Power or Repower Kits for Red Caboose GPs

The P&D TWIN TOWER DRIVE for the Red Caboose GP body kit is functionally equivalent to the P&D power units already available for the P&D F units, GPs, RSDs, and the Weaver FAs, FBs, RS-3s and GP-38s.

The Red Caboose power kits provide only the necessary power related parts to supplement the Red Caboose GP body kit. These power kits fully utilize the underframe (platform), deck, air tanks, fuel tanks, motor mounts and screws that are furnished in the Red Caboose body kit.

These P&D Twin Tower Drive kits can also be used to repower existing Red Caboose GPs. Two kits are offered: #PDP2200K has plastic Blomberg trucks, while #PDP2201K features the P&D brass Blomberg trucks, which are truly some of the finest trucks on the market. Each kit also includes a powerful Pittman motor and all the necessary parts to complete the installation. Detailed instructions are included.
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Cover: A steam locomotive sits on the turntable at the service facilities near AH Tower on Herm Botzow’s Buckeye Railroad Co., Photo by Bob Simmons.

Centerspread: A sweeping view of Paul Templar’s On30 Cooncreek & Tumbleweed Springs. Paul is from the U.K. and provided this photo.
In O Scale, it is often difficult to find an area in the train room with enough width to create a typical urban railroad yard, with adjoining areas for a passenger terminal, flat yards for freight classification, an engine facility and industrial spurs. Tail tracks and arrival tracks are needed to permit switching maneuvers while other trains pass on the mainline. The benchwork becomes so wide that operators cannot reach trains if all these activities are squeezed into one location. This is the first in a series of three articles that present ideas for yards on intermediate sized O Scale layouts. Instead of building one huge yard that takes away space for mainline tracks, the idea is to build several smaller yards along a longer mainline. Each yard can then be designed to perform slightly different but complementary functions within the overall scheme of your pike.

The first, and possibly the most generally applicable, of these concepts is the linear yard. There are prototypical precedents throughout the country, as when a real railroad is confined to a narrow river valley. In such circumstances, the railroad will string out the yard components end to end. Doing this in 1:48 permits operators to reach the back of the yard more easily. With more table frontage, several crews can work the yard simultaneously. If the yard eventually widens, aisles should be made available on both sides to ensure adequate operator access to all tracks.

The Buckeye Railroad is based roughly on the Pittsburgh & Lake Erie and has as its purpose connecting the New York Central mainline at Ashtabula, Ohio, to Pittsburgh. The Buckeye’s Ashtabula is a much larger city than its namesake and, as such, can justify a large passenger depot based on the one in Cincinnati, Ohio. To the west of Ashtabula is the New York Central’s Collinwood Yard. Just east of Cleveland, Collinwood Yard is a staging area for trains operating on the Buckeye. From there to Buckeye Junction, the first community east of Ashtabula, the Buckeye has trackage rights on the New York Central. At Buckeye Junction, the Buckeye diverges and heads east (actually southeast) on its own mainline to its eastern terminal at Pittsburgh.
Figure 1 is a drawing of the Buckeye Railroad yard at Ashtabula. Defined as the trackage between two double crossovers stretching west from Ashtabula Harbor Tower (AH) to Ashtabula Tower (AB), it occupies 46 feet along the edge of a narrow section of the train room. Beginning at the lower left or east end, there is a five-track engine facility below the double track mainlines. The main closest to the front of the table is the passenger main. The far main is the freight main. The freight main does not have access to Ashtabula's Union Depot. The engine facility includes a turntable, an approach track, water columns, a coaling tower and a Diesel refueling setup.

Moving to the west, there are crossovers from the freight main to the freight arrival track at the bottom of Figure 1. Another crossover connects the passenger main to the passenger staging track above the mains. The staging track also connects to the engine terminal. Connected to the freight arrival track is a switching lead. The end of this lead doubles as the arrival track for the coal port at Ashtabula Harbor. A second crossover at this location leads to an industrial spur serving a bakery and a three-track freight yard for processing coal trains. The yard is elevated several inches for easier "reachability" and is known as the Upper Freight Yard.

At the major curve in the mainline is the main yard gate to the passenger terminal. Across the way is a crossover that divides the freight arrival tracks into two sections to permit runarounds and simultaneous switching of two freight trains. At the west end of the yard, adjacent to the freight main, is a three-track freight yard, known as the Lower Freight Yard. Between the lower yard and the main are a caboose track, a gate switch to the freight main and a spur to the freight house. On the other side of the mains is the Ashtabula Union Depot passenger yard with four stub end tracks.

The table is narrowest at the bakery, a mere 26 inches for five tracks. It reaches its widest point, 68 inches, at the west end. Here, the table is accessible from both sides. The least number of tracks is three at the east crossovers. The maximum number, 11, occurs just east of the west crossovers. There are 34 separate turnouts, all manually operated. As mentioned, the yard sits at the west end of Buckeye Railroad operations and is fed from the west by a four-track staging yard at Collinwood, Ohio. At the east end, departing passenger trains cross over to the freight main and proceed east on single track to Buckeye Junction, and, from there, to a division point and the Pittsburgh terminal at the east end of the railroad. During an operating session there will be upwards of 32 trains running to, from or through Ashtabula.

The yard is designed to handle a variety of operations simultaneously. The top priority is the unencumbered movement of through trains on the mains. This includes through passenger trains that stop on the main at the depot. The next priority is given to the passenger, mail and milk trains to, and from, the East that begin and end their runs at Union Depot. Some of these trains arrive behind steam locomotives that must be turned at the engine facility for their return trip.

On the freight side of the yard, there is the daily arrival at the Lower Freight Yard of a through freight from the classification yard at the Buckeye division point to the east. The cars on this train are then set out by a yard drill that switches the adjacent freight house, the bakery at the east end of the yard and the grain elevators at the upper yard. The empties are assembled into a train at the lower yard and are hauled back to the division point for classification and off-line routings.

The greatest volume of activity at Ashtabula centers on the Upper Freight Yard and the coal port lead. Loaded coal trains from the
south are assembled at the division point and moved to Ashtabula throughout the session. As each train arrives, it exchanges its loaded hoppers for empties and returns to the division point where the hoppers will be moved to their originating roads. The coal drags are run as extras.

The yard design permits several of these separate operations to proceed simultaneously so that a large volume of traffic can be handled without blocking the mains. For example, a coal drag might be being switched at the Upper Freight Yard while the yard drill is sorting freight cars at the Lower Freight Yard. At the same time, a local passenger train arriving from the east might be crossing over to the passenger main at the AH tower. As the local enters the depot, a through passenger train from the west might be departing the passenger station on the passenger main. At the east end, a steam engine might be coaled and turned at the engine facility for its next assignment. Needless to say, this is a busy time for Buckeye operators, even as the yard easily absorbs the action. The attached photos show train movements at various points in the yard. Perhaps a linear yard could smooth out your operations as well.

(Photos 6 can be seen on page 8)
Photo 4 is a view of the passenger yard looking west from under the highway viaduct. A departing milk train is flanked by two waiting passenger trains. From left to right, the locomotives are a Williams Atlantic, Atlas RS-1 and Weaver FA.

Photo 5 is an overview of the passenger depot and, across the two mains, the lower freight yard. The two Pennsy coaches are Walthers kits built by the author and reworked by Ed Bommer. The milk cars are scratchbuilt by the author and the streamlined passenger equipment is by MTH. Aisles skirt both sides of the yard at this location.
Photo 6 is a view back to the east showing the yard drill at work in the Lower Freight Yard as it sorts and delivers recently arrived freight cars to the various industries as Ashtabula. These include the grain elevators on the left and the freight house on the right. Note that the grain elevators can only be switched by temporarily pulling the hopper cars out of the other end of the siding.

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Just have a look at eBay! Someone is offering a KTM GP-35 for a reasonable price and he is willing to ship it overseas!

To make it short—I got this item. I had never seen a KTM Diesel locomotive before, though I’m familiar with their steam engines because a friend is a collector of these old treasures. I was expecting a Diesel with less detail than today’s standards, and was afraid that all the running parts would be heavily worn.

While waiting for the parcel to arrive, I had time to search for a paint scheme for my GP-35. I wanted to model a prototype that is currently in service, while still in the Phase 1 configuration of the KTM model.

Meanwhile, I received a new issue of “Diesel Era” magazine and—Goal! A picture shows a GP-35 of “Progress Rail”, an integrated rail service company with a few GP-35’s in their fleet. Their locomotives are painted in a simple black scheme. The first decision was made.

A few days later the long awaited parcel arrived. Upon opening it, I was happy to find an undamaged model. The former owner packed the unit perfectly for its long overseas journey. I was surprised about the heavy weight of the engine too. I was more surprised when, running on my short test track, the model performed smoothly and quietly with a prototypical speed range.

Upgrading and reworking old Diesel locomotives is “business as usual” for the real railroad companies, so why not for a railroad modeler? The first step is always to disassemble the model. This was an easy task even though many screws were used to hold the model together. Be sure to put all the screws and little parts in bags or a small box, as they can easily disappear.

The model is built in three major groups, the body, the walkway with the stanchions and the pilots, and the frame with the fuel tank. Holding the various parts in my hands, I couldn’t help but notice the solid construction of the model. The body is fabricated in sheet brass, using just a few brass castings, such as the dynamic brake blister and the fan housings. The workers at KTM must have been real artists, soldering all those little parts together! All of the soldering is clean and solid; the quality of fabrication is much better than many Chinese-built brass imports of today.

After disassembly, the next step was to remove the old paint. Brass has the advantage over plastic in that you can’t destroy it with common paint strippers. The clean body shows many fine details, like the door latches and fine screen castings, close to today’s standards. Impressive for a thirty year old model!

Unfortunately, serious damage also became visible after stripping. The front pilot was twisted and had been broken away from the walkway. A former owner had repaired the damage with the help of a lot of glue; this was not acceptable to me. Removing the old glue and eliminating the twist of the pilot was just the first tedious step. Soldering the pilot in place again without unsoldering all the other small parts was the real challenge. I used jeweler’s clay to fix all the small parts in place and to protect the fine soldering from too much heat. Then, by using a low melting point soldering paste and a small torch, the job was finished successfully. The resulting repair is invisible.

The shell needed a little upgraded...
ing, too. I wanted to replace the old cast fan housings with new “see-through” PSC housings. Simple to do – unsolder the old ones, carefully cut the holes for the new ones, and add the new castings. To affix the new castings I used a good epoxy resin, applied from the inside of the shell.

Do you remember my surprise about the weight of the engine? That was easily explained while looking at the old open-frame CLW motor, located over the rear truck, and a big heavy block of lead as a counterweight at the front truck. Both the motor and the lead block were removed, reducing the weight by 2 pounds. I am not a fan of over-weighted, heavy models.

Of course, a new motor was now needed. My motor of choice, as always, is a Faulhaber motor. During the installation of the new motor is the perfect time to inspect and re-lubricate the gear tower. I opened the gearbox and found all of the gears to be in excellent condition, though the thirty-year-old grease had hardened like soap, and had to go. The parts had a bath in paint cleaner. After a few minutes, they came out nice and clean.

I then reassembled the gearbox, adding some thrust washers to reduce the end-play of the shafts, and filled the box with fresh grease. The old paper seal between the housing castings was replaced with a new liquid sealant. The new motor is a perfect fit; together with the original KTM gear ratio I get a prototypical scale speed of 65mph.

Changing the trucks is the most visibly effective upgrade for these engines. The old truck sideframe castings are quite crude, far below the level of detail of the body. A brass model needs brass trucks, so I chose to use the Blomberg truck kit from CLW. Here again, re-lubricate and inspect the axle gearboxes while you work. Opening the axle gearboxes, I noticed only minor signs of gear wear and, after cleaning and adding new grease, they will be good for many more years of service. In short, they are bullet proof.

The old KTM wheels have a .172” tread. I prefer a narrower wheel so I changed them out for my favorite, the .145” tread Northwest Shortline wheel. This meant I had to make new axles to fit the new wheels. The new axles were turned within a couple of hours, using a small lathe. Then I removed the gears from the old axles and secured them in place on the new axles with a special epoxy resin. For more strength, the epoxy was heat-cured in a baking oven.

Replace the axle into the gearbox and reduce the end-play of the worm with thrust washers. This is important for every worm/gear combination for two reasons - noise reduction and to give the worm/gear combination a defined backlash. This prevents premature wear of the gears. The gearboxes were refilled with fresh grease and the wheels were pressed on the axles. Because all of the NWSL wheels were insulated, a new four-wheel electrical pickup system was installed at each truck.

Now it's time for the final phase of the project, the painting. Searching through the Internet, I found the homepage of Progress Rail, which featured a few pictures of different units. My choice for the locomotive was road number 1008. But how I get the decals for my project? An inquiry, together with some photos, about the possibility to order the correct decals was promptly replied to by Jim Abbott of Highball Graphics– yes, they can do it! Ten days later I had the decals, perfectly done in size and colors.

First, a grey automotive primer was applied, followed by Tamiya gloss acrylic black paint. This yielded the perfect surface for the decals. To make the fine details more visible and for a slightly faded look, I added a few drops of white paint into the black. After the decal work was done, two coats of my favorite Model Flex satin clear-coat were applied to protect the decals and give the model a used look.

Assembling all the new and old parts together, I have a solid model that looks like a new one and is good for at least another thirty years of service.
This month we are going to delve into a subject not usually covered by most trolley modelers and that is the prototype power sources. Photo 1 below shows a typical power pole setup that was on the Greensburg-Uniontown via Hecla Jct line. It is on Highland St. and the track ran along here right next to the pole line under bracket arm construction. The street was narrower to accommodate the track. The power lines were usually in 3 wire set-ups, plus, minus and ground. Here there is a double set.

Power stations were in major cities or just outside them and usually generated DC 550-600 volts. These stations were often coal fired with several rotary generators putting out the power to feeder lines along the route. Since DC power is fast depleted over a long distance, sub stations were required to provide a boost in the system. These were generally 8-10 miles apart, depending on the level of service. Photo 2 shows a model of one of these power stations made by Korber models and installed on the East Penn model trolley setup inside the loop. Anybody can build similar buildings from scratch.

Crossarms need to be put on the line-side poles to make your line look like the prototype. A three wire crossarm was put out by Current Line some time ago but they are no longer in business. I have some of these and they can be duplicated by using wood crossarms attached to the top of the lineside poles. Usually one wire is on one side of the pole and 2 wires are on the other side. A feed wire is dropped down to the running wire at three hundred foot intervals from the outside of the two. The single wire is a ground. Wires made from large black thread can be used but it may be kept to a minimum if it gets in the way of operations or other things such as cats that like to walk on the right-of-way.

As a reference to substations in the old Traction & Models magazine, March 1972, pg. 18, there was an article showing several types of buildings (This magazine can be obtained sometimes in book sales at hobby shows). Some were stations and substation combinations. One station in the magazine, at Lagro, Indiana, still exists and was offered by Wabash Valley Models some years ago. I’m not sure if this company still exists. Lagro was on the Fort Wayne-Wabash-Peru line Of IRR just east of the town of Wabash. Korber used to offer a huge substation with coal siding along one side a few years ago and it may be still found at hobby shows. Lionel also had one similar to this.

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15. Glossary of Terms
There is a vibrant community of Boston and Maine modelers that I have had the pleasure of meeting. One of them is John Peterson. John lives in the greater Washington, DC area and has been an O scale modeler for many years. His first layout was in HO scale, based on The Boston and Maine RR. He then moved up to On2, modeling the Maine narrow gauge railroads, as the prototype was close to his northern New England roots. After about 20 years of modeling narrow gauge, John decided to return to his first love, the Boston and Maine, though this time in O scale.

Growing up on the North Shore near Salem, Mass., John has always been interested in the Boston and Maine. He commuted to college behind steam in those famous B&M wooden commuter coaches and witnessed the transition to Diesel power. John is an early member of the B&M Historical Society, having joined while he was in the Army and studying for his Master’s Degree in the greater Boston Area. He uses the resources of the society, as well as other sources, to do a great deal of research on the railroad and the multiple eras he models. He runs late 1940’s steam, early 1950’s first generation Diesels, and the ‘Blue Bird’ era of the early 1960’s, though he is careful not to mingle them on the layout at the same time.

John’s layout represents a B&M branch line serving the paper mill industry around Berlin and Groveton, New Hampshire. He developed a point-to-point track plan running from Woodsville, N. H. to Berlin, and Woodsville to Groveton. The resulting track plan also provides for the option of continuous running. The overall layout size is 17 by 28 feet. The minimum radius is 48 inches and track height varies from 46 to 52 inches above the floor.

John started to build the layout in 1995, using “L-girder” and open-grid construction for his benchwork. He had trains running in about 6 months. All of the trackage features Code 125 rail, hand-laid with either scratch-built or Old Pullman turnouts. A current project involves the replacement of turnout points and frogs with highly detailed cast components. The track is laid on milled Homabed roadbed, laminated to a ½ inch plywood sub-roadbed. All but five of the turnouts are hand-thrown, as John likes to have the operators walk with their train.
and align the switches. The five powered turnouts, such as those at the Woodsville yard throat, use Del-Aire pneumatic switch motors powered by an air canister that John pressurizes before each operating session. All the turnout points and frogs receive power using micro-switches mounted below the surface of the roadbed.

Once finished with the track work, John turned his attention to the scenery, which is quite complete at this point. He used Hydrocal over aluminum screening with Woodland Scenic’s ground foam and texture materials for the ground cover. The structures are based on typical structures in the Berlin and Groveton areas. Many of John’s buildings are scratch-built from drawings and photos of actual New England prototypes, others are built from craftsman type kits. All of them nicely re-enforce the northern New England theme. You’ll even see one or two of those classic B&M ball signals when you visit.

The rolling stock on the layout shows the same care and craftsmanship as the structures. His B&M freight equipment is all nicely detailed for the prototype, again using the resources of the B&M Historical Society. Many of the passenger cars are modified from “stock” models, while several signature B&M cars, unavailable in the marketplace, have been beautifully built from scratch. Currently on the bench are a couple of wood baggage cars, neatly executed in styrene. Locomotives, both Diesel and steam, are all neatly detailed and painted. All
rolling stock is finished before earning a place on the railroad.

While John has built and painted some magnificent equipment, it is clear that this is not merely a collection of fine rolling stock models. One of John’s major interests is in prototypical operations, and he has regular Friday night operating sessions with several other members of his casual group. A typical operating session consists of two crews of up to four people. One crew operates a through freight from Woodsville to Berlin, while the other mans the Groveton local operating from Woodsville to Groveton. The Groveton local performs switching en route, while the Berlin crew travels directly to Berlin to switch the yards and mill complex there. Both crews make up new trains and return to Woodsville. Train orders and switch lists are used for operations. Passenger trains are run at the end of the freight operations.

John was an early advocate of command control systems, starting with Dynatrol. The railroad now employs Digital Command Control (DCC) to gain operating flexibility out of a smaller, yet high-density railroad design. He finds that DCC also facilitates the use of helpers on the layout, which can be part of the operating scheme. The current control system uses North Coast Engineering components (NCE D408SR decoders), with added Soundtraxx DSX sound-only decoders in most of his engines. John is very happy with this DCC and sound approach. Operators use NCE wireless radio remote throttles to control the trains while walking with them, thus eliminating tethered cables.

All told, John’s B&M is a great example of a railroad with an enviable attention to the overall theme. It looks like New England. The level of craftsmanship is obvious throughout, and the result is a fine example of what is possible in a typical smaller basement railroad. Plan on visiting John and seeing this wonderful layout during the 2004 O Scale National Convention in Washington, DC this coming July. If you would like more information on the convention, you can visit our website. If you would like to contact us you can write us at either sonc2004@hotmail.com or, via mail at Capitol Area O Scalers, PO Box 42563, Washington, DC 20015. Web: http://www.2004onational.com
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One Day Fare (check one) ❑ Thursday ❑ Friday ❑ Saturday | $25 | x | =
Sale Tables | $45 | x | =
Electrical Drop for Sale Tables | $45 | x | =
Banquet—Saturday evening, July 24.
One full course dinner choice of beef or salmon entrée per banquet ticket.
Total # of beef entrées ___ Total # of salmon entrées ___ $39.95 x =

Show Car Advance Reservation
Limited Number. First reserved, first served.

<table>
<thead>
<tr>
<th>Name</th>
<th>Dealership Name (if applicable)</th>
<th>Address</th>
<th>City</th>
<th>State</th>
<th>Zip</th>
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Spouse/Children Names ________________________________

Options | Price Each | Quantity | Total
---|---|---|---
Atlas RF&P 40' USRA outside-braced box car
Exclusive run. ❑ Boxcar red. 2 numbers available now! 2 rail only but can be easily converted to 3 rail | $56.95 | x | =
Red Caboose 40' Fruit Growers Express reefer
Exclusive run. 4 color paint with silver roofs. 6 numbers available now! 2 rail only but can be easily converted to 3 rail | $52.95 | x | =
Atlas Western Maryland 70 Ton Covered Hopper
Exclusive run, very limited production. ❑ 2 rail ❑ 3 rail | $65.95 | x | = $62.95 | x | =
Atlas Chesapeake & Ohio 70 Ton Covered Hopper
Exclusive run, very limited production. ❑ 2 rail ❑ 3 rail | $65.95 | x | = $62.95 | x | =

Check one: ❑ Cars to be picked up at show by registrant above named on this form.
❑ Delivery—add $10.00 for one car and $3.00 per additional car shipping and handling to total at right column.

Total payment $______________

May/June '04 - O Scale Trains • 19
The search for simple brackets for a Pennsy Diesel Trainphone antenna installation ended when I discovered HO Diesel handrail stanchions made by Rail Detail Products. Their #10020 medium stanchion is made from 0.020" x 0.030" steel. It's L-shaped, 0.625" long with a rolled end for an 0.030" diameter rod.

Here's the original PRR Trainphone antenna installation on a repainted Rivarossi FM Diesel.

These things soon found many other applications - here are some examples:

- Cut lever brackets on a scratchbuilt B&O Wagon Top Caboose
- Cut lever Installation on a PRR kitbashed gondola
- Replaced the pesky plastic trainline brackets on an Intermountain hopper
- Hinges for drop step on scratchbuilt PRR bunk cars
- Trainline brackets on scratchbuilt B&O wagon-top covered hopper
- Hinges, levers & rod supports on scratchbuilt B&O wagon-top covered hopper
- Trainline support at gladhand on Ambroid flanger
- Brake wheel shaft brackets on Ambroid flanger
Easements for the Learning Curve

Brian Scace

This month, we’re going someplace that may not be initially regarded by most as beginner’s fare. Indeed, at first blush this probably scores a solid 8 on Scace’s Neurotic-O-Meter. Stick with us, though, because there are lots of good thoughts here, and a basic goal choice you should consider early on. First, go back to the Nov/Dec’ 03 OST and re-read the column. Then consider what Robert Weaver, of Winnipeg, writes:

“Reading Brian Scace’s article ‘Easements for the Learning Curve’ (Nov/Dec’ 03) touched a chord of reality with my own ‘O’ scale rail design process. His ideas for the union of railway context and dramatic intent parallel a few of my own approaches to ‘O’ scale rail design. However his conclusion disappoints because he fails to push the envelope of design to a logical end.

We do not need “to invest more thought into how we create the illusion of distance to the horizon.” Rather the strength of our scale precludes the need for any perception of more depth at all. N and HO both require a background with sky and landform to not only frame the picture but also to provide a larger than model context that counter balances the inadequacies of both scales namely a lack of ‘details’. Whereas we should be thinking about how we can better use those details and that ‘background’ space to create realistic excitement for the viewer.

I would argue that our layouts should be more inward oriented where the logical viewing of the layout is ‘in the round’. The spatial design of the details should entice the viewer to the extent that their mind is transported to the center of the model where their imagination becomes surrounded by soaring structures, massive locomotives and prototypical adventures. Whether it is an urban or a prairie landscape is not a material issue.”

Let’s look at approaches to this problem a little further. First, I’m so pleased that Robert wrote. His viewpoint differs so radically from mine, that it forced me to pour myself a stiff one and ruminate as to why. His approach reflects a lot of thought on the subject, yet we have come to two wildly different conclusions. Or have we…?

The biggest difference is in general school of thought. It sounds to me that Robert’s approach leans more toward the Railroad Modeler side of the house, while mine is strongly nested in the Model Railroad school. Let me explain the difference. The Railroad Model school is arguably the older concept, and is deeply rooted in O Scale. Simplistically, the Railroad Modeler perspective is where the subject modeled is the boxcar, locomotive, or structure. The layout is considered, as Robert states, as a “larger-than-model-context”.

I’m a staunch member of the Model Railroad school, where the boxcar, locomotive, or structure is merely an element of the subject modeled, which in our case is the railroad itself and its operations. To those of us in the Model Railroad school, the layout is the model, and a reasonable replication of the prototype’s operation the goal.

Although the difference sounds subtle, the approach to perceived realism quickly becomes radically different.

Here are some thoughts:

In the Railroad Modeling school, each model is made to be studied as a stand-alone entity. This leads to a very high degree of detail fidelity in each and every discrete piece as it’s placed on the layout, be it track, rolling stock, or structure. Each model, with the possible exception of large structures, is dimensionally faithful to the prototype and no subterfuge needs be indulged in for believability.

In the Model Railroading school, there is such a thing as over-detailing. If the viewer’s eye glaze over when presented with an extremely high, yet even level of detail, you’ve lost the advantages of selective detailing. Selective detailing is the perfect tool to attract attention where we want it. We need that tool, because our model (the layout) is selectively compressed. The Model Railroad school accepts that compromise.

Railroad Modeling assumes a skill level in all facets of the hobby. Because of the tradition that O Scalers are Railroad Modelers, we have more than our share of highly skilled craftsmen. I agree with Robert; the size is the perfect medium for the Railroad Modeler.

In the Model Railroading school, most of us have areas within the railroad building exercise where we’re not entirely satisfied with our skill level. Few are equally proficient at all aspects of the hobby or want to be. In my case, I loathe laying track and love building locomotives. Therefore my track is not nearly as nice a model as my locomotives are. So long as my track is darkly colored (a theatre trick) and details are understated, the eye doesn’t focus on my modeling weaknesses. My locomotives are highly detailed and weathered to highlight, rather than hide, the details. The eye is drawn to my long suit. Hence (and heretically), underdetailing is also a useful tool, employed when we want the eye to move on.

Railroad Modeling has its pitfalls. Because absolute scale fidelity is usually a personal goal, sooner or later the compromises in the “larger-than-model-context” become either limiting because of unacceptability or an insurmountable stumbling block. Many folks in the Railroad Model school gravitate to narrow gauge, short lines, traction, or industrial operations in order to reduce the need for illusion (call it selective compression) to at least a tolerable level. I know several of my friends who are uncomfortable with any compromise at all. They have built some beautiful pieces and display them in cases, just because any of the compromises inherent in layout design are not acceptable to them.

The Model Railroad school has its pitfalls, too. My railroad subject is the Boston and Albany, circa August 1944, from State Line Tunnels to Washington Summit. That’s about 30 miles of mainline proto-
type. The room available is nominally 20x30 feet. The goal is for a visitor to see scenes that cause him to pause and say, “I’ve been there! That’s North Adams Junction.” No amount of detail is going to save me. I need illusion. The pitfall, and point of the November column, is that illusion puts you at risk of glaring errors, which attract the eye as effectively as high selective detailing. The eye just loves to focus on anomalies in our modeling. Any cases of non-natural occurrence, such as shadows on backdrops, will attract the eye like a flaming wreck. This is where depth of field considerations are, in the Model Railroad school, actually more valid in O than in the smaller scales, especially on smaller railroads where shelf type construction is the rule. It’s a risk we take to make our goal, to replicate the railroad and its operation as closely as we choose.

So, are you a Railroad Modeler, with a goal of absolute fidelity of each individual model? Or are you a Model Railroader, having the goal of the recognizable replication of a railroad and its operation? Do you and your friends gather around the latest modeling project or brass import on a Friday night, or do you head for the call board, ready to chalk up for the local? Probably the answer really is some combination of both. The choices really are what techniques will you use to get to the spot on the scale between the two extremes that satisfies you. No approach “fails” or “disappoints”. Each has its validity merely because the personal goals are different. You, gentle reader, get to pick your goals and choose the techniques that get you there. There is no “right way”. Our goal here is to get you to think, so you can make intelligent choices that satisfy you.

Let’s go Exploring!
I am sure that there are a number of modelers who model the American scene who would dearly love to have a unique bridge on their layout, but have not the courage to start one. I know that you can buy a variety of trestle bridges, but to have one that's scratch-built for the desired location is always nice to see when its completed and in place.

Making a log bridge.

I got my inspiration for making this kind of log bridge from an actual photograph taken by Darius Kinsey in his magnificent book “The Locomotive Portraits”. The photograph was of the Sound Timber Company's fine log bridge over the Sauk River. Their idea of building this kind of bridge was “minimum expense”. Logs were hauled to the area and some used as piles driven into the ground to form the piers. Big logs were used above and below the ties, which formed the spans upon which the track was then laid.

Many modelers tend to make the traditional timber trestle using many bents made from a jig, which we'll look at later in this article. I have built trestles on many an occasion on various layouts, but decided that this time I would try my hand at this fascinating log bridge. Here's how I built mine.

For my log bridge, I used 1⁄2” balsa dowel for the main logs above the ties and 3⁄4” balsa dowel underneath. The ties themselves were ¼” square. The first task on my agenda was to remove all the ties (for the gap needed across the gorge) from a length of 16.5mm On30 Peco track. Certainly, this method will work with any pre-fabricated or hand laid track you may be using. One-quarter inch square hardwood was cut to the length needed to accommodate the logs above while being wide enough for the locos to pass. These were cut to 3¼” wide then stained with a Dark Oak stain. When dry they were spaced at 3⁄8” intervals along the rail as in Figure 1.

The next step was to cut the two ⅛” dowels and the two ⅜” dowels to length. Once cut they were scribed with a rasp to give a bark effect, as in Figure 2.

All of the logs were stained with a Dark Oak stain. When dry, they were dry-brushed with grays and browns.
Once all the logs were finished in this way, the fun of putting it all together could be started. I needed two of these log bridges to span the gorge shown in Figure 3. One was higher than the other by about 4", so I planned on making each different in appearance from the other, while keeping the log idea for both. The upper crossing, as seen in Figure 4, is more on the lines of a simple trestle with braces forming the main strength of the bridge.

The construction techniques for both are very similar, so let’s look at how the lower bridge was built. With all the logs stained and ready to be assembled, I started by gluing the main large (3/4") logs underneath the 1/4" ties as in Figure 5. Figure 6 shows the placement of the upper (1/2") logs. When the glue for these logs was fully dried, I inlaid 1/8" stripwood between the rails (Figure 7).

The next part of the operation was to glue together, I then applied the outer log stays and lashed them in with rope (Figure 10). I also placed further log stays lower down for added support, where needed.

Turning attention to the piers, the first step was to make a half-moon “dish” on the top of each upright to match the 3/4" log crosspiece each pair of uprights supports, as in Figure 9.

Once this was completed and the logs

Figure 11 shows the completed log bridge support structure.
Figure 12 shows a version of plank decking used to finish the bridge, and Figure 13 shows the completed bridges.

The Traditional Timber Trestle

As I stated earlier, the traditional trestle is usually made using some sort of paper template, which is very time consuming. I’ve devised a method that is a quick and easy way to construct as many of the risers, or bents, that you may require. You still have to draw out the plan on card (rather than paper) but you’ll only need to draw it out once with this method, because we will use the drawing as the basis for a re-usable jig. The beauty of it is you could make hundreds of trestle bents using the one jig. The lead photo for this article (pg. 24) shows a trestle I made using this method. Here’s how to build your jig.

Get hold of some 1⁄16” card approximately 8” wide by the height you want to make the trestle (you will need four pieces) and mark out the size of the main riser you require. Draw it out as if you were going to actually pin the wood to it. Next, glue one of the other three pieces underneath the drawing and carefully cut out the outline of the trestle bent members with a sharp craft or hobby knife. Cut through both pieces of card that you have laminated together, using Figure 14 to get the idea. You only need to cut out the five straight pieces. Now glue the other two pieces of card together and place them underneath the cutouts and glue or staple the four layers together. Again, refer to Figure 14. The plan view of the jig is at the top right, with the elevation view at the bottom of the figure.

Now you will need some ¼” balsa or hard wood. Make up some pieces about ½” long and glue these to the card as shown in Figure 14. These are the pieces shown in red. They will help you to uniformly position the horizontal members of each bent.

All that remains for you to do now is to try out your jig. Using ¼” square timber, cut off five pieces the length you require and inlay them into the jig (Figure 14 -bottom). Now cut the horizontal cross members and, using a very small amount of glue, place them across the timbers and against the ¼” blocks that were shown in red in Figure 14. Before going on to the next pieces, use some track pins (I use Peco ½” pins) and pin through the pieces of wood at the glue joints. Lightly tap them in with a small hammer, being careful not to go all the way into the card, but just deep enough to hold each piece in place.

Now do the same all the way down to the bottom. When all is complete, (It takes me about 5 minutes for each one) gently lift the bent out of the jig. Now, (here’s why you didn’t knock those track pins all the way home) cut off the tops and bottoms of the overlap first, then glue and place the other five horizontal pieces opposite the first five. This part is even easier. Put a small amount of glue on each piece, then place it underneath and, when all is square, lightly tap the track pins to secure the pieces together.

When you have completed all pieces in the same way, drill a small hole in a piece of wood and place the track pins over the hole. Lightly tap them all the way home, turn the assembly over, and cut off the remaining track pin not required. Now you are ready to start another riser. I tend to leave the diagonal
pieces until I have completed the amount of trestle bents that are required. Tall or short, any trestle bridge can be made this way. Figure 15 shows a nine-foot curved trestle built with this method.

Ed note: Want to see more of Paul’s layout? Check out the centerspread of this issue, the March 2004 issue of Model Railroading and the May 2004 of Railroad Model Craftsman. All photos by Paul Templar.

Resources
Billings rope from Shrewsbury Model Centre
http://www.shrewsburymodels.co.uk/
Ph: 01743 245539
In the U.S.
http://www.happyhobby.com/hobb_html/billings.htm
HAPPY HOBBY
7125 N. 76th ST. Milwaukee, WI 53223
414-461-6013 Fax 414-461-6045
Building An Open Pier For Your Layout.

The Prototype

The pier belonged to the Pennsylvania Railroad in Jersey City. The original pier had three tracks and a 35 ton travelling gantry crane. It was used to interchange freight from the railroad to berthing vessels. A photo that appeared in the Rail Marine Information Group's magazine “Transfer” inspired the model.

The Model: Pier 31, Brooklyn Terminal Railroad.

The size was dictated by the space I had in my train room and is designed to fit in with the operation of the main layout. The framework is made out of 1”x4” pine and the top is ⅜” MDF sheet (medium density fiberboard, or use plywood). The dimensions overall are 120”x19” and at one end widening to 28” x 36” (See photo #1).

As with the prototype, I wanted three tracks running full length but have added three sidings at one end for more operating scope. The track and turnouts are English Peco and the three long straight pieces are Peco lengths soldered to copper clad ties as they will be paved (see photos 3 and 4). The track is paved with plaster and foam core, then covered with balsa planking, as the real thing was made entirely of wood. At one end, to vary the paving, I have used cobblestones to represent repairs to the pier. The balsa for the planks was cut from .040” sheets ⅛” wide and were stained using Builders In Scale “Silver Wood” stain, an excellent product for staining wood. The planks were glued direct to the plaster using quick drying wood glue held down with heavy weights with wax paper under the weights to prevent the glue from sticking to them (see photo 5 and for a close up of the finished planks see photo 6).

The sides and end of the pier were made up from ⅛” MDF sheets cut to size with strips of balsa glued to the MDF to represent heavy timber seen on piers. They were nailed and glued to the 4”x1” sides and end. Again the whole lot was stained with Silver Wood (see photos 7, 8, 9).

Final details were added, bollards, rail stops, one building as an office, figures, crates, scratchbuilt lights and the 35-ton crane (To be featured in a future article) complete with its own rails.

The complete pier has its own control panel and power source independent from the main layout and all turnouts are electrical controlled.
**Features:**
- Crisp factory paint and lettering
- Powerful Pittman can motor
- Operating ditch lights
- Directional lighting
- DCC equipped

**Other variations not pictured:**
- BNSF “AC44CW” Nos. 5603 and 5609
- CP “AC44CW” Nos. 9592 and 9600
- CSX “C60AC” Nos. 5002 and 5016
- UP “C60AC” Nos. 7567 and 7579

Take Your Model Railroad To The Next Level . . . Experience An Overland Model

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Visit [www.overlandmodels.com](http://www.overlandmodels.com) To See A List Of Dealers
Last issue I suggested some guidelines about how this particular column could be conducted. This time I’d like to offer a rationale for including a column such as this in OST (other than the publisher and editor thought it would be a good idea, of course). It may have crossed the minds of those readers who prefer to model what they see around them in contemporary railroading that a column about older O Scale is—dare I say it—irrelevant. Not all who model twenty-first century prototype are necessarily young, nor are all who model earlier periods always fossils who can’t let go of their youth, but, generally, most of us tend to favor the kind of railroading we knew from when we first really got interested in the steel rail. Yet, how can we explain the phenomenon of Revolutionary War and Civil War re-enactors, who are, effectively, recreating 1:1 scale models of an earlier period. Clearly, none of them were around when the “prototype” existed.

One of my mentors in a graduate program—an excellent historian—once answered the question, “Why study history?” He observed that many claim that one ought to study history because the past teaches us things we need to know (ever hear that at school?). He allowed as how that might be a reason, but not the most compelling one, which is that what went on before we were around is INTERESTING. That is my justification for offering this corner of OST. As we find out more about O Scale modeling when it was young, perhaps before we were born, interesting tidbits appear. Some may even be useful for one’s own modeling, whatever the period or emphasis, but that is secondary and coincidental. Not everyone may want to learn about matters that have no immediate application to his or her modeling. That is perfectly all right, and I hope we can stay on friendly terms when we are grabbing for the same item at an O Scale show. I believe Joe G. intends OST to offer a variety of goodies for all individual tastes, so that any O Scale modeler can find enough to keep her or him coming back, and there are plenty of good, practical, hands-on projects in each issue.

For others, of course, knowing more about the ways O Scale modelers found to represent the real thing in the past is a connection to something outside oneself, the here-and-now, and gives a sense of continuity with the past that goes on into the future. For those of us of a certain age, the great names of that past are largely gone, with more departing all the time. Perhaps only a handful of O Scalers still living can actually tell us what it was like in the 1920’s. The hobby began to develop from mass-market toy trains, the occasional rich man’s custom-built adult toys, and the rare example of a skilled workman’s leisure production when leisure for many workers was rare. There was model railroading as a hobby before Al Kalmbach published the first issue of Model Railroader in 1934. Back then modelers largely relied on British imports, books and periodicals (Henry Greenly was the giant among them). What canny Al, himself an O Scaler, hoped was that all the modelers working in solitude would become aware there were other fellows just like themselves, and that what they enjoyed was not odd or bizarre.

In the middle of the Great Depression, Al Kalmbach was taking a considerable risk, but he was a printer, and the printing business was slow. We know now, after the fact, that his gamble paid off, but he didn’t know it then. Once model railroaders found a forum, things started to pick up rapidly. One of the great milestones was the organization of the NMRA. Whatever folks say about the merits of the current NMRA, looking at it from a historical perspective, model railroading would not exist as we now know it without the pioneering work of establishing common standards for commercial products, as well as bringing those early hobbyists together for conventions. Concurrently, the great clubs in the large cities (mostly in the East and Midwest) were organizing in the 1930’s (and they were almost all O scale until after WWII). Individual modelers could show their work, receive encouragement and (generally) tactful criticism to improve their efforts. Information as to prototype and modeling techniques could be shared. Those who lacked space to build their own miniature empire could join with others to afford operation for their prized locomotives and cars.

When one reads older magazines and studies the ads, it is easy to forget the results of inflation. One sees locomotives selling for $100 and thinks, “not bad!” forgetting that few workingmen earned much more than $25 a week—if they had a job at all—and that many had to support a family on that. It is not coincidental that the older magazine articles mention modelers who were physicians, attorneys, corporate executives, bankers, and such. Some of that was doubtless to suggest the respectability of the hobby, but it really was a rich man’s hobby. The only alternative for those of modest means was to convert toy trains—a recurring theme for most of model railroad history. They would gradually develop their skills to the point where they could match the custom-builders who provided the wealthier with their equipment. Until after WWII, it was common for manufacturers to offer their locomotives three ways: built-up by in-house craftsmen; a semi-kit with most of the parts machined to some degree; and as a set of unmachined castings which required not only some effort on the part of the builder, but also considerable skill in using machine tools. The one thing most people had in abundance during the Depression was time. Curiously, that cut both ways: the model railroader had to spend more time making things he could not afford to buy, but the effort spent in creating them also served as a pastime to help him forget that he was under- or unemployed.

With a few exceptions, most of the equipment from this period is now of only antiquarian interest. When it shows up at meets, flea markets, eBay or at estate auctions, it usually seems crude. It either cannot be brought up to our current expected standard of fidelity or would take so much labor and cost as to hardly justify the effort. But for at least some, it is a connection with the pioneers, just as visiting a local history museum gives some sense of what one’s locale once was. There is even a modest collector interest in many of the pieces, preferably in a pristine, unbuilt state in the original box with original instructions (and early “kits” did not always include “instructions,” assuming a fair amount of expertise on the part of the builder). There is something fascinating, I think, to be able to put a well-built car or locomotive (structures developed more slowly in the hobby) from the 1930’s next to a more recent counterpart and recognize that all the changes have come about in a single human being’s lifetime.

I had hoped to actually talk specifics (perhaps about Hawk Models) this time out, but I’ve used up all my space. Next time, I’d like to open a discussion of the various model railroad periodicals over the years and invite your input, as there is still quite a bit I don’t know about the subject.
**Reader Feedback**

**Rigid Trucks A Problem?**

I really enjoy your magazine. My comment/question is regarding the trucks that are appearing on the new Atlas cars. They are totally rigid. As I understand it, the conventional wisdom is that the trucks should be fairly flexible to negotiate the curve between small mom-and-pop stores and the large-volume buyers as far as selling prices went, it was ultimately unfair to the large-volume buyers and to the consumers.

With the growth of discount chain stores and shopping malls, added to increased consumer activism, those laws were repealed during the 1960's or 70's. Thus, today's manufacturers and/or importers can list a "manufacturer's suggested retail price" (MSRP) but cannot enforce it.

In the past, domestic O scale products and early brass imports (Max Gray and US Hobbies) sold at a one-third discount to dealers. (The importers probably paid the overseas builders about 50-60 percent of the dealer price, to cover their overhead and profit.) The dealer discount in "mass-market" HO and N scale items (as well as many other consumer products) is 40 percent. Many hobby shops would not stock O Scale because they needed the additional percentage to meet their overhead.

While the 3-rail importers and a few 2-rail firms do list MSRPs, their dealer discounts can vary from a small courtesy discount to higher numbers which allow dealers to stock a quantity and variety of product and offer some discounts. Some firms provide only net prices to their dealers, with the ultimate retail price a matter of negotiation between the dealers and their retail customers.

Woody Mathews (via email)

**Colored Lenses**

Re: Issue #12 article on working caboose lights by Marty Iftody. I enjoyed this article because it helps bring a little more realism to the trains. One thing that I would like to interject would be about coloring "lenses" in marker lamps.

This is an old trick I learned from Bill Clouser many years ago. Bill kept a set of ordinary food coloring gels on his work bench just for the purpose of making stained glass windows in a model of a church he built for one of his customers. It works. I’ve had a set of markers on a tender of an engine for almost forty years that still look great.

Bob O’Neill (via email)

**Fair Trade Laws**

Re: the last installment of John Smith’s series on the problems of importing models from the Orient. One point might need clarification. In connection with the “Fair Trade” laws, I think John was intending to refer to their demise. Under Fair Trade laws in place for many decades, at least from the 1930s, manufacturers had the right to set retail selling prices, and could cut-off dealers who discounted. While this “leveled the playing field” between small mom-and-pop stores and the large-volume buyers as far as selling prices went, it was ultimately unfair to the large-volume buyers and to the consumers.

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Woody Mathews (via email)

**Spiral Easements**

Your magazine just keeps on getting better and better! Those center spread N&W photos don’t hurt either as I grew up about 300 feet from the N&W bridge over the East Branch of the Elizabeth River and heard ‘em all and woke up and saw most of the mainline action going up to Lambert Point and the Union passenger depot from 1940-45.

I need help. I thought you might be the best one to direct this request to the proper person. I need information on how to make spiral easement curves in O scale. I saw an article perhaps 30 years ago on how to calculate them and draw them on a plastic template which could later be transferred to the track base but, of course, I can no longer find it. Perhaps you know of better ways to achieve the same results.

I don’t plan on going overboard but a few of these critters in the foreground do really dress up a layout when your eye cannot tell where straight track ends and the curve begins. Thanks for any help you or your staff can give. Sincerely,

Robert C. McKnight, Mo.

Joe G. replies: Thanks for your letter. When we published George Muller’s track laying article in OST#12, we left out a graph on calculating easements. The graph is from an NMRA Data Sheet and we received permission to reprint that Data Sheet in its entirety. See it on pages 48-49 in this issue.

The Internet can really be useful if you know where to look. I went to the Model Railroader Magazine Index to look up the article you mentioned and surprisingly found a program that will print out easements from your computer. Meanwhile the MR Index listed 31 articles on easements between 1957 and 2001. Here’s the URL for the MR Index [http://index.mrmag.com/]

**Needs A Cleaning Solution**

I have started collecting O Scale trains. I was wondering if you can tell me what I should use to clean my trains. I have been using Pledge with a toothbrush. I have been told that is not good and I should just use water. That does not look all that good. What do collectors use? I have some neat cars that I use instead of just keeping them wrapped up, but when they get dirty, how do I clean them and not lose any of their value?

Bob Csehak (via email)

Joe G. replies: That’s a good question. Mostly you use mild soap and water and a very soft cloth. Sometimes you may want to add “409” or a similar cleaner but you have to be careful not to rub off paint and/or decals. Once clean, keep them clean by dusting regularly (I like the new Swiffer dusters) and don’t handle them with bare hands. That’s where most of the oils and gunk come from. Use cotton or latex gloves. Any other readers have suggestions for Bob? Send ‘em in.

◆
Hand-Laying Switches - Ed Reutling

There are probably as many ways of hand-laying switches as there are people doing the process. For a number of years, I had gone through the process of making the frogs and points beforehand and making the switch from there. A fellow O Scaler suggested I try the method I’m about to outline here. Simply stated, I just lay the four rails in their approximate alignment and go from there. The switch shown in this series of photos is O standard gauge, not narrow gauge, and is a very sharp switch. The process is the same for any switch that you might consider.

I lay out the centerlines of the two converging tracks and then lay the two pieces of roadbed following the centerlines. Next, the ties are glued in place and, when the glue is dry, sanded smooth [Fig. 1]. For the purpose of photographic contrast, I did not stain the ties but that operation would be next.

One of the nice things about hand-laying a switch is the ability to have continuous rails through the switches. Lay the outside straight (main) track and the outside diverging rail in their proper locations relative to the track alignment. Spike them in place every 4-6 ties, depending on the amount of tension needed to hold the rails. Then lay the inside straight rail in the proper alignment and lay it right through to where the points will eventually be. [Fig. 2]. Leave an extra 1½” of rail past the place where the points would end. Lightly spike the rail in place and in gauge.

Then using the multi-finger technique shown [Fig. 3] hold the diverging rail and mark where it crosses the inner straight rail. Cut the straight through rail with your tool of choice (I use a Dremel Motor Tool) [Fig. 4].

Lightly spike to reinstall the diverging rail and leave an extra 1½” beyond the end of the point as before. Mark where the rail foot needs to be ground away so the rail heads touch and then grind the foot away. Properly set the gauge for both of the soon-to-be frog rails and solder the two pieces together. Cut the extra curved rail away. [Fig. 5]
Form the wings of the guard rails of the frog and lay in place. Identify where the rail foot is to be cut for the hinge point (I no longer hinge my points using rail joiners). Cutting the foot allows the rail to flex. Now, cut this piece to length ending where the end of the point is to be. [Fig 6]

Next, do the curved converging rail using the same process. Form the wing guards, cut the foot, cut to length [Fig 7]. In Figures 6 and 7, the hinge points are indicated by the white arrows.

We’ll not cut the stock rails as most others do. Instead, we’ll shape the contact side of the points, pretty much as they are shaped on the real thing. File the contact side of the point to a taper, and then file away the foot, so as to allow the contact to snuggle right up to the stock rail. Then file the wheel flange side of the point to a taper. Now you will have a very smooth action of the wheel on the point segment of the switch.

This next step is determined by your method of powering the frog and points. I completely electrically insulate the frog for DCC operation, and, because I use jumper wires from the stock rails to the point rails, I don’t have to rely on any external contact to power the points. The completed frog is soldered solidly together filling the flange ways with solder. When the frog is solid, clean the flange ways using a piece of hacksaw blade held in a pair of pliers. [Fig. 8] Finish the final gauging and spiking of all the rails, add the guard rails opposite the frog. Now you may cut the frog clear of the rest of the track work, isolating it from all the other rails.

To tie the point rails together I use Plastruct ½" sq. plastic as a throw bar. Solder ¾" x ½" brass strips, slightly bent to a shallow angle, to the inside of each point rail. Drill these tabs to clear a 00-90 screw. Screw the point rails to the throw bar with hex head 00-90 machine screws [fig 9, Yes, that is an HO scale ground throw in Fig. 9. It has plenty of throw for O Scale]. Add the ballast of your choice and the switch is finished.

Yes, this is a very sharp switch. And, yes, cars do run through it. So does an ALCO S-2 pushing them. Most of the cars using this switch are four-wheel on-line quarry cars. This is one reason for learning how to make your own switches, so that you can put your tracks wherever you want them without restrictions. When you master this technique, you'll be able to place a switch anywhere on the layout anytime you want with a minimum disruption to the tracks.

If you have any questions on my methods, anyone can call me at 423-477-5790 or email me at [reutling@xtn.net].
Painted Wheels with Shiny Treads
By Ron Gribler

The Intermountain 33" axle sets provide improved performance but if you aren’t pleased with their bright, unpainted appearance, here’s a simple method to paint the wheels and axle and keep those shiny treads & flanges. Use an ordinary rubber hose washer as a perfect paint mask for these wheels. Locate at least two of these washers and a 4 inch length of 1⁄8" shrink tubing. Drill a couple of 1⁄8" holes in a scrap piece of wood, and you are ready to go. Wipe the wheels with solvent to remove the slight film of oil from them.

Press one of the washers over each wheel of the axle set assuring each is tight against the wheel flange. Set the axle set into one of the holes in the piece of wood and hold the shrink tubing over the tapered axle end. For the hopper car wheels shown, I used a can of Testor’s flat black spray paint. Rotate the board while spraying. When the paint is dry, flip the axle over & repeat. When the paint is dry again, pull off the hose washer. A car set of these can be done very quickly.

Reassemble the trucks and enjoy those shiny treads.
Limited Edition Kit
Precise Laser-Cut
Engineered for Easy Assembly
50+ Detail Castings
Flexible Positioning
Positionable Doors & Windows

Master Creations’ O kit #18105 contains the tipple, headhouse, power house, storage shed, retaining walls, and a ton of character for $549.95! The tipple is approximately 45’ x 90 scale feet with the overall diorama shown being about 24” x 48”. Not all details are shown in the photo!
Impressions from the (Mid-West O) Chicago show
Brian Scace, Assoc. Editor

The O Scale Trains Traveling Medicine Show spent a wonderful weekend at the annual March meet in Chicago. It was the perfect opportunity to talk with many subscribers, sign up a few new ones, and flog a few copies of the OST Guide. I spoke with many of you, and thank you for all the positive comments and suggestions; very gratifying to hear that the vast majority of folks are pleased with the direction the magazine is taking.

We're featuring several of the contest models in this issue, with an emphasis on some of the more imaginative entries. Our congratulations to the winners of the contest:

- William Garlock built a very clean rendition of a Rutland wood baggage car to win the Passenger Car category. Daryl Townsend entered the car.
- Frank Miller won the Steam Locomotive category with his C&O 0-10-0. Frank's craftsmanship certainly transcends the old rule about never entering an unpainted model in a contest.
- Boyd “Sammy” Hill entered two Diesels, and his very nice ACL SD-45 took the Internal Combustion category.
- Dave Stewart painted up a brass well-flat and entered it. The eye catcher was the oversized load he scratchbuilt for it. A “well” deserved (I couldn’t resist that one!) win in the Freight Car category.
- Wesley Moreland’s scratchbuilt CSL work motor, with all the neat junk we love, took the Traction category.
- Randy Swanson took both Dioramas/Structures and Maintenance-of-Way with his pile-driver scene.

It was a privilege to serve as a judge, and OST would like to express a hearty “Well done!” to all the contestants and to our colleagues from 48th O Scale News who did a superb job of administering the contest.

If you haven’t been to one of the larger regional meets, such as this one, I would encourage you to try one out. Just watch the events listings in OST, and make one or two a goal. I learn something new every time, and so will you. There are always interesting clinics, layout tours, manufacturers and importers showing their latest projects, and treasure-a-plenty in the trading halls, not to mention the opportunity to compare notes with plenty of other O Scalers.

Mike and Judy Hill, from Hill's Hobby and Collector's Shop, and their able staff did a magnificent job and certainly made our little crew feel most welcome. Thank you.

Below: Frank Miller scratchbuilt this C&O 0-10-0 and took the top seat for Steam Engines. At right: Dave Stewart’s custom built load for this ALCO Models flat was good enough for 1st in Freight Cars.
The Meet: A photo from Carey Hinch’s home layout which will be featured in a future issue of OST.

These next three photos are the work of Harry Hieke of Eagle’s Nest Miniatures.

Top left: A trestle Harry custom built for a customer out of brass.

Middle left: A Midlands Reproductions Great Northern dome car. Harry scratchbuilt the interior for his customer. The car is also lighted with a battery that is charged from track power. The car is shown on Lou Pardee’s layout.

Bottom left: A new Middle Division, PRR H21 hopper that Harry weathered and installed a custom coal load. Harry does a lot of custom painting and weathering.
Frank Fazzio is a big Erie fan and his favorite locomotive is the S-4 Berkshire. After building many kit locomotives, he decided the S-4 would be his first foray into scratchbuilding. The locomotive shown above and below started with a commercial chassis that had to be shortened. The boiler, cylinders, cab and rear truck are scratchbuilt. Most all the parts were made from .020” brass. Rivet detail was achieved with a NWSL rivet press. Frank says the most difficult part of the loco was the rear truck. It has 24 separate parts to it.

Frank says his next project, if he can find the drivers, is an Erie R-1, 2-10-2.
Above: This N&W steam-era caboose was scratch and parts-built by OST Publisher Joe Giannovario. It took Second Place in a Pacific Coast Region NMRA meet in 1981. It’s made of wood, styrene, and white-metal castings. The cupola lifts off and the caboose has a full interior. Ed Reutling and Bill Ramey of Adirondack Car & Foundry are making a resin kit of this style N&W caboose, which was used right into the Diesel era due to its steel underframe. An article on making the patterns and building the kit will appear in a future issue of OST.

Below: Inspired by an article in a 1945 Model Railroader, OST Publisher Joe Giannovario scratch and parts-built this N&W class GKd coal gon almost entirely out of styrene. Every rivet was hand pressed. Only the trucks, couplers and piping are metal. The trucks are highly modified Buckeyes from Quality Craft which are no longer available. The prototype car was built for rotary dumping. At least one importer is making noises about this car as it has never been done in any scale.
NEWS: Chooch Enterprises, Inc.
PO Box 1200
Maple Valley, WA 98038
Phone: 425-788-8680
www.choochenterprises.com

Mike O’Connell at Chooch Enterprises dropped a note to remind us of the Northern Pacific 40’ S.S AAR boxcar kit. Even though you think you have enough NP cars, you should seriously look at this car. The patterns, made by Jim Zwerneman, are exceptional! This is a completely new pattern created from the actual drawings. These cars ran in revenue service well into the 70’s. [www.choochenterprises.com]

NEWS: 2 Doors Down available from Karlgarin Models
Warren Farm Little Baddow
Chelmsford Essex CM3 4TQ
England
44 1245 226110 (International)
skippy@karlgarin.com

Robin Arkinsall is a friend of OST frequent contributor Marshall Vine. Both Marshall and Robin live in the United Kingdom. Robin sent this note about his new company, 2 Doors Down,

“2 Doors Down produces a range of O gauge, 1:48 scale, etched brass kits covering the small industrial switchers (“critters”) and short line locomotives which could be found in daily use all over the USA. They have been designed and produced by Robin Arkinsall, well-known and respected as the originator of the Impetus range of UK industrial locomotive kits, and happily continue in the same tradition of excellent quality and value for the money.

“The kits are principally etched brass with cast whitemetal fittings. In some cases, resin castings of the hoods/bonnets will be available for those who do not feel confident in constructing this item in brass. The kits are designed to be motorized using Slater’s wheels, Mashima motors, Romford gears and Delrin chain and sprocket drive where appropriate. (All these items are available from Karlgarin Models in England, www.karlgarin.com). The kits are designed to accept Kadee couplers.

“It is only fair to mention that due to pricing constraints, as well as a lack of information (!), these kits have little or no cab detail at present. Electrical pickups are not supplied in the kits, most builders having their own preference. Clear and simple illustrated instructions are included.

“The 25 Tonner is a diminutive loco, less than four inches long, based on the GE prototype first introduced in the 1940’s. Many are still in use today. It has an etched brass body, with a simple fold-up chassis and whitemetal detail castings. This kit makes an ideal starter project. Price: £47-00 (p&p £2-50) (That’s about US$86, plus shipping) A Motorizing pack is available (all parts available separately) comprising Slater’s wheels, Mashima motor, Romford gearbox, delrin chain and sprockets. Price: £27-50 (£25-00 if purchased with kit)

(That’s about US$51, plus shipping)

“300HP EMD This distinctive center-cab, twin-engine locomotive was another 1940’s product with a long service history. The kit is similar in design to the 25-tonner and despite the somewhat archaic appearance has a certain charm! Price: TBA mid-2004 Motorizing pack/parts available separately.

“GE 70 Tonner Although a pre-WW2 design intended for use on shortlines and switching, there are examples still to be found hard at work. Two kit variants will be available: early version with no grille on the hood front and large lamp, and later type with front grille, rectangular lamp housing and differing side grilles etc. The trucks are designed to be motorized independently, thus providing plenty of power and smooth running. Available late 2004.”

NEWS: Weaver Models
PO Box 231
Northumberland PA 17857
570-473-9434
www.weavermodels.com

Weaver Models is pleased to announce release of a die cast USRA Light Pacific Steamer, scheduled for a Late Spring/Early Summer ’04 arrival.

Features will include: die cast body construction, operational cab vents, illuminated cab, cab window glass, all 2-rail drivers flanged, puffing smoke unit, detailed interior, firebox glow, front & rear operating marker lights, illuminated headlight, illuminated front & rear number boards, easy access volume control with sound on/sound off switch (located in tender), multiple cab numbers, 11 roadnames (plus undecorated).

Your choice of 2-Rail or 3-Rail without sound ($725.) or 2-Rail or 3-Rail with authentic RailSounds® TrainMaster® Command Control ($849.). Roadnames will include: Western Maryland, Grand Trunk Western, Canadian National, Louisville & Nashville, Norfolk & Western, Boston & Maine, Chicago & Northwestern, Maine Central, Milwaukee Road, ATSF and Illinois Central.
O Scale 3D Tenement, Pack of 2. Each pack includes: 2 tenements which can be built as flat or pitched roof varieties, fully detailed porch railings, columns and stairs, stair well exit and chimneys. The kit comes complete with fully illustrated instruction manual as well. Each kit will cover approx. 18" length along the wall and projects out 3 1/2" and can be narrowed if desired. Combine two or more packs and create an entire tenement row spanning over 3 feet. Each kit retails for $110.

MAGNA FORCE is a complete power supply with a six-foot, three-wire, 16AWG input line with grounded plug for standard 120VAC wall outlets. In addition, there is an integral 16AWG, three-wire output cord that terminates in stripped and tinned bare wire for insertion into the standard input wire clamps on all systems. The instruction sheet provides hook-up diagrams for Digitrax, Lenz, and NCE systems. The MF615 is $44.95.“

“Automatic reversing requires that the circuit sense a “short” (your train entering the section of reversed polarity) and immediately match the polarity. But it’s not enough to do this quickly; you have to be able to handle the load of the train entering the section, which is why the OG-AR’s unmatched 4-amp capacity is so important. The OG-AR is $39.95.

“MAGNA FORCE (MF615) provides a stable output voltage of 15 volts AC at 5 amperes. The 5-amp rating is conservative and the unit has consistently out-performed the rating in tests. The unit is ideal for powering most systems by Atlas, Digitrax, Lenz, NCE and other DCC systems. The transformer is housed in an impact resistant plastic housing with a built-in, lighted on-off switch. MAGNA FORCE is protected from short circuits and overloads by an internal circuit. Turning off the unit and waiting a minute will recycle the breaker and restore operation.

“ON-GUARD DCC AUTO REVERSER (OG-AR) provides automatic direction control for DCC locomotives traversing reversing loops, wyes, or turntables. The OG-AR has the same ultra-high-speed response time and the same 4-amp capacity as our circuit breakers. OG-AR is solid-state circuitry with no relays. Outputs for remote indicator lights for track power and reversing are built-in.

“ON-GUARD, reliable short-circuit protection at a price that makes power districts an affordable reality on any size layout.

“Shorts happen. The most attentive of operators will sooner or later approach a turnout set against them. The best-maintained track and equipment can still have derailments. At the least, shorts shut down your system, but if that shutdown is slow in coming a multi-amp short can seriously damage your valuable equipment. All DCC manufacturers and guidebooks recommend separating your layout into independently protected districts so a short doesn’t shut down your entire railroad. That’s great advice, and the budget pricing of ON-GUARD means you can avoid shutdowns, without having the bank foreclose.

“The OG-CB is $29.95.”

“ON-GUARD DCC CIRCUIT BREAKER: (OG-CB) is an external circuit breaker for dividing DCC layouts into protected power districts. It provides 4-amp protection against short-circuits with a reaction time that’s faster than any built-in breaker on any system.

“OG-CB is a solid-state circuit board with no relays. Installation requires only that you connect your main bus to the ON-GUARD inputs and use the ON-GUARD outputs to feed the bus to that district.

“ON-GUARD automatically resets once a short is cleared. The circuit board has built-in outputs for track-power and short-circuit status lights should you wish to add these to a remote control panel.

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REVIEW: Telegraph Poles
Weaver Models
PO Box 231
Northumberland PA 17857
570-473-9434, www.weavermodels.com
Reviewed by Neville Rossiter

I am always on the lookout for ways of improving or making my layout look more realistic. When Weaver came out with their O scale telegraph poles I thought, like you dear reader “What's so special about these poles compared with others over the years?”

Well, these are special! The poles come in two sizes both assembled and unassembled, I received a box of each 6” (24 scale feet high) and 9” (36 scale feet high) assembled poles. The boxes are strong and well packed and arrived intact on the long journey to Australia. Also included was a jar of Scalecoat “Insulator Glass Green” paint ordered separately.

The poles are quite realistic and are made of styrene with a wood grain finish. The insulators are a work of art (I checked them out under a microscope!) and are based on the “Armstrong” type. I am told that an actual full size insulator was sent to the die maker to copy. Also included in each box is full instructions and tips. The 6” poles come with two crossarms and the 9” poles have four crossarms.

One important point, the poles are actually tapered and the tops are also beveled, which shows how much thought has gone into these items to make them as realistic as possible. I found a place for them on my layout and have used the 9” poles. I painted them first with “Old Concrete” paint then “Roof Brown”. I then scraped the pole lightly with a hobby saw and sanded them with very fine sandpaper. I then painted the insulators. (Tip: I glued the bases to a piece of board and stuck the poles in them while I painted them.)

To mount the poles I drilled 1/4 holes in my baseboard. (Bases are supplied for those who don’t want to drill into the baseboard.) I spaced them apart 90 scale feet. When I purchase more, I intend to buy the kits and have a go at kitbashing them. They come with the cross arms and insulators together with the poles separate on plastic sprues. Weaver intends to bring the assembled poles out with painted insulators. Contact them for further information. I would recommend these very high quality O scale items to O Scalers and Hi Railers alike.

The Weaver O Scale Telephone Pole is available in the following configurations:
P737 = 6 Assembled 6” Poles with 2 Crossarms ($12.49 retail)
P738 = 6 Assembled 9” Poles with 4 Crossarms ($13.95 retail)
P739 = Unassembled Bulk Pack Of 60 Crossarms & (15) 9” Poles ($19.95 retail)
P740 = Unassembled Bulk Pack Of 36 Crossarms & (18) 6” Poles ($19.95 retail)

Assembled versions include detachable bases.
Weaver also has the following “accessories” available to complement the poles:
P741 - Package of 6 Detachable Bases ($2.00 retail)
P742 - 1-ounce bottle SCII Insulator Glass Green paint $2.39

REVIEW: “Wartime” Composite Mill Gondolas
Weaver Models
PO Box 231
Northumberland PA 17857
570-473-9434, www.weavermodels.com
Reviewed by Jace Kahn

When I was in HO many years ago I prized my Ulrich composite mill gondolas as distinctive-looking freight cars that were not quite exotic and could be found on any common-carrier railroad in the steam and transition eras. That prototype became a gap for me in O scale until now. True, there were some brass imports that were very nice, but at $200+ they were well beyond my budget. So when more than a year ago Weaver announced their intention to offer a mass-production model at a reasonable price, I could hardly wait. They were recently released and I bought my first one at the Wind Gap, Pa., show in March.

Composite wood and steel construction goes back at least to the USRA designs of the WWI era, not only the single-sheathed boxcars which became so common after 1920 but also the drop-
The only thing that really bothered me about my Osgood-Bradley coach was the windows. The originals were almost flush, while the model comes with glazing behind the frames, exposing the carbody thickness for all to see. While this was a somewhat ignorant of my adhesives, this was probably the only choice, as snap-in panes would be far too thick to be convincing. Instead, Chooch chose a clear acrylic material, which has some reflection (pun intended), I have to agree with Mike's objectionably so, and I don't have scale drawings. The levers are wide, the cylinder is about the size of the original Atlas cars (which is to say, too small), the reservoir is misproportioned, and the triple valve is cast in low-reliability. Like the corner steps, each owner will have to decide whether it is worth the time and effort to replace them with more accurate detail. Happily few O Scalers operate their trains upside-down, so “out of sight, out of mind!” Surprisingly, the brake gear looks fine viewed from the side through the lacy structural members.

It's nit-picking, true, but I wanted you all to know the worst. I plan on buying at least one, and probably two, more at Chicago.

After disassembling the car and stripping out the factory glazing, one finds that the windows fit in the frames tightly, not an easy task given the slight variations inherent in a complex plastic carbody casting. This is a good thing, as there are no problematic gaps to inelegantly fill after installation. As an aside, Chooch delayed delivery several times after announcing the kit, because they were re-tweaking the laser to get a better fit. Although Mike was surely getting tired of my queries (“Where's my stuff?!”), I must applaud his neurosis. The resulting fit is excellent, and well worth the wait.

Because the panes fit so nicely, and they are entirely encapsulated by the frame, the question of a proper adhesive comes quickly to mind. You can’t just caulk these puppies in place! Chooch’s instruction sheet says to use an “acrylic” cement, which, in my mind, could lead one to some version of ACC. My experience with ACC’s and Plexiglas has been singularly bad (frosting issues, mostly). My assumption is that the instruction sheet means some “acrylic cement” other than ACC. Being somewhat ignorant of my adhesives, this was probably the only new window kits for these cars ($24 plus s&h). Now these are not the snap-in styrene panes you might be wishing for. After some reflection (pun intended), I have to agree with Mike's choice, as snap-in panes would be far too thick to be convincing. Instead, Chooch chose a clear acrylic material, which has been laser-cut to fit in the frames.

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issue I had with the clarity of the instructions.

My solution was to use watch crystal cement. This stuff is available from Micro-Mark, and comes in a tube with a needle applicator. Although thicker than, say, Tenex, watch crystal cement will flow by capillary action, dries clear, and (before curing) cleans off with alcohol without attacking clear plastic. Once cured, it produces a strong bond. I found that the easiest method for setting the panes was to put a bead of cement down the center frame member, step the pane into the frame, and carefully dot a little cement in the opposite corners, just enough to leach in and secure the pane. You will have time to adjust the position of the pane before the cement sets, using this method.

For me, setting forty-odd panes one-at-a-time can get a little mind numbing. This is one of those projects you’ll want to tackle while listening to a “book-on-tape”, the radio, or something soothing like NFL football. Fortunately, the watch crystal cement allows plenty of time to move the panes around until they are even, square, and matched with each other. If you screw one up, smile, remove it, clean ‘er up with some alcohol, and start again. Take your time (It took me three evenings to do one car) and relax.

The end result more than makes up for the somewhat tedious and repetitive installation process. The appearance of my Osgood-Bradley’s is vastly improved. Take your time, even if you only get a couple panes in to your satisfaction a night; the difference is striking. I can heartily recommend these kits.

By the way, if you intend to store your kit until you summon up the courage to tackle the task in the next 20 years or so, I would suggest you peel the paper from the windows and stash them in a Zip-loc bag. There are few tasks in life more disagreeable than removing old paper from Plexiglas after the adhesive has dried out.

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**Product News & Reviews**

**NEWS: Nickel Plate War “Emergency” Caboose**

**Nickel Plate High Speed Products**
c/o M. David Vaughn
13732 Lakeside Dr.
Clarksville MD 21029-1345

During 1943-44, the Nickel Plate Road built some unique cabooses from steel-framed wood sheathed boxcars. M. David Vaughn (NKP High Speed Products) and Jim Canter (Canter Rail Services) will be exclusively importing these war “emergency” cabooses in O Scale. The project was announced some time ago but David now advises the contract has been signed, drawings approved and the pilot model is under construction by Ajin of Korea. Expected delivery is July in time for SONC 2004.

The models will be completely assembled with all exterior detail but no interiors. The models will also be built with draft gear drilled and tapped to accept Kadee couplers. The models will come with leaf spring AAR caboose truck (brass) and gauged for O standard.

Price is $279 (unpainted) plus shipping. Models can be ordered painted in the NKP “High Speed Service” scheme for an additional $65, or in caboose brown for $55. A deposit of $100 will ensure you get one of these fine quality cabooses.
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**Jim Hackworth**

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**May/June '04 - O Scale Trains**  47
Spiral Easements

A spiral easement, or transition curve as it is sometimes called, is a curve of uniformly diminishing radius connecting the tangent with the circular arc of the curve. The circular arc is that portion of the curve having a fixed radius. In the figure below, the tangent ends and the spiral easement begins at TS, and the easement ends and the circular arc begins at SC.

The prototype uses easements to gradually change the radius of curvature of the track. For large radius curves an easement is not of great importance, but in model railroads curves of small radii are common and easements should be used for smooth running and to reduce derailments.

SuperElevation

Super-elevation of a curve, or “banking a curve” as it is sometimes called, is the distance which the outer rail is raised above the inner rail to counteract the tendency of a train to overturn outward when running on the curve. The greater the speed of the train and the sharper the curve, the more the super-elevation required.

In the prototype, super-elevation is of great importance, but in model railroads this is not the case. It does, however, add much to the realistic appearance of a train rounding a curve. Whenever used, super-elevation must be increased gradually from zero in the tangent to the maximum employed at the minimum radius portion of the curve. Such gradual change in super-elevation is known as run-off, and it generally occurs in the easement portion of the curve. However, if the easement is short, the run-off may extend into either the tangent or the circular arc or both.

In model railroads, easements may be used without super-elevation, but super-elevation should never be used without run-off. If super-elevation is used, it should not be greater than the value given in the table to the right. The values in the right hand column are the equivalent to 6.7 scale inches which corresponds to the maximum permitted by most prototype railroads. In many cases, values half as great will give good appearance. Super-elevation is often not practical in streetcar and interurban tracks laid in paved streets. Likewise it is not required because of low operating speeds.

Calculation of Easements

It has been determined that for riding comfort, the length of the easement, \( L \), should be at least two thirds of the final super-elevation in inches times the train velocity in miles per hour. If super-elevation of 6 scale inches is employed in model work, the above rule becomes:

\[
L = \frac{4V}{R_m} \tag{1}
\]

If we take \( V = 50 \) miles per hour, then \( L \) should be 200 scale feet, or 60” in O gauge, or about 27 1/2” in HO gauge. In model work the lengths of easements so calculated may be excessive because of space limitations. Recommended minimum easement lengths based upon the length of equipment used are given in the table at the top of the back of this page.

In the prototype, an easement is laid out as a cubic spiral, which is a curve of uniformly increasing sharpness. Thus, the apparent radius, \( R \), at any point decreases in proportion to the distance, \( D \), from the point of beginning (TS); that is:

\[
R = \frac{L}{R_m} \tag{2}
\]

where \( R_m \) = minimum radius found in the circular arc. Thus at a point 2/3 of the way along a spiral easement ending in a curve of 60” radius, the apparent radius would be 2/3 of 60” or 40”.

Another property of the cubic spiral easement is that its length, \( L \), is exactly twice the length of the arc of the final curve which it displaces. This relationship is diagrammed in the figure to the right.

In the prototype, the method of laying out an easement is based upon calculating from formula (3) values of \( F \), the offset of the spiral from the tangent extended, for various points along the curve. This method may be employed in model work, but it is quite tedious. For approximate and much simpler methods, see Data Sheet D3c-1.

A further property of the cubic spiral easement, of particular value in laying out easements, is that \( X \), the distance between the tangent extended and the circular arc extended, is equal to twice \( F \), the offset of the spiral from the tangent extended. For recommendations as to length of easements in model practice and corresponding values of \( X \), see the table on the reverse side of this page.

Ed. Note: George Muller’s Considerations For Laying Track in OST#12 made reference to an Easement Graph in an NMRA Data Sheet. At publication time we didn’t have a clean copy of the graph nor permission from the NMRA to reprint it here. Here is the Data Sheet in its entirety.
### RECOMMENDED MINIMUM LENGTH OF EASEMENT

<table>
<thead>
<tr>
<th>Class of Equipment</th>
<th>A</th>
<th>B, C</th>
<th>D, E, F, G</th>
<th>H</th>
<th>J</th>
</tr>
</thead>
<tbody>
<tr>
<td>O, O½</td>
<td>25&quot;</td>
<td>28&quot;</td>
<td>33&quot;</td>
<td>40&quot;</td>
<td>42&quot;</td>
</tr>
<tr>
<td>S</td>
<td>18&quot;</td>
<td>20&quot;</td>
<td>24&quot;</td>
<td>30&quot;</td>
<td>32&quot;</td>
</tr>
<tr>
<td>OO</td>
<td>15&quot;</td>
<td>17&quot;</td>
<td>20&quot;</td>
<td>24&quot;</td>
<td>26&quot;</td>
</tr>
<tr>
<td>HO</td>
<td>11&quot;</td>
<td>15&quot;</td>
<td>18&quot;</td>
<td>21&quot;</td>
<td>23&quot;</td>
</tr>
<tr>
<td>TT</td>
<td>10&quot;</td>
<td>12&quot;</td>
<td>14&quot;</td>
<td>16&quot;</td>
<td>17&quot;</td>
</tr>
</tbody>
</table>

To determine the length of easement appropriate for your road, first determine your equipment class from Data Sheet D5a. (A, B, and C are streetcar and interurban lines; D, E, F, and G are old-time and short-equipment lines; H and J are standard trunk line railroads.) Read in the table above the recommended minimum length of easement in inches. Longer values should be used whenever possible, particularly in high-speed tracks. Shorter values (down to one-half) may be used where space is at a premium. In the case of short radius curves found in streetcar and interurban lines (Equipment Classes A, B and C) the length of easement for good appearance should not exceed the radius of the curve. Some easement should be used on all yard tracks where passenger cars and road engines are operated.

The minimum easement length may also be used for the length of the superelevation run-off. Where the maximum superelevation is used, the run-off must not be shorter. If a full-length run-off cannot be obtained, the superelevation should be reduced to conform to the length of the run-off. A run-off which is too rapid or irregular will frequently cause derailments.

### CHART FOR CALCULATING "X"

![Chart for Calculating "X"](image)

The distance "x" that the tangent extended lies outside the circular curve extended (see the figure on the front of this sheet) may be determined from the chart above. Find the intersection of a horizontal line corresponding to the length of the easement and a vertical line corresponding to the radius of the circular part of the curve. This intersection will fall on or between the heavy diagonal lines which indicate the values of "x"; estimated fractions between the values shown will be accurate enough.
In OST #13, we announced the O Scale Trains Narrow Minded Digital Photo Contest. The list of donated prizes and the rules are posted again below. I hope we will receive some interesting digital images from modelers in all the O Scale narrow gauges.

The Prizes:
- Rich Yoder On3 GE 45 tonner
- Broadway Limited On30 C-16
- Bachmann On30 Shay
- Harold Storm Display Case

The Rules:
1. Image must include some O Scale narrow gauge equipment content.
2. Image must include some O Scale human figure content.
3. Image must be submitted in digital JPEG format.
4. Image size must be close to 1200x900 pixels.
5. Final file size must be between 40 and 60 Kb.
6. Image must be emailed to: images@oscalemag.com
7. Details of any image editing must be disclosed.
8. Submitter agrees that OST may publish the image at its discretion.
10. Final deadline is midnight, Monday, May 10.
12. Winners will be announced and winning images published in OST #15.
13. Bobber Gibbs will be the sole judge of the contest.

Any party who wishes to donate a prize should contact Bobber through OST or at: bobber@sympatico.ca

Recently, I received a Bachmann On30 Davenport critter and a Rich Yoder On3 GE 45 ton diesel switcher to review for my Narrow Minded column. I took some digital images that will promote our contest and also be part of the reviews.

Bachmann On30 Davenport 8 Tonner

This exquisite little On30 Davenport looks good and runs superbly. The roof of the cab scales out to 6'9" wide but this critter is only 13'3" long over the step-boards. The cab is a full six feet high inside and the door opening is 5'6"x22".

The interior of the cab is very well detailed with six gauges, throttle and brake, all piping, operator's seat and glass in all windows. The paint on my Little River Logging sample is flat and does not reflect any light. The lettering is crisp. The engine door handles are painted so perfectly that they should turn and open. The headlight works and the wires from the bulb are painted to look like piping. This tiny critter can be weathered and detailed as much as you care to.

By removing two screws, the couplers and pockets slide out and the entire shell is removable for access to the wiring and headlight. It is not necessary but a bit more weight could be added in various places to improve traction.

Although the Davenport 8 tonner is about three scale inches wider than the Bachmann Porter 0-4-0, it is a full 30 inches shorter, making this a very tiny critter with a 42" wheelbase and 21" wheels. It should negotiate even sharper curves than the Porter and its 57" wheelbase and 24" wheels. The flanges on the Davenport are smaller than the Porter and look just right to me.

On my layout, it began to move at one volt and its top speed was a bit higher than the Porter. It is an excellent locomotive for slow speed switching and there is no droop to the couplers. Coupled to a string of eight loaded Grandt Line Koppel ore cars, it pulled away effortlessly and rounded 12" radius curves with ease. When I added another eight loaded ore cars, it pulled them on straight track but began to slip on the curve.

Summary: an excellent On30 scale model at a reasonable price, appropriate for any industrial setting.

Rich Yoder On3 GE 45 Ton Diesel

The Northwest Short Line GE 45 tonner is my favorite O Scale standard gauge diesel locomotive of all time and I was fortunate to be able to compare Rich Yoder's new model to my reliable old centercab that I have enjoyed for many years. Side by side, the two models seemed to be identical at 25'3" long over the end plates and 9'9" wide until I started to compare individual details.

On the RY model, the access panels on top of the engine covers have positioning plates or clamps to secure the panels and the radiator filler cap plates have four simulated bolts. The RY model cab has 16 individual window frames compared to four for the NWSL. The RY model has hinges on each of the two cab doors and 12 engine access doors. There are none on the NWSL. The RY model deck has safety handrails, the NWSL does not. Every stanchion on the RY model fits inside a mounting plate with two mounting bolts and every handrail fits inside a tee joint or end bracket. The NWSL handrails have no fittings. The interior of the RY model is nicely detailed with a seat, cabinet with doors and handles, instrument panel with gauges and switches, throttle, valves and handles for engine and train brakes.

Underneath, the RY model includes...
two large air pressure tanks, a couple of valves and lots of piping with simulated fittings. The RY model has a bell mounted under the deck. On the RY model, the front and rear stepboards have simulated bolt heads.

From three feet away, the units look identical except for stepboard brackets and exhaust but upon close examination, the RY model has much more detail.

So, how does the RY model run? I’m very critical because the NWSL has always been my best slow speed switcher and my most reliable locomotive.

The GE 45 tonner that Rich Yoder donated for our O Scale Trains Narrow Minded Digital Photo Contest is an On3 model and although I have O and On30 layouts, I only have one 6/8” On3 module for testing purposes. After cleaning the rails, I connected my Bachmann Magnum power pack with amperage and voltage meters. At exactly 10 minutes to the hour, I applied one volt of power and the front headlight came on brightly with a bluish tinge. I noticed that the model had begun to move. Slowly. How slowly? Well, after exactly 20 minutes it had travelled exactly 66 inches without hesitation and drawing less than 0.2 amps. I reversed the direction to send it back. The front headlight went out, the rear, (now front) came on brightly and it began to move again. Slowly. I left it and came upstairs to type this report. It is now 15 minutes later and I will go downstairs and check the results.

I’m back. It must be broken in now because it took only 16 minutes to travel 66 inches in reverse. To see how slow it would run without stopping, I found that it took five minutes to travel six inches so I can conclude without further testing that it runs really slow. I ran it through some handlaid turnouts and the RY model did not falter once. I elevated one end to create grades. According to my calculations, a rise of four inches in five feet equals eight inches in 10 feet and 80 inches or 6.6 feet in 100 feet. On this 6.6% grade, the RY model ran smoothly but with a bit of gear noise. It was quieter when descending. I increased the grade until I finally reached just over 12% and the RY model growled, but crawled up with no slipping.

Summary: This is a superb model of a GE 45 tonner with a high level of detail and it runs slowly and smoothly, exactly what I want in a switcher. The directional and constant intensity lighting is a bonus. I’ve never met and I don’t know Rich Yoder but I’m thinking that, since I have to send this narrow gauge diesel to a winner of our Digital Photo Contest, I’m going to have to order a standard gauge model to test on my layout with some loaded ore cars. If I can get a painted and unlettered model, it’s probably not going back after testing because I think I may have found a new favorite O Scale standard gauge diesel switcher. In any case, I’ll report the results of my standard gauge review to readers of O Scale Trains Magazine.

O Scalers: Check out Rich Yoder’s website at: [www.richyodermodels.com]

Now, my narrow minded friends, let’s have some interesting digital photos for the contest. The winners of our donated prizes are going to be some happy modelers.

Happy Rails To You Until We Meet Again, Bobber Gibbs

bobber@sympatico.ca

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**Rich Yoder On3 GE 45 Ton Diesel**

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C&O Wood Caboose
PRR H21a
USRA Steel Gondolas

**Upcoming Models**

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Baldwin S12
WM Fishbelly Twins
Rivet Making

Making rivet impressions in various materials is one of those essential skills needed if you want to scratch building locomotives or rolling stock. You will find that even detailing kit or ready to run models may need the added touch of rivets in the right place. You don’t have to be a “rivet counter” to find an application for adding rivet detail to brass or styrene. Over the years, I have seen a number of ideas and products offered to do this basic task. This issue I will devote most of the column to show you a range of tools and techniques for adding rivet detail.

Simple Methods

The most basic tools for doing rivets range from the use of a pounce wheel (used in sewing), a blunt needle held in a pin vise, a center punch, and even the application of individual styrene rivets like those made by Grandt Line and Tichy Train Group or the brass rivets like those sold by Galtran. This last method comes in handy where you can’t impress a rivet such as with a thick material or a casting. The first photo shows a Lackawanna caboose under construction using Tichy rivets for detailing the side sills and center sill. I use this often when making patterns. In this instance, the materials didn’t lend themselves to embossing techniques. Drilling all of those holes takes time but the results are worth it. Pounce wheels can, and other manual devices tend to, produce uneven results either in spacing or shape. These methods are not ideal but a credible model can be built using these simple and inexpensive tools.

Rivet Making Machines

The next step up if you want to make better rivets is to make a press, modify an existing machine of some type or buy one. There are several commercial machines available for making rivets. NWSL offers a machine that features a moving table to space the rivets out. They offer several different die sizes as well. I have seen a number of very fine models built with this device. You can see the machine at their website or your local dealer.

Jerry Snow, of Accurate O Scale, has built a manual press with an indexing table. Snow’s machine has gotten a number of favorable comments. International Models is selling a press made in England. It is a simple device with a stop for positioning the material and an adjustment for the depth of the impression. They sell three different sized rivet dies sized for OO, 7mm and G-gauge. I purchased the press with the 7mm sized die.

It produces a rivet head approximately .020" to .030" depending upon the setup and the material thickness. I am going to order an OO sized die for smaller rivets on tenders and such. The initial testing with the press has shown good results. I am able to press sharp rivets in 0.015" brass without any problem.

Another approach to making rivets is to use a tried and tested method first devised by Jerry White; convert an old cast iron sewing machine into a press. It takes some effort but it will do a fine job of pressing rivets and providing fairly accurate spacing. The machine shown in the photo was converted about 40 years ago by Paul Jansen for me. Paul had seen one of Jerry White’s machines during a visit to his shop. A number of the Proto48 guys in Reno have converted modern Brothers machines in a similar fashion. It is a simple conver-
sion that entails adding a block of metal underneath the table to support the female die, adding rollers to guide a moving table, a simple table and a set of dies.

The dies are made from steel drill rod and a threaded steel rod. While they are not hardened, they will punch nice rivets in plastic, card stock and thin brass. It is possible to adapt the NWSL die set to this machine if you want a more durable material.

The machine takes full advantage of the sewing functions like the claw under the table that drags the material through. It engages the table and pulls it through. I added masking tape to the bottom of the table to enhance the motion. You can set the spacing of the rivets by adjusting the stitch control on the right side. You basically tape the material to the table and run it through. I have found that by placing a small weight on the table it will produce a nice even pattern.

We will continue the discussion of rivet making next issue. Issue 15 will cover some techniques for producing embossed rivets in all sorts of applications.

Latest News

We mentioned in the last issue about a rumor of new gondola from San Juan Car Company. I saw John Parker, San Juan Car Company owner, at O Scale West and confirmed that he is busy working on two versions of the Southern Pacific G-50-20 general service gondola and the composite version G-50-23. The later version was purchased in the late 1940’s to haul sugar beets. You can expect to see the car around mid-summer. The G-50-20 has a steel side and is very similar to cars on the UP and others lines. The sugar beet car is truly unique to the SP. John mentioned that he will do the ASF A-3 truck that is correct for the car. Outside of the very expensive imports like those from Precision Scale and Pacific Limited, there hasn’t been a car like this in O scale. With all of John’s standard gauge models, you will be able to buy the model in Proto48 and O gauge.

As a serious railroad modeler for the last 50-plus years, I have been amazed and awe struck by some of the attitudes and actions of some fellow hobbyists. You could call it the old Hatfield and McCoy mentality: the 2-rail vs. 3-rail syndrome where scale rivet-counters on one side face toy train people on the other. Each side is quite vocal to the exclusion of the other. Each side is actually hurting the growth of the hobby by sending mixed messages to manufacturers about where the market is at the moment.

I am a HiRailer in transition and represent a fast-growing group of modelers who actually enjoy running their trains. We are not seasonal hobbyists with only a 4x8 layout that runs around the Christmas tree. HiRailers realize that operating a scale layout takes a lot of thought and planning. To be a HiRailer you have to be interested in scale. Operating on O54 curves doesn’t cut it. But, owning and operating scale-sized locomotives and rolling stock doesn’t necessarily make you an O Scaler anymore than sitting in a roundhouse makes you a locomotive!

Some O Scale modelers, on the other hand, do not have layouts. They are technical and talented but remain arm-chair hobbyists. These model railroaders view their pure-scale pieces from glass display cases. Their quality hobby time is spent looking at the particular piece and dreaming about what it would actually look like if it ever had the opportunity to run on track, but then they can’t or won’t build a layout, so it stays on the shelf.

HiRailers and O Scale operators have the best of both worlds: appreciation for the models, detail, and operation in a scale environment. Sure Hirailers sometimes feel like they’re running in circles... and they probably are. Many O Scalers operate in a point-to-point prototypical plan. Both use highly detailed and ballasted track with appropriate backgrounds making the trains look prototypical. HiRailers don’t seem to notice that little center rail and I venture to say that one day it will be gone!

My point is this: depending on your perspective, shunning modelers whether they be 2-rail or 3-rail will only hurt the growth of the hobby. We need to band together as O Scale ambassadors. This is an open forum for the exchange of information and ideas.

The Capital Area ‘O’ Scalers have done just that with a fantastic job of planning for the upcoming O Scale National Convention this July in Washington, D.C. (See the ad and registration form elsewhere in this magazine.) They have included several HiRail layouts along with the scale layout tours being offered. Serious modelers from both sides of the tracks have been invited. It will be a great show and I look forward to seeing you there!

HDH

URLs of the Resources Mentioned

www.grandtline.com
www.tichytraininggroup.com
www.galtran.com
www.nwsl.com

◆
I was most fortunate to grow up in the 50’s and 60’s. I have always been into model railroading. I started like most at age four with a Lionel steamer and a circle of track around the tree, then trading that for a HO Hustler and adding cars and track as fast as I could sell newspapers or cut grass. When I was 16 years old my father was transferred to St. Louis, Mo., and bought a house in Kirkwood. Little did I know then that this was the Mecca of model railroading and the home of the National Museum of Transport. I soon became a paid volunteer. That led to the chance meeting of a fatherly gentleman named Bob Whelove. This started a life-long friendship that lasted till his death in 1991. Bob worked for the Wabash railroad from 1930 until 1977, when he retired.

Bob discovered a group of modelers were forming a club in an old Frisco railroad station at Webster Groves, Mo. and joined the group in 1939. He started scratchbuilding engines because, back then, not much was available.

Bob had over 368 models in his logbook and 64 in his own collection. He is most remembered for the Wabash 700 he built complete with “elephant ears”. He took NMRA National honors with it in 1975. To me, though, there was one complete train that topped anything else. The Wabash Blue Bird.

Shortly after he returned from WWII (1947) Bob was asked by one of his supervisors at the railroad to display some of his models to a “few of the advertising department” people. A date was set and Bob brought some passenger cars he built from Walthers kits that he had greatly modified and superdetailed inside and out.

The way he told the story was that he and the superintendent walked into the main office and were escorted right into the Board of Directors office. The “few people” turned out to be none other than CEO, Arthur K. Atkinson, and everybody down the line. I presumed Bob was in awe of the gathering but he retained his composure and all 21 Board members became like kids in a candy shop listening to every detail he had to say. Still, not quite knowing what he was there for, Atkinson brought out shop drawings and sample books with the Budd corporation logo on them. As Atkinson started to open them up he asked Bob if he could build a model of this new streamlined train they were having built. Due to material shortages after the war, the real train could not be delivered until 1950.

The Chicago Rail Expo was planned for 1949 and a display by all the railroads was going to take place. A special model railroad built to ¼” scale (outside third rail) would be featured and Atkinson wanted his “baby” to be there. Bob assured him he could do so. At that Atkinson pronounced, “If Whelove comes into any of your shops and asks for assistance, then you may all consider it okay by me.” Bob left the meeting walking on air. He shortly realized he didn’t have a clue as to how to start as there was nothing out there to start with. After reading about extruding aluminum he decided that a die could be made from hard maple and with the help of the foundry in Peoria he proceeded to have the blanks for the bodies extruded in 8 foot lengths. From that he cut them into scale proportions and as he said, “headed for the house.” The letter enclosed (see next page) describes what was entailed in the construction. The letter was created by Bob for the Wabash history files at the request of Mr. Atkinson after the 1951 delivery of the two Budd built beauties.

One day Atkinson requested Bob come up to the main office. As Bob was escorted into the boardroom he saw Atkinson in his stockinged feet on top of the huge board table. His secretary was sitting in a chair. Atkinson boomed out to Bob “Hey, Whelove, can you make a display track for the train? I want to keep it on the table for a centerpiece. Can’t see it getting dusty in some box somewhere.” That is where it stayed until shortly before the N&W take over in 1972. Bob got a call from his ex-supervisor, now displaced by the merger. It was not long after that the train, minus the EMD engines (no one knows what happened to them), was given to Bob as a gift. After several months of rebuilding to two rail and some interior work the train was ready to go.

About that time, Bob Smith of Central Locomotive Works, came out with the PA-1 Diesels. After ordering the engines it didn’t take long before they took shape. Not many decals were available. The Wabash “Flying Flags” on the engines and the observation tail-sign were hand painted by long-time friend and model railroader, Bill Clouser. Bob Hegge (noted traction modeler) was a regular in the Whelove work shop, also. For those that have a copy, Hegge wrote an article on Bob Whelove for Model Railroader in May 1977. Many good pictures of Bob’s models and the Blue Bird are in the four page essay. He also graced the cover of MR in 1951 as a young man.

Bob Whelove was inducted into the O Scale Hall Of Fame in 1997 at the St. Louis O Scale National convention.
Mr. A. K. Atkinson:

The model of the Wabash Blue Bird dome streamliner was started in April 1949. Plans of the train were furnished by the Wabash. It was necessary that I have complete information regarding all external and internal features of the real train before I could build the model. At this time the real train was not in existence therefore my task was more difficult since I could not see the prototype.

The locomotives were dummy models furnished by Electro Motive. I built the power trucks and the engines operated at the Chicago Railroad Fair two seasons.

The basic model was built from aluminum extrusions. Each window, door and dome opening was hand filed. Patterns for the dome windshield sections had to be made and the various partsicast and fabricated. Since aluminum does not polish all parts were assembled with optical screws from the inside. The car trucks were made from bronze castings and are complete to brake cylinders and snubber bars. Each car has real glass windows except for the round end of the parlor car and the domes which are of blue plexiglass to simulate the non-glare glass in the prototype. There are over 100 separate items of furniture, each hand made. A typical interior such as the diner contains 40 straight back chairs each containing seven parts, ten tables complete with clothes, divans with trays on the arm rests and floor stand ashtrays turned of aluminum. Rugs proved very difficult to match in miniature. Most of them were cuttings from dress material. Estimated time of construction is about 675 hours and about another 100 hours will be needed to complete the train.

Yours truly,

R. A.
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PSC D&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&RGW spelled out. New, never run ....................................................... $3895
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Key UP Challenger, unpbd, coal version. New, never run ............ $3195
Key UP FEF-3, 4-8-4, FP Rd#844, oil version, two-tone grey, silver stripe, orig. box not in best shape. New, very little run time .... $2750
Key or PSC WM Shay (no box label) FP Rd#6. New, never run .... $1895
Key NYC K3n, 4-6-2, FP Rd#4740. New, never run .............. $19250
Key PRR E8 AA, FP Brunswick Green, gold stripe. New ........ $2695
Car Works, FM H-20-44, AAR trucks, unpainted, new, never run .... $550
PSC CB&Q C-16a, latest run, F/P, new, never run ..................... $3980
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See your models in print! Send photos by postal mail or email and we will put them in the magazine for everyone to enjoy. If you don't want to end up seeing our publisher's N&W collection, send something today!
As you can see from the pictures in this ad, a magnificent model of the SP-5000 is being produced in 0 scale for both the collector and the operator. The engine shown is the #5021 with the #5036 being shown in previous ads in this magazine. Some of the features include punched rivets, full working and equalized suspension, stainless steel wheels and tapered axles, opening hatches, doors, windows and journal box lids, smokebox interior, etc. For the operator the model will negotiate a carefully laid 60 inch radius with all the drivers flanged. The drive is silky smooth and quiet with ball bearings used in the mechanism and chassis parts. The running characteristics will delight you as no other model has done before. The sample model was run on different layouts all over the U.S and has accumulated more than 100 hours of trouble free operation. The other two engine #s being offered are the #5024 and the #5048. Price $3800.00 Plus shipping.

The bottom right picture shows the status of the project in Korea as of 2/16/04 with racks of parts (frames, trucks and chassis parts) behind the photographer. You can see more pictures of these parts and the models on the C&LS website. The project is late being completed due to many reasons concerning both the C&LS and the builder. Expected delivery is now the end of April. All persons who have made reservation or advance payments are receiving 6% yearly interest. The C&LS apologizes for the delay in shipping, but puts quality, value, and ultimately customer satisfaction ahead of shipping dates.
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FOR SALE: Pecos River Brass, new in box, never unpacked, #4071 GN P2 4-8-2 in as-originally-built format, unpainted brass, $750 ($250 under dealer cost). No known defects. Not test run. Sold AS-IS, purchaser’s risk, NON-RETURNABLE. Fax: 412-766-4213, Mail Order Trains Plus, 349 Roosevelt Rd, Pittsburgh, PA 15237-1024

WANTED: W. A. Drake double dome tank cars, specifically WAD-0001 SHPX. Will consider other double dome cars. Ph: 763-786-2813, email - rhleners@aol.com; Robert Leners, 1144 79th Ave NE, Spring Lake Park, MN 55432-2802

WANTED: O, S, TT, HOn3, N, brass kits, parts, basket cases, Thomas Shawnee Express, Kemtron/Precision, Pioneer, Hawk SC, anything Kemtron. Also lathe, miller, shaper, possibly drill press. Email: chris3667@lycos.com, (732) 801-6260, Chris Keegan, 300 Pat Rd., Barnegat, NJ 08005

FOR SALE: Sunset PRR S1 6-4-4-6 $1250, N1 2-10-2 $825, Q2 4-4-6-4 $1025, all new in original boxes. Rich Yoder hoppers: PRR H21a $189, GLCA $179, GLA $189. Ph: 410-584-7737, Jim Hawk, 400 Symphony Circle #413, Hunt Valley, MD 21030-1978

FOR SALE: OUT OF PRINT Books - Reduction of a 40-year library. Railroad, Logging, Rail-marine, Mechanical Catalogs, Gazettes, etc. List is $2.00 (cost me $2.60). Dave Newcomb, 48 Glenmere, Reading, MA 01867

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May 2004

8th, Merchantville, New Jersey
Cherry Valley Model Railroad Club "Merchantville 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 for the first table (includes one admission) and $12 for each additional table. Info/reservations, SASE – CVMRC PO Box 192, Maple Shade, NJ 08052, Dave Richter (215) 639-3864, or Chuck Jacobs 856-234-1898

22nd, St. Paul, Minnesota
Twin City Model Railroad Museum Hobby Sale – Education building at the Minnesota Fairgrounds, 9:00 am – 3:00 pm, Admission $4, under 5yo free. Contact TCMRM, 651-647-9628, www.tcmrm.org

29th, Plantation, Florida
South Plantation Train Club Show & Sale – South Plantation High School Cafeteria, 1300 SW 54 Ave. All scales, 2-Rail O Scale modules and displays - setup 7 am to 9 am, 9 am to 2 pm; tables available. Contact Ken Sargeant (954) 473-6376, www.southplantationtrainclub.com; sarge40@aol.com

June 2004

19th & 20th, Timonium, Maryland
The Great Scale Model Train Show & The All-American High-Rail & Collectors Show - Maryland State Fairgrounds - separated into sections, Scale (by gauge) and HiRail. Fri: dealer setup 5 pm to 11 pm; Sat: setup 7 am to 9 am, sales & exhibits 9 am to 4 pm; Sun: setup 8:30 am to 10 am, sales & exhibits 10 am to 4 pm; Admission: $5; (spouses & children under 14 are free), $16.00 for the first table (includes one admission) and $12.00 for each additional table. Information SASE EOS, PO Box 1781, Bensalem PA 19020; (215) 639-3864, eostrains@att.net Bring an index card with your name, address etc., for a $1.00 off your admission.

19th & 20th, Biloxi, Mississippi
Gulf Coast Model Railroad Club 1st Annual Model Railroad Show at the Imperial Palace Hotel & Casino Convention Center, 850 Bayview, Biloxi. Admission covers both days: Adults - $4, Under 18 - $2, Under 12 - Free. Model RR vendors, operating layouts, door prizes. For more info: 228-864-4877, rbush@datasync.com

July 2004

4th-11th, Seattle, Washington
Puget Sound Express 2004, NMRA National Convention - all scales; Mt. Ranier Club $1,000; Mt. Baker Club $500; Mt. St. Helens Club $250; $125; spouse $30, youth $20. Info: Dave Kreitler, Registrar (425) 831-5131; email registrar@nmra2004.org; www.nmra2004.org

17th, St. Paul, Minnesota
Twin City Model Railroad Museum Hobby Sale - 1021 Bandana Blvd. East, Ste 222 in St. Paul, 9:00 am – 3:00 pm, Sale admission free, Museum $2, under 5yo free. Contact TCMRM, 651-647-9628, www.tcmrm.org

22nd-25th, Washington, D.C.

August 2004

7th, Denver, Pennsylvania
Eastern "O" Scalers – Denver Fire Hall, 4th & Locust Streets, Denver, Pa., 9:00 am – 1:00 pm Adm. $5; (spouses & children under 14 are free), $16.00 for the first table (includes one admission) and $12.00 for each additional table. Information SASE EOS, PO Box 1781, Bensalem PA 19020; (215) 639-3864, eostrains@att.net Bring an index card with your name, address etc., for a $1.00 off your admission.

September 2004

17th & 18th, Indianapolis, Indiana
Indianapolis Midwest "O" Scale Fall Meet - Four Points by Sheraton, 7701 E 42nd St (hotel phone 317/897-4000) - 2-Rail O Scale, Proto:48, On3, On2, O Trolley/Traction displays and sale. Friday registration 10 am, trading hall opens 2 to 9 pm; Saturday registration 8:15 am, sales 9 am to 3 pm, layout tour 4:30 to 7 pm (7 layouts open); Sunday layout tour 9 am to 2 pm (9 layouts open); advanced registration by August 1st $10 for one or both days; 30"x72" table $35 each until August 1st, or $45 after that date. Info: Jim Canter, 1203 Rotherham Ln, Beech Grove, IN 46107-3323; (317) 782-3322; email jcanternkp@aol.com

October 2004

9th & 10th, Timonium, Maryland
Double Show: The Great Scale Model Train Show & The All-American High-Rail & Collectors Show - Maryland State Fairgrounds - separated into sections, Scale (by gauge) and HiRail. Fri: dealer setup 5 pm to 11 pm; Sat: setup 7 am to 9 am, sales & exhibits 9 am to 4 pm; Sun: setup 8:30 am to 10 am, sales & exhibits 10 am to 4 pm; Admission: $6; kids under 12 free, family max $12; 8' tables $55 (includes 2 worker's passes for the first table and 1 for each add'l table). Contact Howard Zane, (410) 730-1036; hzane1@hcomcast.net; www.gsmts.com

30th, Strongsville, Ohio
(Cleveland area) Western Reserve O Scale Meet (2-Rail O Scale Only) - Holiday Inn Select Strongsville (1 exit south of turnpike at I-71 and OH Rte 82) - 9 am to 3 pm; $5; tables $20. Info: Bob Boeddener, 32165 Hickory Ln, Avon Lake, OH 44012; (440) 933-7169.

November 2004

6th, Wind Gap, Pennsylvania
Eastern "O" Scalers – Plainfield Fire Hall, 6480 Sullivan Trail – 9:00 am – 1:00 pm Adm. $5; (spouses & children under 14 are free), $16.00 for the first table (includes one admission) and $12.00 for each additional table. Information SASE EOS, PO Box 1781, Bensalem PA 19020; (215) 639-3864, eostrains@att.net Bring an index card with your name, address etc., for a $1.00 off your admission.
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440-248-3055
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614-274-1178
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Cincinnati, OH 45215
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Western Hills Photo & Hobby
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Cincinnati, OH 45211
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Whistle Stop Trains
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Portland, OR 97266
503-761-1822
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C&E Branchline RR Shop
102 W. Grove St.
Dunmore, PA 18509
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Mountoursville, PA 17754
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610-374-8589
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717-794-2860
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Strasburg, PA 17579
717-687-0464
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Adirondack Car & Foundry
160 Harwood Rd.
Gray, TN 38515
423-477-5790
Hobbymart USA, 9901 Town & Country Circle, Knoxville, TN 37923, 865-690-1099
Smoky Mountain Model Trains Ltd
1933 Pittman Center Rd
Sevierville TN 37876
865-428-8595
Texas
Discount Model Trains Inc.
4641 Ratliff Lane
Addison, TX 75001
972-931-8135
Virginia
Railyard Hobby Shop
7547 Williamson Rd
Roanoke, VA 24019
540-362-1714
Wall's Hobby Shop
PO Box 1805, Petersburgh, VA, 23805, 804-861-1333
Washington
Central Hobbies
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Point Roberts WA 98281
604-431-0771
The Inside Gateway
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L5M 1L3
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George's Trains
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Toronto Ontario M4S 2M2
416-489-9783
Victoria Scale Rail, Inc.
163577 Douglass St.
Victoria, BC V8Z 3L6
250-475-2860
Switzerland
Trainmaster
3 Hochweidstr. Kilchberg
CH-8802
250-475-2860
United Kingdom
Quince Valley Designs
17 West Street
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01327 341374

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I’ll start off this issue with a bit of administrivia. Many of you have asked us to provide a First Class Mail subscription. Well, your pleas have been heard. Starting with the July issue, we will offer First Class Mail service for $40 a year. We will also upgrade those of you with current subscriptions at $1.65 per issue, but you will have to call the office to find out the exact cost since that will depend on how many issues you have left. So, if you’ve had bad postal service in your area, you may want to upgrade your subscription.

A recent issue of O Gauge Railroading posed the question “What is the future of the O Gauge Hobby?” The issue of “scale” vs. “gauge” aside, the staff at OGR went to AtlasO, K-Line, Lionel, MTH, Sunset, Weaver, and Williams for their take on the question. Their answers are instructive and enlightening. I’ll summarize some of the more interesting points.

Tom Headrich, speaking for AtlasO, commented that there are some people in this business with too large a legal budget. For those of you not aware of it, MTH is suing Lionel and QSI electronics over alleged patent violations. Mr. Headrich also commented on the product duplication that seems rampant and hurts inventory projections. Overall, however, AtlasO sees an expanding market for O scale products. That’s a good thing because we’d like to see more 2 rail track products, like curved switches, please.

Next up was Nick Ladd from K-Line. Mr. Ladd commented on the rise of “O Scale” dedication and the move to super-detailing.” [emphasis mine] Methinks K-Line has seen the light. They will be offering a line of freight cars in 2 rail with scale wheels and couplers. Can a scale 2-rail locomotive be far behind?

John Brady from Lionel stated “In the future, scale-sized and scale-detail hi-rail products will continue to drive [our] most popular categories...” Are you getting the picture yet? That word, scale, is peppered everywhere in these comments. We’ve seen Lionel produce a scale 2 rail locomotive (PRR T1) in the past and we’ve also seen a Lionel developmental model with easily replaceable drivers. We know Lionel can make scale cars because they’re doing it right now. It’s not too implausible to predict that Lionel may make a move into 2 rail scale soon.

Sunset Models/3rd Rail is a staple in the O Scale marketplace so Scott Mann didn’t really have any revelations to make. However, Sunset’s new High Iron line bears watching. The prices Sunset is quoting for these Chinese-made brass models are reminiscent of the 1970’s. If the quality is right, they’ll be a tremendous value.

Joe Hayter of Weaver Models stated his commitment to both 2 and 3 rail scale models. Nothing new here. Weaver, however, does seem to be doing models that are off the beaten track and that’s very refreshing. Their new telegraph poles are a great example of a new scale product in their line. See the review in this issue.

Larry Harrington for Williams Electric Trains made no reference to scale anything. It’s interesting to note that some of the very first scale 3 rail locomotives came from Williams and they’ve done 2 rail in the past. However, they’ve picked their niche and it’s reproducing the classic Lionel designs from the 1950’s.

Mike Wolf for MTH Electric Trains touted the “superiority” of his product over all others. MTH claims to have over 7200 products, but there was not a single mention of scale or 2 rail in anything said. MTH has made 2 rail locomotives in the past but dropped the practice due to poor sales.

One really interesting comment was made by several different people. They expect a major manufacturer to go out of business in the next several years but would not say which one. I have my own opinion but I’ll have to keep it to myself lest I get tarred and feathered for spreading nasty rumors.

From my perspective, the future of O Scale, doesn’t really depend on Lionel, K-Line, or MTH. If they add products for us scale guys, that’s fine with us. If they fit our needs, we’ll buy them. Will we exist without them? Yes, we’ve done that quite well all along. Do we need AtlasO, Weaver and Sunset? Absolutely, because they’ve supported scale products all along. They’ve helped bring down the cost barrier of entering O Scale as a hobby.

I have a few prognostications myself. I believe we will continue to see a decline in kit offerings. I’ve had at least two kit manufacturers tell me that it isn’t worth the trouble to keep all those parts in stock and kit sales are weak. They say they’re much better off selling ready-to-run. One has virtually stopped offering kits and the other is giving it serious consideration. That’s so sad because learning the model building skills required to build a kit can add so much to the enjoyment of this hobby. Anybody can take an item out of a box and run it, but there’s a certain pride to be had in saying “I built that.” Fortunately, there are still enough people kit-building and scratch-building that OST has plenty of articles in the bank for you to enjoy. Maybe one of those articles will inspire you to build a kit or attempt to scratchbuild something. If you do, let us know.

I believe that On30 will eclipse all other narrow gauge scales and maybe even have a following larger than O standard. Why? The price is right. You can buy the most extraordinary On30 locomotives (some with sound and DCC installed) for less than $300. That’s an incredible bargain in a scale where the typical price for a locomotive is at least $1000. Mountain Model Imports will be doing a diecast and brass D&RGW K-27, outside frame, 2-8-2, in both On3 and On30 for less than $400. But... wait for it... they’ll import almost 10 times as many in On30 as On3.

I believe the gap between the high and low end locomotives in O Scale will widen. Size does matter, it seems, as people won’t pay typical brass prices for smaller locomotives or for diecast either. This creates a nice niche market for small locomotives like the GE Diesel series imported by BY Models. But where is the new small steam to come from? Weaver is making another stab at diecast steam with their upcoming USRA Pacific. An informal poll I took shows that a 4-6-0 was the most oft requested small steam engine. Personally, I’m holding out for an N&W 4-8-0. It’s small. It has character, and there’s still one in steam at the Strasburg Railroad!

I believe the push for more detail and scale fidelity by Hi-Railers will inexorably lead to more 2 rail scale products. I mean, just think this through to its logical conclusion. If what you want in your train model is more fidelity to the prototype, how long will it be before you become dissatisfied with that middle rail in your track? For some, maybe never. I’m betting that for most, sooner than later.

I believe that 2-rail TMCC will give DCC a good run for the money with no clear winner. If the DCC manufacturers can come up with decoders to handle higher currents than they offer now, DCC will have the lock.

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### DESCRIPTION  2-RAIL ITEM#

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<thead>
<tr>
<th>DESCRIPTION</th>
<th>2-RAIL ITEM#</th>
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