 1960's probably was the golden age of the local hobby shop in the United States. Small Business Administration loans and generous credit policies under the GI Bill encouraged individuals to think about "being their own boss." Perhaps military service had soured many on having to take orders from a supervisor. Others, remembering the Depression experience, (erroneously) concluded that the best protection against getting laid-off was to own the business.

Most of us O Scaleers are of a certain age, middle to late-middle, so it is most likely that, during this period, our interest in model railroading first took hold. Can you remember your first REAL hobby shop? For me it was Howard Ruth on Genesee Street in Buffalo, NY (and I suspect there are at least a dozen readers of this very column who will mentally remark "Oh, yes. Ruth's!"). Every time my family would drive into the big city to visit relatives, I would walk the mile or two to drool over the trains in the cases, perhaps saving up for the occasional car kit. For my high school graduation present, I chose an HO n3 PFM caboose from Ruth's, my first (but hardly last) brass piece (it cost $8.95, as I recall). Each visit, I would stand around, listening and being ignored by the clerks as they talked with their buddies about model railroading (Is that also a familiar experience for those who were gawky teenagers back then?). At the time, it was usually necessary to drive to a fair-sized city to find a real fully-stocked hobby shop or to mail-order, from the display ads in the magazines, from such places as E&H in Philadelphia (founded by several brothers who were veterans) or AHC in New York City. In smaller cities, the older practice of a toy or hardware store stocking a limited selection of scale model kits persisted. Everyone seemed to understand the economic reality that there had to be a substantial customer base of walk-in trade to make the enterprise profitable. Only a generation later would hobby shops move to suburban locations, not only following the population shifts in America, but recognizing that motivated customers were willing to drive a ways to find what they needed.

Although some hobby shops were of some age, many were start-ups, and what made it possible for an intelligently managed store to support the owner and his family was a vanished concept called Free Trade Pricing (which was a misnomer, as so many bureaucratic subterfuges are). What that meant was that the list price established by the manufacturer (which determined the wholesale markup and retail profit margin) was pretty much cut in stone. Retailers discounted from the list price at their peril. If the supplier (and it might be the wholesaler, or "jobber" in the jargon, probably because they dealt in job lots, who enforced discipline rather than the manufacturer) discovered that a retail outlet was selling merchandise below the dictated price, it would be cut off. That was the reason for trading stamps (the best-known being S&H "Green Stamps") which the alert retailer could issue with each purchase, and the buyer could paste in books until she or he finally could redeem the books of stamps for merchandise. This was a time when it helped to have a friend or relative, who worked for the store or the manufacturer, who was authorized to buy at discount from the retail price. Even there, there were supposed to be restrictions on who was entitled to that privilege. For many years the courts supported this system, so there was no recourse; "suggested" list or retail prices appeared only after the courts finally changed their minds.

Normally, the only way one could buy an item for less than the published price was if it was somehow less than perfect, perhaps a damaged box, or missing some small part, or a "return." This created problems for the retailer who wanted to dispose of slow-moving stock, as he could not hold a "sale," as this would violate the terms of his franchise. Usually he could return the merchandise to the wholesaler and receive whatever the manufacturer would pay for it.
skilled ones went bankrupt (and tended to blame everyone and everything except themselves). Credit cards were very few, and used only for limited purposes. I well remember when I graduated from college in 1963 and received a letter from an oil company, telling me I was approved without a credit check for one of their charge cards, and how special it made me feel. At the other end of the spectrum were the American Express/Diners Club charge cards, whose substantial annual fees meant only senior executives of prosperous corporations could justify them. The astute retailer dealt with the disparity between desire and ability to pay with another long-gone concept, the lay-away plan, whereby one could buy something through time-payments. The difference, for you younger readers, is that the buyer did not actually GET the item until the full price had been paid; an attractive plan for buyers was one in which ONLY the cost of the item was charged, without interest or fees. I bought my first locomotive that way, six months of fifty-cents a week.

If I find I have used up my allotted space for this issue in describing how things were when I got into the hobby. The reminiscences may evoke nostalgia for some, and provide new and exotic information for those younger. Perhaps in the next column: How we got from There to Here.
A few years ago, a Hines’ 2-8-2 was acquired by R. B. Morgan, one of the authors. These engines were sold in kit form during the 1947-48 era. We understand that the design of the parts and the molds came from William Lenoir, who was a master model locomotive builder. It’s believed that Pearce Tool Co. acquired this line of engines and, today, Stevenson Preservation Lines is offering parts (if not a complete kit) for the engine. One notable difference between the original Hines’ engine and Stevenson’s version is that the latter’s frame will be designed for sprung drivers whereas the Hines’ engine has the driver axles placed in drilled holes within the bronze frame.

The Hines’ engine is a good representation of the USRA heavy Mikado. The boiler is made from thick sheet brass. The cab is a bronze casting, as is the frame, cylinders, and rods. The drivers are machined cast iron and insulated for two-rail operation. Because some of the parts were relative crude bronze castings (air pump, etc.) it was decided to have D.L. McCaffery, the coauthor, install additional details and replace the bronze air pump and some other parts with lost-wax castings. Dan also added driver brake shoes, various steam lines, mounted the linkage for a lubricator that was installed, made adjustments for assuring smooth operation of the mechanism, and painted the locomotive.

The engine was modified to look like an Erie class N-2 locomotive (see Photo 1). These were USRA heavy Mikados, of which the Erie had fifteen. About half of these engines used Worthington feedwater heaters and the remainder used Elesco feedwater heaters. A number of photos of Erie class N-2 engines were obtained to assure accuracy in applying details. An important aspect of correct detailing a model is the use of prototype photos. In this case, photos were obtained from Dan Biernacki, of the Erie Lackawanna Historical Society, and Harold Vollrath, a noted dealer of locomotive photos.

Three of the Erie’s N-2 engines had their original USRA four-axle tenders replaced with larger six-axle tenders (from Erie class S-1 and S-2 engines that, in turn, received larger ones yet). The chosen prototype engine for modifying the Hines 2-8-2 had one of these six-axle tenders. One was made using the sides of a Lobaugh tender (bought at a train show for a few bucks; it came from one of their 2-8-4 kits). The tender’s coal bunker was straightened (removing the roll at the top), a new frame from brass stock was made that included l-beam side sills, and beading was added to the top edge of the tender sides. A set of Precision Scale castings of six-wheel Commonwealth trucks were assembled and installed. Other lost wax castings for the tender included a rear headlight, markers, a water hatch, rerailers, a poling pole, steps, footboards, and coal door parts (see Photo 2).

The new spring worked well until the boiler was reattached to the engine. Electric power was given to the motor to see how well the spring served while delivering torque to the worm gear assembly. It worked well. Initially, thought was given to replacing the spring with two universal joints via a shaft between them, but this could not be done due to the limited space between the motor and the gearbox. We then decided to continue using the spring torque delivery system, but with a new machine-made spring. The local hardware store had a large selection of springs, and several were bought to determine which would work best. One was chosen with the spring wire slightly larger than the homemade spring.

Electric power was given to the motor to see how well the spring served while delivering torque to the worm gear assembly. It worked well. Initially, thought was given to replacing the spring with two universal joints via a shaft between them, but this could not be done due to the limited space between the motor and the gearbox. We then decided to continue using the spring torque delivery system, but with a new machine-made spring. The local hardware store had a large selection of springs, and several were bought to determine which would work best. One was chosen with the spring wire slightly larger than the homemade spring.

The new spring worked well until the boiler was reattached to the engine. Electric power was applied to the engine and almost immediately the motor stopped. When the boiler was removed, it was noticed that the location of the drive pin for the spring served while delivering torque to the worm gear assembly. It worked well. Initially, thought was given to replacing the spring with two universal joints via a shaft between them, but this could not be done due to the limited space between the motor and the gearbox. We then decided to continue using the spring torque delivery system, but with a new machine-made spring. The local hardware store had a large selection of springs, and several were bought to determine which would work best. One was chosen with the spring wire slightly larger than the homemade spring.
spring was permanently distorted, some of the turns being larger than the rest of the spring. When the engine goes in one direction, the overall spring diameter wants to shrink. Conversely, when the engine goes in the opposite direction, the spring diameter wants to swell.

To avoid repetition of this effect, a stronger spring was installed that had the same overall diameter but with the spring wire being slightly larger (see Photos 3 & 4, and Figure 1). The hardware store identified the spring as a #128. The new spring was tested in the unassembled engine and it worked fine. Then the boiler was reattached and, again, testing was carried out. The engine was slightly noisy when running light.

The boiler was again removed and adjustment made to the spring-mandrel arrangement. The spring was slightly compressed, causing the worm to push against the front of the gearbox (resulting in excess friction and wear). One of the mandrel’s set screws was loosened and then the mandrel was slightly pushed back. This released the tension in the spring thus eliminating the thrust force on the worm. The boiler was again affixed to the frame, and the 2-8-2 was then tested. The engine ran quietly and, on a test run it easily walked away with 43 freight cars (each varying between 10 and 16 ounces) on level track.

We still believe that a double-universal system, with a shaft between the two universal joints, is the best solution for applying torque to the gearbox. If space doesn’t allow this type of application, a spring may be a good substitution. A number of locomotive manufacturers use Neoprene or rubber tubing for delivering torque between the motor and gearbox. After a period of years, the tubing dries out and must be replaced. If you have such a torque delivery system, and there isn’t sufficient space to install universals, you may wish to use a spring for a permanent torque-delivery system. We found this system has worked well.

We also applied it in a U.S. Hobbies Erie K-5a heavy Pacific. When doing so additional weight was placed in the boiler. Like the 2-8-2, Dan updated and added details and paint (see Photo 5). The Pacific easily took eight heavyweight passenger cars (averaging three pounds each) and a couple of lighter headend cars up a 1.8% grade.

Figure 1

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For over twenty-five years, I was privileged to know Arthur Ford. With his patient support and fine model building skills, Arthur helped me create a fleet of trolleys that are, only now, going to have a layout to run on.

For decades, Arthur ran Model Railway Interchange, a hobby shop that backed up against the Middleborough, MA, railroad station and yards. His shop was located in a garage, which was entered through the first six feet of an actual wooden trolley that Arthur had rescued from destruction.

First Visit

I had forgotten Arthur’s address when my (now) wife Betsy and I arrived in Middleborough from downtown Boston. We got instant directions when we stopped a police car and asked the officer, “Where’s the hobby shop located in a trolley?” He immediately knew who we were talking about. The trolley has since been moved to the Seashore Trolley Museum in Kennebunk, ME, where Arthur was an active member.

Arthur completed the cars by rounding the roofs, adding Wagner trucks, and wiring them for “pole-reverse”. At the end of the run, the rear trolley pole would be lowered, and the other raised. Headlights and running lights would then automatically change for operation in the other direction. Arthur even painstakingly switched my Ken Kidder open cars from single-pole, to dual pole-reverse operation. To this day, the ritual of lowering one pole and raising another provides pleasure.

Lessons From a Craftsman

Arthur taught me numerous lessons. One of the most important was that there was no reason to spend time involved in aspects of the hobby that didn’t provide pleasure. It was always better to concentrate on what you did enjoy doing, and delegate the less pleasurable aspects to others. Accordingly, I spent more than twenty years building LaBelle wooden trolley car kits, sending them to Arthur for him to create the roofs and add trucks and power. After powering, and adding window glass, he would return the cars to me for final painting.

In addition to the custom finished and powered LaBelle kits, I am fortunate to own several custom cars that Arthur Ford built for me. These were mostly models of cars preserved at the Seashore Trolley Museum in Kennebunk, ME, where Arthur was an active member. My favorite models are the two-car Montreal and Southern Counties train and the City of Manchester single-truck parlor car.

There is also a custom-built model of the Boston and Albany “Bobber” scaled from photographs. This car ran on a former steam branch in Boston’s western suburbs.

Arthur also encouraged me to follow my instincts when painting the cars. I have never been a fan of the “right out of the paint shop” school of model building, instead preferring heavily weathered cars. Although it may have occasionally bothered Arthur, he encouraged my weathering cars by first painting cars a dark gray, then adding washes of the final color before the gray coat was dry. Since the gray paint...
and the color blend together and soak into the wood, it creates the sun-bleached effect that reflects how I think of wooden cars.

**Status Today**

It is amazing how well the cars have stood up over the years. Occasionally an underbody part requires reattachment, but the cars have survived numerous coast-to-coast moves, as well as a horrific house flood caused by a hot water hose which burst on the Friday of Memorial Day weekend, while we were away.

Recently, some of the cars have been experiencing electrical problems due to the pole-reverse system. At a Boston Trolley Meet a few years ago, Richard Ford, Arthur’s son, had to perform emergency surgery on one car.

Last year, thanks to the every-other-year Boston Trolleymen's Meet, I was fortunate enough to connect with Jean Deschenes. Jean had originally helped Arthur with many of my cars. Recently, Jean has been going through the cars, lubricating and adjusting the Wagner power trucks, and troubleshooting cars with connection problems in the pole-reverse system.

And, continuing the tradition, Jean is increasing my fleet with a couple of new “always wanted” custom built trolleys, including the Piedmont & Northern’s four-truck freight engine I’ve always wanted.

Arthur’s models are a legacy that I’m proud to own. I encourage those with limited time to consider concentrating on the parts of car or layout construction that please them, and look outside to others for help with the other tasks that must be completed. Arthur taught me that lesson while he did all those things that weren’t as satisfying to me as working with wood and building the basic car bodies. In the bargain, we forged an invaluable friendship.

◆

**Montreal & Southern Counties**

 Arthur Ford scratch built this two-car train for the author from drawings made at the Seashore Trolley Museum in Kennebunk, Maine. Jean Deschenes is presently building the matching freight motor, also at the Seashore museum.

**Weathered not lettered**

The author’s preferred way to weather cars, lacking only custom dry-transfer lettering.

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Arthur Ford scratch built this two-car train for the author from drawings made at the Seashore Trolley Museum in Kennebunk, Maine. Jean Deschenes is presently building the matching freight motor, also at the Seashore museum.

**Boston & Albany**

Arthur Ford built scratchbuilt model of the Boston & Albany shuttle which operated for years on a branch near Newton Lower Falls, MA.

And the color blend together and soak into the wood, it creates the sun-bleached effect that reflects how I think of wooden cars.

**Status Today**

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Model photographs courtesy Gene Paltrineri. [www.genepaltrineri.com].

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OST Builds A Layout - Update

Back in OST#13 (March/April 2004) I gave you a first look at the layout I’m building here at OST Intergalactic Headquarters. If you recall, it’s a modest space about 14’ x 22’. The plan was developed with Clark Thorp and is based on a John Armstrong layout designed around the N&W.

Well, progress has been good. I started by attaching 1 x 4 ledger boards to the walls at the base layout height. Everything else is attached to those. If Dick McCloy and Rex Desilets are reading this, some of this benchwork will look very familiar to them. It came from my HO scale layout built in 1978. Never throw away good layout benchwork! The rest of the benchwork was constructed of inexpensive 1 x 3 framing lumber in L-girder style with 2 x 4 legs.

Joists were installed every 18 inches made from the same 1 x 3 framing lumber. That was a mistake and if I were to do this over I’d use 1 x 4 S4S (surfaced four sides). But it’s too late now, so I’ve had to make adjustments here and there.

The base for all level track is 3/8” plywood with 3/4” Styrofoam glued over that. All raised track is on spline and lattice sub-roadbed of my own design with 3/4” Styrofoam over it.

The top three photos at the right show basically the same spot on the layout (Point A on the diagram) at different stages of construction. The last photo was taken from Point B.

We’re at the point where we need to build six or seven curved switches. After that I can finish laying the AtlasO flex track. I will keep you apprised of our progress.
Martin Brechbiel sent this photo of a small O Scale station that will be the subject of two clinics at a local NMRA division meet. In the first clinic all the parts will be painted and stained. At the second clinic the parts will be assembled into this structure. What a great way to promote O Scale!

Jay Duke is 79 and has been involved in O Scale for the better part of 70 years now. His current (and 14th) layout, the Orange Grove Western, was completed in 1979. This photo shows a PRR M1 below while a Lionel 700E passes overhead, pulling a Delta Lines boxcar. Pete Trunk took the photo.

Old #4 is pulling up to the trainorder office on the yard lead to pick up their orders for the day. The photo was taken on Pete Hess’ On30 Swamp Valley RR. Old #4 is a weathered Bachmann Shay. To see more of the Swamp Valley, visit: http://home.att.net/~svrr65/svrr.html

Am Espee freight train with six axle Diesel power passes a CTC signal bridge. The SD9 has an LED-headlight powered from the digital-control unit. The brass signal bridge is also modified with dual color (red/green) LED lights. All the models are detailed, painted and finished by Juerg Luetscher of Switzerland.
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<table>
<thead>
<tr>
<th>Locomotive Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key NYC E7 A-A, latest run F/P, new, never run</td>
<td>$2595</td>
</tr>
<tr>
<td>Key PRR E7 B unit, F/P Tuscan, buff stripes, new, never run</td>
<td>$2395</td>
</tr>
<tr>
<td>Key PRR E7 B unit, F/P Tuscan, buff stripes, new, never run</td>
<td>$1950</td>
</tr>
<tr>
<td>Key PRR E8 AA, F/P Brunswick Green, gold stripe, new</td>
<td>$2695</td>
</tr>
<tr>
<td>Key UP FEF-2, F/P #825, two tone gray, silver stripe, new</td>
<td>$2795</td>
</tr>
<tr>
<td>Key UP FEF-2, F/P #825, two tone gray, silver stripe, new</td>
<td>$2895</td>
</tr>
<tr>
<td>Key UP FEF-3, F/P, Road# 844, new, never run</td>
<td>$2595</td>
</tr>
<tr>
<td>Key UP FEF-3, F/P, Road# 844, new, never run</td>
<td>$2595</td>
</tr>
<tr>
<td>Key UP FEF-3, FEF-3, unpainted, new, never run</td>
<td>$2150</td>
</tr>
<tr>
<td>Key UP FEF3 4-8-4, unpainted, coal version, rare</td>
<td>$2995</td>
</tr>
<tr>
<td>Key D&amp;RGW L95, 2-8-8-2, F/P #3400, gm boiler, new, never run</td>
<td>$3600</td>
</tr>
<tr>
<td>Key D&amp;RGW L-131, 2-8-8-2, FP Rd#3600, black boiler (one of a kind), boiler tube pilot and tri-color herald w/D&amp;RGW spelled out, new, never run</td>
<td>$3895</td>
</tr>
<tr>
<td>Key UP FEF-3, F/P #835, w/triple stacks, new, never run</td>
<td>$2995</td>
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<tr>
<td>Key UP FEF-2, F/R #825, two tone gray, silver stripe, new</td>
<td>$2795</td>
</tr>
<tr>
<td>Key UP FEF-2, F/R #825, two tone gray, silver stripe, new</td>
<td>$2795</td>
</tr>
<tr>
<td>Key PRR E8 AA, FP Brunswick Green, new never run</td>
<td>$2495</td>
</tr>
<tr>
<td>Key PRR FP7 A-B, latest run, F/P Tuscan 5 stripes, new, never run</td>
<td>$2995</td>
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<tr>
<td>Key C&amp;O FP7 A-A, latest run, F/P, new, never run</td>
<td>$2595</td>
</tr>
<tr>
<td>Key C&amp;O FP7 A-A, latest run, F/P, new, never run</td>
<td>$2595</td>
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<tr>
<td>Key C&amp;O FP7 A-B, latest run, F/P, new, never run</td>
<td>$2995</td>
</tr>
<tr>
<td>Key C&amp;O FP7 A-B, latest run, F/P, new, never run</td>
<td>$3850</td>
</tr>
<tr>
<td>Key UP FEF-3 4-8-4, F/P #5437, builder's photo edition, 1 of 10 with white tires and running board</td>
<td>$3900</td>
</tr>
<tr>
<td>Key UP FEF-3 4-8-4, unpainted, new, never run</td>
<td>$2150</td>
</tr>
</tbody>
</table>

Photos are available on request.

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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.

## Events

### 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. Adm. $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 set-up 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 $1.00 off your admission. Contact eostrains@att.net website

### September 2005

**3: Merchantville, New Jersey**

Cherry Valley Annual Model RR Club 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 – CMRCC PO Box 192, Maple Shade, NJ 08052, Harry Hieke (856) 625-5506 between 6 & 9 pm or Dave Richter (215) 639-3864.

**17-18: Dothan, Alabama**

Wiregrass Annual Model RR Show and Sale at the National Peanut Festival Fairgrounds, US 321 S, Dothan, AL. Admission $5: adults, children under 12 are free. Open from 9 am to 5 pm on Saturday and from 10 am to 4 pm on Sunday. Contact Danny Lewis, 491 Ashley Circle, Dothan, AL 36305, PH: 334-792-0728. Contact dannylyws@yahoo.com

**23-24: Indianapolis, Indiana**

Indianapolis O Scale Fall Meet. Two day O Scale swap meet with over 250 tables in one large hall. New and collectible 2-Rail trains and products available. Also includes model contest and display layouts. Registration by August 15 gets custom name tag. Dealer tables $40 by 8/15/05, $45 after that date. Admission $15 per person, good for both days. Contact Jim Canter for more information: 1203 Rotherham Ln, Beech Grove, IN 46107, 317-782-3232. Contact jcanternkp@aol.com

### October 2005

**15: Gardner, Mass. USA**

Southern New England Model Railroad Club O Scale Train Show. Location: Chestnut Street United Methodist Church, 161 Chestnut Street, Gardner Massachusetts. Show hours are from 9:30 AM to 4:00 PM. Free Parking. Show features Dealers, Displays, Food and Southern New England O-Scale operating layout. Dealers please contact Bob Jones at bobs-jonesmodels@earthlink.net. Admission is $5.00 or Family max for $8.00. Contact normt@valinet.com

### 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. Adm. $5; (spouses & children under 14 are free), $16.00 for the first table (includes one admission) and $12.00 for each additional table. Dealer's set-up Friday evening 6:00 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 $1.00 off your admission. Contact eostrains@att.net

**19: Cincinnati, Ohio**

O Scale (2-Rail only) meet sponsored by the Cincinnati Model Railway Club at the Cincinnati Holiday Inn North at I-275 and Rt 42 (Sharonville). open 10 am to 4 pm. Table $20. Admission $5. Contact Frank Koch, 4769 Silverwood Dr, Batavia OH 45103, PH: 513-634-4264. Note: This meet replaces and continues the 24 year tradition of the Western Reserve O Scale Meet of Robert Boeddner and friends. Contact fjkoch@hotmail.com

### 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 33708-3752

**WANTED:** Overland Models Milwaukee Road EF-1 boxcars in O Scale. Will pay $5000 per pair. Bob Harris, 219-921-0932.

**PECOS RIVER BRASS** painted cars: $189, tank cars, Clinchfield cabooses, Airslide covered hoppers, 50’ grain cars, Santa Fe TOFC flats, Santa Fe flat cars, Pullman-Standard covered hopper. Listings SASE, Ph: 727-391-3135, John Clemens, 5273 97 Way N, St. Petersburg, FL 33708-3752

**WANTED:** Those interested in Sunset doing the 2-6-6-4 that SAL sold to B&O; both 2-Rail and 3-Rail O Scale. Also SAL E4 in citrus. Ph: 336-886-9106 Robert L Youngblood, 4331 Hoover Hill Rd, Trinity, NC 27370-8554


**FOR SALE: USH PRR L1 2-8-2 CP; Sunset PRR pass. cars, P70 coach, B60 baggage; CW PRR N5 caboose CP; OMI Erie gas-electric; Atlas SD-35 WM; Weaver Pullman-Bradley coaches pdt GM&O. Bob Burns, 330-758-1561.**


**FOR SALE Weaver: PRR L1s $675; PRR K4s $675; LVRR FA/FB $195. USH PRR M1a $1250. Atlas Seaboard SDP35 $265. Key RS3 pdt PRR $750. Sunset PRR chlorine tank(s) on flat $120. Ph: 770-967-9813, Richard Morhard, 5964 Williamsport Dr, Flowery Branch, GA 30542-3958

**FOR SALE: Case lot closeout of Pecos River 50’ AAR Boxcars in 3 versions. Visit http://www.pecosriverbrass.com/ for sale information. john@pecosriverbrass.com.**
A Shift in Emphasis

Okay, you say, let’s not assemble those US made parts. Let’s put them out as a kit. Here’s my take on that idea. There’s been a distinct shift in the model railroading hobby away from model building to model railroad building. This shift has been driven by the “majority scales” (HO and N) where the model railroader wants instant satisfaction, i.e., ready-to-run models. What this means in a practical sense is that “modern” (say, post 1970) hobbyists no longer develop the mechanical skills necessary to assemble complex and compensated models. They don’t learn to drill, tap, and solder. They develop a completely different skill set oriented around operations and electronics. So, the market for kits shrinks until it’s not justifiable to produce a kit.

Meanwhile, “classic” O Scalers mourn the demise of the kit and kitbuilding. The O Scale market is so small, compared to HO and N (and some say G), that it does not make economic sense to produce kits in such small quantities just for O Scale. Compare the cost of an exquisite Chooch PRR round roof boxcar kit for $150, which needs to be assembled and painted, to an AtlasO ready-to-run PS-1 boxcar for $63. For many modelers, that’s a no-brainer choice.

We, here at O Scale Trains Magazine, are trying to keep the classic model building skills alive by bringing you articles that require you to use and develop those skills to build the models we feature. Tom Houle’s Pennsy gon, in this issue, and my N&W caboose, in the last issue, are two examples. These models are not difficult to build. They do take time, effort and some tools, but your investment is rewarded with a model you can truly say is yours. Once you build a model from scratch, kits are a piece of cake and it’s likely you’ll scratchbuild something else.

When no manufacturer/importer makes the model you want, or the cost of that model is too high for your personal finances, then your other option is to make that model yourself. Try it. You may discover a new aspect of this hobby.

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Photo and Model: Courtesy Mr. Tom Jones

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