Announcing The 1947
GREAT NORTHERN EMPIRE BUILDER in O Scale

Prototype photo by Richard H. Kindig. Similar to PSC #17345-1

See your local Hobby Shop and reserve yours today!

Iron Horse Models
BY PRECISION SCALE CO., INC.
0-8-4 Steam Loco
Super-Detailing
Parts catalog $21.00

P.O. BOX 278
STEVENSVILLE, MT 59870
PHONE: 406-777-5971
FAX: 406-777-5974  eMAIL: psc@xic.net

#17365  1947 Great Northern Empire Builder 8 car set, factory painted and lettered EMPIRE BUILDER:
(1) RPO/Baggage painted #1100, (1) 60-Seat Coach painted #1110, (1) 48-Seat Coach #1120,
(1) Coffee Shop/Dormitory painted #1140, (1) Dining Car painted #1150, (1) 8-4-4 Sleeper #1160,
(1) 16-4 Sleeper painted #1170 and (1) 2-1 Buffet/Lounge/Observation painted #1190.
#17365-1   RPO/Baggage car painted Empire Builder colors, #1101, #1102 and #1104.
#17365-2 48-Seat Coach painted Empire Builder colors, #1121 thru #1131.
#17365-3   60-Seat Coach painted Empire Builder colors #1111, #1112, and #1113.
#17365-4   Coffee Shop/Dormitory car painted Empire Builder colors #1141, #1142 and #1143.
#17365-5   Dining car painted Empire Builder colors #1151, #1152 and #1153.
#17365-6   Sleeper 8-4-4 painted Empire Builder colors #1161 thru #1166.
#17365-7   Sleeper 16-4 painted Empire Builder colors #1171 thru #1177.
#17365-8 Buffet/Lounge/Observation 2-1 painted Empire Builder colors #1191, #1192 and #1193.

Precisely handcrafted brass models, painted and lettered EMPIRE BUILDER.
*Full Interiors with all new PSC tooling  *Interior Shades  *Complete Detailed Underbodies
*Lighting System  *Sprung and Equalized Trucks  *Working Doors and Vestibule

O Scale SOUTHERN PACIFIC 4-8-4 GS-4 and GS-5

#17345   S.P. 4-8-4 GS-4 with skyline casing and skirts. No paint.
#17345-1 Same, painted #4444 Daylight with large SP lettering.
#17345-2 Same, painted #4448 Daylight as running today.
#17347   S.P. 4-8-4 GS-4 with skyline casing, no skirts. No paint.
#17347-1 Same, painted #4436 black and graphite with large SP.
#17347-2 Same, painted #4439 Daylight cab and tender with large SP.

#17349   S.P. 4-8-4 GS-5, skyline casing & skirts. No paint.
#17349-1 Same, painted #4458 Daylight with small SP Lines.
#17349-2 Same, painted #4458 Daylight with large SP lettering.
#17351   S.P. 4-8-4 GS-5, skyline casing, no skirts. No paint.
#17351-1 Same, painted #4459 black & graphite w/large SP.
Features

4 Vine Street Yard
   A twig off a branch, Marshall Vine, U.K.

7 Lighting For layouts
   Some illuminating thoughts by Carey Hinch

9 Grade Crossing Electronics For O Scale
   Don Woodwell fills us in behind the scenes electronics needed.

12 PRSL O Scale layout At Tuckahoe, N.J.
   John P. Dunn, Sr., on the development of a great club layout

26 Painting A Keystone Model Works Hopper
   Harry A Hieke, Jr., shares techniques he uses when custom painting.

31 Bob & Elizabeth Jakl’s Mariposa O Scale Layout
   This mammoth layout dwarfs most club pikes.

36 How Long Have I Wanted One of Those?
   Need a part? Make it yourself like Bob Garrelts did.

38 Build a PRR E-1, Part 2
   John Sauers tackles the boiler.

53 Where the Eagle Meets the Chief
   Day 3 of the 2003 O Scale National Convention.

54 MetroWest Modules, Part 2
   Corner and transition modules, by Jimi Smith.

57 Lionel Milk Reefer Conversion
   Dick Bregler & Joe Giannovario do a 3 rail to 2 rail conversion.

Departments

15 Easements for the Learning Curve - Brian Scace
19 OST Dealers List
20 Narrow Minded – Bobber Gibbs
21 Reader Feedback – Letters to the Editor
42 Product News & Reviews – SP Freight Car Book, Lionel PS-1 Boxcar
45 Proto48 – Gene Deimling
46 Crapola From The Cupola – John C. Smith
48 Buy, Sell, Trade Ads
49 O Scale Hall of Fame – Ed Alexander
49 The Workshop – Neville Rossiter
49 Ad Index
50 Events Listing
60 Modeler’s Shelf
62 Observations – Joe Giannovario
Marshall Vine

The Kingsbury Terminal Railroad (OST #5) is generally accepted as a small layout for O scale, but after it had been in existence for three years, and had been exhibited at a number of shows, thoughts turned to seeing if an even smaller layout could be built. It is quite easy to arrange a small layout if it only consists of a single on scene track, but the operating potential is then rather limited, (and can be very boring!). What I was after was a bit more ambitious, a complete small yard with a run round track, spurs serving as many industries as possible, and off scene staging, and all this in as small a space as could be managed! After a great deal of thought and many rough sketches of possible track plans, it seemed that a layout about half the size of Kingsbury was a real possibility. The result is Vine Street Yard.

This apparent impossibility was made much easier by a device which is commonly used on small layouts over here, the sector plate. This serves the dual function of being off scene staging yard and pointwork for as many converging tracks as are required by the plan. On Vine Street, it completes the run round loop as well. It is a really useful system, saving vast amounts of space which would be taken up with points. Being totally unprototypical though, it does, of course, have to be off scene, and here the modeled tracks disappear under a wide overbridge and a factory flat, but it’s use means that you can get away with almost anything. Looking at the layout plan it will be seen that, other than over the sector plate, the spur along the back of the layout has no actual connection with the rest of the trackwork, yet from the scenic side of the layout, screened by the bridge and backscene, it all seems perfectly acceptable. The old type Atlas two foot radius turnouts also helped to reduce the layout length although their use meant having to accept a rather heavy rail section. The end result though, is a very workable little layout only just over seven feet long.

One of the aims of the British Gauge O Guild, of which I am a member, is to show not only that O scale modeling need not take up vast amounts of room, but that it needn’t be too expensive, so this layout, already fulfilling the small size criteria, was to be built very much on the cheap. (It was also intended to be built as quickly as possible, but here things started to go a bit wrong as a serious illness caused a nine month delay!) For speed of construction ready made items were used whenever possible, hence the secondhand Atlas trackwork, with the three turnouts modified so that they can be operated by cheap and cheerful push/pull rods from the rear. Most of the yard sheds were from the Plasticville Hobo Jungle set, while the yard tower, water tower and girder bridge are Lionel plastic kits. One craftsman type kit in the form of Sonny’s shack did creep in, mainly because I already had one which was looking for a good home! The factory backscenes which run right along the rear of the layout would have taken much time to scratch build, but instead two of the buildings in the excellent Westport Modelworks sheets appeared ideal. The chosen sheets were used in multiple and cut about to produce a reasonably convincing result. One of the more major changes made to one of them was to enlarge the loading door of one building so that a standard boxcar could go inside. The printed roller shutter door was mounted on a piece of thin plywood.
Like its larger brother, Vine Street has now attended a number of shows. For transport it simply closes in half to form a large box with the layout protected on the inside. Simple it may be, but its operation is sufficiently challenging that even after a couple of days of operation it is still not boring. Like Kingsbury we occasionally invite guest operators, and at a recent show one young lad had to be prised off of it!

Although the layout is entirely freelance, as with Kingsbury we always assume that it is based on the outskirts of Chicago. The name was originally chosen at short notice when it needed a name for its first exhibition. Vine Street sounded right, so stuck, but because of my own name and for no other reason. I was therefore more than a little surprised to find out later that not only is there a Vine Street in Chicago, but it is only a block or so off the end of the real Kingsbury Branch!! How’s that for coincidence.

Finally, the Editor permitting, I would like to thank all those who make possible my little ventures into the 0 scale American scene. The main suppliers, both Trains Etc. in Ohio, for the many odd bits and pieces, and Norm’s Trains in Maine, for locos and stock, have helped from the beginning, and without them it is true to say that things would have been next to impossible. But thanks are also due to many other people who have sent items from time to time, including those met more recently on Ebay. With their assistance quite a number of inter-
est models have crossed the Atlantic.

This might be the end of the story, but the layout is still far from finished. (Are they ever?) Small details and people are still being added as I can get them, and this process could continue for some time yet. I will admit though, that another somewhat different layout is already well into the planning stages. After years of modeling industrialized, urban scenes, I rather fancy the wide open spaces, rocks and a few more trees!

But in spite of being so different, it will still owe something to its predecessors, it will be both O scale, and small!
Lighting, lighting, lighting. Just like location, it cannot be said enough. We spend so much of our time, energy, and resources (money) on our hobby. There are books on benchwork, bridges, layout plans, operations, scenery, etc. Where is the lighting book? What good is a detailed and realistic scene if it looks like a solar eclipse is taking place all the time. Not enough is said about layout lighting. I have started building my layout and before the first rail could be put down, I knew I had to get more light. A basement is usually dark with no source of outside light. A spare room could have a window, but it and a 100 watt bulb cannot light a whole layout. Many of us would just put up some florescent lights because they put out a bright enough light. That is a good idea, but how many fixtures will it take? How do you know which bulbs to buy? Are all florescent bulbs the same? A trip to the local mega home store will cause more questions than answers when you see the stacks of bulbs. If you add fixtures to a room do you need to add another circuit for wiring? I hope to “shed some light on the subject” for you.

Recently, a few articles have appeared on the subject of lighting your layout for pictures. Never has an article dealt directly with whole layout lighting. I cannot do that here either, but I hope to get you thinking about your lighting. Most of us are not lighting gurus. Nor do we consider how different aspects of the light itself effects color, mood, and feel of the railroad. Light can create a visual atmosphere. When was the last time you sat down and watched a scene or your railroad as the train went by? Did it feel like summer? Were you thinking of what it is like to walk into the general store to buy a soda while the train clicks and clacks down the line? Or was there a cool breeze from the north and the red and orange foliage of the trees appeared muted and dingy? Check your lighting.

The NMRA has no standard for lighting. So creative freedom and the budget are the limiting factors. A small railroad, say

---

**Carey Hinch**

Lighting, lighting, lighting. Just like location, it cannot be said enough. We spend so much of our time, energy, and resources (money) on our hobby. There are books on benchwork, bridges, layout plans, operations, scenery, etc. Where is the lighting book? What good is a detailed and realistic scene if it looks like a solar eclipse is taking place all the time. Not enough is said about layout lighting. I have started building my layout and before the first rail could be put down, I knew I had to get more light. A basement is usually dark with no source of outside light. A spare room could have a window, but it and a 100 watt bulb cannot light a whole layout. Many of us would just put up some florescent lights because they put out a bright enough light. That is a good idea, but how many fixtures will it take? How do you know which bulbs to buy? Are all florescent bulbs the same? A trip to the local mega home store will cause more questions than answers when you see the stacks of bulbs. If you add fixtures to a room do you need to add another circuit for wiring? I hope to “shed some light on the subject” for you.

Recently, a few articles have appeared on the subject of lighting your layout for pictures. Never has an article dealt directly with whole layout lighting. I cannot do that here either, but I hope to get you thinking about your lighting. Most of us are not lighting gurus. Nor do we consider how different aspects of the light itself effects color, mood, and feel of the railroad. Light can create a visual atmosphere. When was the last time you sat down and watched a scene or your railroad as the train went by? Did it feel like summer? Were you thinking of what it is like to walk into the general store to buy a soda while the train clicks and clacks down the line? Or was there a cool breeze from the north and the red and orange foliage of the trees appeared muted and dingy? Check your lighting.

The NMRA has no standard for lighting. So creative freedom and the budget are the limiting factors. A small railroad, say

---

**Carey Hinch**

Lighting, lighting, lighting. Just like location, it cannot be said enough. We spend so much of our time, energy, and resources (money) on our hobby. There are books on benchwork, bridges, layout plans, operations, scenery, etc. Where is the lighting book? What good is a detailed and realistic scene if it looks like a solar eclipse is taking place all the time. Not enough is said about layout lighting. I have started building my layout and before the first rail could be put down, I knew I had to get more light. A basement is usually dark with no source of outside light. A spare room could have a window, but it and a 100 watt bulb cannot light a whole layout. Many of us would just put up some florescent lights because they put out a bright enough light. That is a good idea, but how many fixtures will it take? How do you know which bulbs to buy? Are all florescent bulbs the same? A trip to the local mega home store will cause more questions than answers when you see the stacks of bulbs. If you add fixtures to a room do you need to add another circuit for wiring? I hope to “shed some light on the subject” for you.

Recently, a few articles have appeared on the subject of lighting your layout for pictures. Never has an article dealt directly with whole layout lighting. I cannot do that here either, but I hope to get you thinking about your lighting. Most of us are not lighting gurus. Nor do we consider how different aspects of the light itself effects color, mood, and feel of the railroad. Light can create a visual atmosphere. When was the last time you sat down and watched a scene or your railroad as the train went by? Did it feel like summer? Were you thinking of what it is like to walk into the general store to buy a soda while the train clicks and clacks down the line? Or was there a cool breeze from the north and the red and orange foliage of the trees appeared muted and dingy? Check your lighting.

The NMRA has no standard for lighting. So creative freedom and the budget are the limiting factors. A small railroad, say

---

**Carey Hinch**

Lighting, lighting, lighting. Just like location, it cannot be said enough. We spend so much of our time, energy, and resources (money) on our hobby. There are books on benchwork, bridges, layout plans, operations, scenery, etc. Where is the lighting book? What good is a detailed and realistic scene if it looks like a solar eclipse is taking place all the time. Not enough is said about layout lighting. I have started building my layout and before the first rail could be put down, I knew I had to get more light. A basement is usually dark with no source of outside light. A spare room could have a window, but it and a 100 watt bulb cannot light a whole layout. Many of us would just put up some florescent lights because they put out a bright enough light. That is a good idea, but how many fixtures will it take? How do you know which bulbs to buy? Are all florescent bulbs the same? A trip to the local mega home store will cause more questions than answers when you see the stacks of bulbs. If you add fixtures to a room do you need to add another circuit for wiring? I hope to “shed some light on the subject” for you.

Recently, a few articles have appeared on the subject of lighting your layout for pictures. Never has an article dealt directly with whole layout lighting. I cannot do that here either, but I hope to get you thinking about your lighting. Most of us are not lighting gurus. Nor do we consider how different aspects of the light itself effects color, mood, and feel of the railroad. Light can create a visual atmosphere. When was the last time you sat down and watched a scene or your railroad as the train went by? Did it feel like summer? Were you thinking of what it is like to walk into the general store to buy a soda while the train clicks and clacks down the line? Or was there a cool breeze from the north and the red and orange foliage of the trees appeared muted and dingy? Check your lighting.

The NMRA has no standard for lighting. So creative freedom and the budget are the limiting factors. A small railroad, say
Lighting for Layouts

12’ x 17’ could be lit by fluorescent lights with good results: few dark spots, overall coverage, and near true color. What’s the problem? Florescent lighting is not true light. It casts a blue tint to everything. However, depending on the bulb and wattage, you can achieve good color representation on your trains. It can help in photography to have true color florescent bulbs, however, tungsten lighting is the best, true light for great photos.

So how many of us are professional photographers anyway? As a general rule, the higher a lamp’s Color Rendering Index (CRI) number, the better color will appear to the human eye. GE type SP florescent lamps with CRI’s at 70+ have better color rendering than older standard florescent style bulbs. SPX type bulbs have a CRI of 80+ for higher rendering at the same efficiency. SPX style lamps do cost more. You could spend $75 or more per fixture! Ouch! An incandescent light generally has an excellent CRI of 100 as does sunlight.

Is it cold in here? Check the color temperature. This is good to know if trying to light the garage or family room of your house. Most of us would choose incandescent lighting for a family room because of the warm feel it gives, but that is a completely different story. Color temperature is measured in Kelvins (K). A lamp with a temp of 3000°K is a warm light. It makes people and furnishings look good in low light levels. Temps at 4100°K are cool white. They are useful for higher light levels when people and furnishings must look good. Very cool or Chroma is near sun tone at 6500°K to 7500°K respectively. It will simulate colors of sunlight. It renders all colors well, but emphasizes cool or blue tones. The lower the K number the warmer or more golden a light will appear. A four-light fixture of Chroma lights can light a scene approaching that of true sunlight without the UV. Using a wide dispersion clear cover on the fixture can spread the light evenly around the room.

How would you light the O Scale Trains layout contest room if you built it? Let’s get back to the 12’ x 17’ room. It could really use four 2’ x 4’ fixtures and two 2’ x 2’ fixtures arranged in a drop ceiling. Space the fixtures at least two feet off any wall. This calls for some cutting of ceiling tiles but avoids the stark light from the fixture on the wall and disperses the shadow between fixtures. This does give a lot of light. I chose to light my first railroad with ceiling fixtures. You can see an example at www.bsrroscale.com. If you use six fixtures to light a room and then need a 10 amp power source for 3 trains are you near to exceeding the wiring amperage limits on that circuit? Maybe not, a four-light fixture with 32 watt bulbs uses just .98 amps. By contrast, a single 65 watt incandescent uses 0.59 amp with only 65 watts of output, not 128 watts as on the florescent. Usually a room will have a 15 to 20 amp breaker. Please call an electrician if you are even remotely unsure about house wiring. Never go prying into electrical boxes without knowledge of such things. Always shut off power to the room at the breaker box before working on wiring.

How much light is light? Look to the Lumens, as in luminescence. It can be similar to candle power. A Lumen is a measure of output for florescent lighting and lighting in general. A single 65 watt incandescent bulb has a Lumen of 865. A 48 inch, 32 watt single florescent tube has a Lumen of 2320+! Then there is life expectancy. A florescent bulb has an average life span of 20,000 hours or 2.2 years! A florescent bulb glows light. In short, it puts out light without excessive heat. You can touch a florescent light while on, but you will quickly turn loose of an incandescent and have a nice burn to boot. You can see why florescent lights tend to be the light of choice. (An interesting side note: the life expectancy of a florescent bulb is inversely proportional to how many times the fixture is turned on and off - Ed.)

Lighting for a layout is as important to me as choosing code 148 or 125 rail for the mainline. A poorly lit railroad can be a disappointment to view. Lighting can make the layout vibrantly true to life or cause unnecessary melancholy woes. Remember your visual atmosphere. What about incandescent lighting? High Kelvin temp incandescent bulbs are available now and there are many incandescent bulbs out there that can be used for natural sunlight lighting effects. Lighting a layout is as unique as the layout itself. There are many styles, shapes and costs of fixtures. I only pointed out a few things to consider. Choosing the right light for you is, well, up to you.
Grade Crossing Electronics
For O Scale

Don Woodwell

The use of scale-sized grade crossing signals for prototypical operation of train layouts has grown over the past several years largely due to miniaturization of components and demand by O-scale modelers. In the following paragraphs, I will describe various scale grade crossing devices such as flashing lights, moving gates, and ringing bells, as well as supporting electronics. These components are train detectors, activation circuits, and gate motors. Lastly, I’ll describe their installation and layout integration.

Lights.

Flashing lights on a crossbuck scaled to ¼ inch are a realistic 9.5 feet above the highway surface. If your layout’s main highway needs extra protection and warning, a cantilever signal may be seen further away by vehicle drivers since its lights flash at a 20 foot scale height. Both crossbucks and cantilever signals utilize long lasting and very bright light-emitting diodes (LED) whose alternating flash is controlled by an electronic flasher circuit.

Action.

Moving grade crossing protection devices include crossing gates or moving crossing gates with flashing lights. The activating mechanism for a scale-sized gate is located under the layout’s surface. For example, you could raise and lower a crossing gate from N.J. International, Inc. and others with Circuitron Tortoise switch machine equipped with an add-on ‘Remote Signal Activator’ also supplied by Circuitron. Another slow motion switch machine from Lemaco and supplied by DALLEE would be mounted vertically underneath the gate to raise and lower it.

Sound.

Ringing bells add a third dimension to the well-protected grade crossing. Sound-boards are very familiar to operators today, and the crossing bell is no exception. All firms offer a digitally recorded bell while Circuitron also supplies a board to activate a real mechanical bell.

Detection.

Prototypical activation of any crossing device requires a train detection method such as current sensing, infrared, and opto-electrical. When the train is detected, an electrical circuit is completed that turns on lights, rings a bell, or lowers crossing gates.

• Current Sensing: (Circuitron, Custom Signals, and DALLEE) The current flowing through a locomotive or lighted car in a block is detected by a sensitive solid state circuit that outputs an electrical signal thereby causing something to happen such as turning on crossing signals, ringing a bell, or activating a gate.

• Infrared: The following two types result in an activation signal: DALLEE – An emitter and detector are located in a direct line of sight on both sides of the track; Z-Stuff – The single emitter/detector is housed in a single unit dwarf block signal.

• Opto-electrical: (Circuitron) Light sensitive photocells mounted between the rails detect a passing train when it shades the photocell from the ambient room lighting. The associated electronic circuit outputs an activation signal.

Electronic Controller

Detectors feed a controller whose task it is to activate the crossing protection equipment. A controller output flashes the LEDs on the crossbuck or cantilever signal, rings the crossing bell, or starts the crossing gate motor. Diagram 1 illustrates the generic connections among the devices. Each detector and controller circuit supplier executes its designs differently so it’s advisable to study their technical documents before buying their products to ensure that you are buying the right product for your grade crossing requirements.

The diagram shows a single mainline track, but your highways may cross a double or triple mainline or perhaps a mainline and siding or you may have a unidirectional mainline with multiple crossings. Each of these situations requires a different configuration of detectors and controllers not to mention multiple crossing protection devices. As such, pre-planning your grade crossing electronics is essential.
### Grade Crossing Electronics

#### Installing the Components

I like to simulate a concrete base for mounting each signal by cutting a round piece of 1” diameter dowel about ¼” to ½” in length, painting it with a concrete color, and gluing to the layout’s surface. When this glue is dry, drill a hole in the base for the crossbuck or cantilever signals’ wires and gates’ activating rod. Add a spot of glue to the signal or gate base after feeding the LED wires or rod through the hole.

If you have several supplier’s components like signals, gates, and electronics, you should diagram the complete installation based on the separate instruction sheets. Subsequently, fax a copy to the suppliers for their approval. It’s best to get the connections right the first time rather than trying to debug errors when you find the equipment doesn’t work after it’s installed.

In order to protect the components from dirt, dust, and damage, I mount them in black plastic “project boxes” purchased at Radio Shack, and use color-coded wires to facilitate connections to the track, crossing devices and the other electronics. Mount the plastic boxes to the platform’s underside either with screws or double-sided tape after the electrical components are mounted to the box but before wiring to the devices.

Carefully connect wires between the plastic boxes and the flashing lights, moving gates, and ringing bells to ensure that they work the first time. You should recheck the connections several times to make certain that they are attached according to your approved diagram.

#### Lineside Details

Integrating the grade crossing scene into your layout with added line-side details adds greatly to its realism. In addition to detailing the physical grade crossing, you may wish to add scale-size battery vaults, control panels, and sheds to house the controls.

I mounted the grade crossing ringing bell speaker in a crew bunkhouse near the crossing by gluing a two-inch speaker and sound tube to a cutout sidewall and hiding it with a cloth speaker cover in the same style as the bunkhouse exterior wall. You have no idea that a speaker is housed in that little...
building once it is landscaped. The sound-board is mounted under the tabletop in the black plastic box described above.

Summary

Model railroaders who want a more realistic layout and high-rail operators should consider enhancing their highway grade crossings with light, action, and sound for prototypical operations. State-of-the-art electronics packages make the upgrading easy and realistic, and the results are clearly worth the effort.

Grade Crossing Electronics Supplier Addresses
1. Circuitron, 211 RocBaar Drive, Romeoville, IL 60446-1163
2. Custom Signals, 32 Alexander Blvd., Poughkeepsie, NY 12603,
3. DALLEE Electronics, 246 W. Main Street, Leola, PA 17540
4. Keil Line, 6440 McCullom Lake Rd., Wonder Lake, IL 60097
5. NJ International, P.O. Box 99, East Norwich, NY 11732
6. The Oakridge Corporation, P.O. Box 247, Lemont, IL 60439,
7. Walthers, P.O. Box 3039, Milwaukee, WI 53201-3039
8. Z-Stuff, Distributed by,: GarGraves Trackage Corporation, Dept. O, 8967 Ridge Road, North Rose, NY 14516-9793

### TABLE 1

<table>
<thead>
<tr>
<th>Supplier Details</th>
<th>Detectors</th>
<th>Controller</th>
<th>Crossbuck</th>
<th>Cantilever</th>
<th>Gates</th>
<th>Bell</th>
<th>Lineside</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circuitron</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Custom Signals</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DALLEE</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Keil Line</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NJ Intl.</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oakridge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Walthers</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z-Stuff</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

O Scale Rules!

OST T-Shirts

Why, you too can have your very own O Scale Trains T-Shirt...All ya gotta do is send $9.95 plus $4.00 Shipping and Handling and tell us whether you want diesel or steam and whether you want it in large or extra large. Them's all your choices 'cause they only come in black with white lettering. I really need a raise and this was my idea so could you please order one so I can have my raise? Send your checks or credit card info to: OST-T, PO Box 238, Lionville, PA 19353-0238

Thanks,
Jaini

T-shirts designed for OTS by KORconcepts LLC
<www.korconcepts.com>
The Beginning - October 2000.

Buzz Burney and I were approached by the leadership of the South Jersey RR museum and offered a 27' x 19' space to construct an O scale layout based on the PRSL line from Camden to Cape May NJ. The extended dog bone style layout was conceived and designed by Buzz Burnley. It highlights the railroad of at Camden, Tuckahoe Junction, Winslow Junction, Dennisville and Cape May with it’s adjoining magnesite plant, the major customer of the PRSL in Cape May County.

The layout infrastructure consists of L-girder construction with a unique homasote-on-edge spline sub-roadbed. This concept is not only very sturdy and flexible for curves and junctions, but is solid as a rock when painted and ¼” luan placed on top to support the hand laid track (ties supplied by Dave Thompson).

Trackwork is all from Right O’ Way Products and each rail is highly detailed, as are the switches. Details are so important in O scale that if they are not modeled they are missed and it sticks out like a sore thumb.

Power for our layout comes from a 10 amp Crest Hobbies Power Source and wireless hand held Aristo-Craft controllers so the operator can “walk” with his train. Switches are controlled by Del-Aire Air Powered with slow motion adapter. Layout height varies from 48 to 54 inches.

January 2001

The O scale division acquired two new members - Frank Williamson and Tom Douglass. Frank who is an Ohio resident summers in Ocean City, N.J. He is very helpful providing that extra hand in both of the museum’s O and HO projects. Tom is a professional builder and proved the backbone of the construction for the layout benchwork and backdrop and scenery dividers. Due to the layout size, we felt that scenic dividers were critical. The layout can be seen at only the location you are viewing actually making the layout seem larger than it is.

October 2001

Dave Thompson became our fifth member, bringing many years of O scale knowledge of layout design and trackwork, especially intricate switchwork. Dave and his father, the late George Thompson, built an impressive O scale layout in George’s Stone Harbor, N.J., home. Dave and his 7 year old son Jonathan are constructing a large Espee layout in Dave’s Seaville, N.J., home. Jonathan Thompson will be a fine O scaler and even now is quite capable of handling a train.

Dave and Buzz tweaked the original
layout plan to its final design, a lot of O scale railroading in a 19’ x 24’ area.

Work progressed steadily in the later part of 2001, and we decided to have our “Golden Spike” ceremony on January 15, 2002 which was attended by 26 O scalers from New Jersey and Southeastern Pennsylvania.

**February 2002 to Present**

Work has progressed very well on the layout. The backdrop/scenic dividers are completed and painted. Clouds were painted by my lifelong friend Lou Godbold, a member of my HO club, Patcong Valley Society of Model Railroaders. Track work, switches and sidings are nearing completion. The scenery reflects the era of the layout, October 1955, and is progressing quite rapidly at the Dennisville and Winslow Junction area.

Our sixth member, Ralph Rigg, joined us in May 2002. Ralph is a retired Philadelphia firefighter and is active in both O and HO scale layouts at the museum. Ralph is enjoying getting his hands dirty with scenery construction and has become an invaluable asset.

The key to our layout’s rapid construction is that we all stick to the plan, have lots of fun while working (we always take a 30 minute b.s. break when "Foreman" Douglass calls for it) and after the work session we run our trains, the real reason this layout is being built.

**Fund Raising**

When Buzz and I first joined the museum we knew the cost and ownership of the layout would be the responsibility of the O scale division as the museum could not financially support the construction or the continued maintenance of the layout. Each O scale member, in addition to a $200 museum stipend and $20 monthly dues, has paid an extra $250 O scale stipend. Also, our O scale division holds an O scale only train show in December and May.

Membership in the O scale division is open, however, we have decided on a 10 member maximum, as we are looking
for modelers/workers, not leaners.

Our work nights are each Tuesday from 7 p.m. to whenever, at the museum located at Mt. Pleasant Rd., in Tuckahoe, N.J. Please call first: John P. Dunn Sr., 609-484-8125, since every so often we take a break and socialize with a dinner and good fellowship.

I am very proud to be associated with this fine group of gentlemen and O scale modelers.
Have you ever built a layout, and found that trains slow down at some distance from the power supply? Is there some place on your railroad where locomotives cross from one electrical block to another with a somewhat radical speed change? Welcome to the Wonderful World of Wire, where “conductor” isn’t some guy with a cool suit, a ticket punch, and a superiority complex!

Please understand that this month’s diatribe is not about wiring (There are plenty of books out on two-rail wiring from folks like Kalmbach), but about wire size and type, as well as some common errors that will cost you volts.

First, I’m going to go after something of a myth in this column and then we’ll identify the real culprit for those conditions mentioned in the first paragraph.

Scace’s Snappy Patter:

How often have we heard from our friends and neighbors that, since O scale is industrial strength model railroading, we need to use 12 gauge wire, Bakelite terminal blocks, and, by the way, a separate circuit in the house fuse/breaker box is a great idea? Well, lets look at the facts here.

Wire size is expressed in “gauge”. Here is a chart with properties of the more useful copper wire gauges for our purposes:

<table>
<thead>
<tr>
<th>Gauge</th>
<th>Diameter (1)</th>
<th>Current Cap’y (2)</th>
<th>Voltage Drop per 100’ (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>.064”</td>
<td>15A/20A</td>
<td>.25V per Amp</td>
</tr>
<tr>
<td>16</td>
<td>.050”</td>
<td>6A/10A</td>
<td>.41V per Amp</td>
</tr>
<tr>
<td>18</td>
<td>.040”</td>
<td>5A/7.5A</td>
<td>.65V per Amp</td>
</tr>
<tr>
<td>20</td>
<td>.032”</td>
<td>3.7A/5A</td>
<td>1.03V per Amp</td>
</tr>
<tr>
<td>22</td>
<td>.025”</td>
<td>1.5A/2.3A</td>
<td>1.64V per Amp</td>
</tr>
<tr>
<td>24</td>
<td>.016”</td>
<td>0.9A/1.3A</td>
<td>2.61V per Amp</td>
</tr>
</tbody>
</table>

Notes:
1: Diameter is the conductive cross-section of solid wire or the sum of the cross sections of stranded wire. By the way, you’ll find stranded wire much easier to manipulate than solid wire of the same size, in most model railroading applications.

2: Current capacity is expressed in Amperes. The first figure is for rubber insulation, and the second is for other insulations such as the various plastics common today. For our purposes, these are steady loads, not occasional peak loads, within reason.

3: You electronics guys will notice that I am not calling this “resistance;” nor am I calling “volts per ampere” by the proper name, “Ohms.” This is so the average Joe knows what I’m talking about, so don’t write the letter.

I can hear the wailing, now! “We didn’t sign up for a Physics lecture!” “I don’t wanna do math with my modeling!” Well, bear with me for another paragraph or two, and the Truth will be revealed. Let’s say we wired our layout with 18-gauge wire. The farthest block is 25 feet away from the power source. This means the out-and-back distance is 50 feet. A train powered by a Sunset SP Cab-Forward (built with a Pittman can motor) is sucking down 1.5 amps. (“I hated word problems in school! I don’t wanna do them for my hobby!!” Stop whining and stick with me here!). Our chart says that the voltage drop for 18-gauge wire is .65 volts per amp of load over a distance of 100 feet. Since we said the out-and-back distance to our block is 50 feet, that means the voltage loss to that part of the railroad is .325 volts per amp of load. Multiply this by our 1.5 amp load (the Cab-Forward) and we get 0.4875, or only about a half a volt loss! Looks like 18 gauge was a good choice for our wire size, given our biggest load, our farthest distance from the power source, and our handy dandy whizz-o chart.

The Big Lesson:

So why does our Cab-Forward still slow down? It’s probably the connections, rather than the wire size. If you are using mechanical connections, such as terminal blocks, screw connections, wire-nuts, or just twisting your wires together, each one of these represents a significant voltage loss! Why? Because the better the contact between two conductors, the less resistance experienced by the current as it hops from one conductor to the next. The best way to make connections with maximum contact area, hence minimum loss, is to solder the permanent joints. Obviously, switches are mechanical joints, but we want them to be temporary and accept the losses incurred by using them as the price to pay. Two wires twisted together, however, make a permanent joint and should be soldered. To minimize voltage loss due to connections being made, throw out the terminal blocks, binding posts, wire-nuts, and solder your stuff!

This leads us to another point. Your rail is a conductor. Each rail joiner, though, is a mechanical connection. Loose rail joiners are common culprits for huge losses. You know what’s coming here! Either solder the joints or solder jumper wires over the...
Easements for the Learning Curve

joints. Even tiny Code 100 nickel-silver rail, soldered together, is the equivalent of a 10 Gauge copper wire bus! Although it isn’t mainstream behavior, after laying some 150’ of three track mainline and soldering all the joints together (and jumpers over the expansion joints), I just dropped a couple of leads to my power supply, fired up the Loco-Link, and voila! Three trains, no blocks, and no visible power losses! It works.

So, let’s review. First, I’m not saying there’s anything wrong with a little overkill. Just because 18-gauge wire may math out to be adequate doesn’t mean that using, say, 16-gauge wire as a general rule is a bad thing. I am saying that you should remember the KISS (Keep It Simple) principle, though. The fewer connections, the fewer real problems with losses. As an added benefit, if your wiring is simple it’s easier to troubleshoot. Second, any joint that can be soldered, should be soldered.

Other Stuff:
The mentoring idea in issue #5 has not taken off as I write this. Obviously, this column is meeting all your needs, along with all the reading you’re doing and the other O Scalers that you’re meeting at all those shows you’ve been attending. I’ll keep the line open, though, so if you want to contact other O Scalers, send in your phone number and we’ll try and find you a mentor or two.

Also, when we start getting new Really Obvious Tips, we’ll print ‘em. Meanwhile, let’s go exploring!

Fine Quality O Scale Brass Models

PRR H21a
Our model features all brass construction and Kadee couplers. Reservations are being taken now with cars being delivered in August. Brass @$220. with Crown trucks $240.

GE 45 Ton Switcher
Our model feature all brass construction, all wheel drive, fly wheel, directional lighting and Kadee couplers. Models offered painted black or unpainted for $335.

GE 44 Ton Phase 1 Switcher
Our model features all brass construction, all wheel drive, fly wheel, directional lighting and Kadee couplers. Models offered painted black for $330 or unpainted for $315.

USRA Steel Gondolas
Our model features all brass construction, Kadee couplers and drop ends. Models will be built with details for five different versions, PRR, NYC, P&LE, B&O and RDG. Priced: brass w/ trucks $225; Ptd Black $240; Custom finished $265.

2 Rail Estate Sale
www.justrains.com/2railpg.htm
P & D
31280 Groesbeck, Fraser, MI 48026
Mon-Fri 10-8; Sat 10-6; Sun 12-5

• WE STOCK ALL BRANDS IN DEPTH •
OPEN 7 DAYS — CREDIT CARDS ACCEPTED

Information 1-586-296-6116  Orders 1-800-874-7443
Fax 1-586-296-5642  E-mail info@pdhobbyshop.com

ALL TRAINS & MODELING ACCESSORIES
O SCALE: 2-RAIL & 3-RAIL and more
BRASS  DECALS  DETAILING PARTS
LOCOMOTIVES  ROLLING STOCK  STRUCTURES
TRACKAGE  TRUCKS & COUPLERS  VEHICLES

The web site does not list all items that P&D stocks; if you have inquiries on other items, please call or e-mail for the latest news.
P&D accepts MasterCard, Visa, Discover, American Express and money orders for “Same Day Shipping.” Allow 2 to 4 weeks for shipment with personal checks. Layaways (excepting sale items) are accepted with 20% down, balance due within 90 days. Canadian and foreign orders are charged appropriate shipping charges, and US orders $6 shipping charges.

Get Real Productions
11 Out of Bounds
Road, Palmyra, VA
22963-2318
434-589-2660
fx434-589-4898
kjkriigel@aol.com

Double Semaphore Train Order Board $59.95 + p/h
3-Color Block Signal w/Equipment Box $49.95 + p/h
3-Color Block Signal w/Standard Mast $49.95 + p/h
Dwarf Signals (2/pack) $39.95 +p/h

Chicagoland’s “O” Gauge Specialist!
PCC GREEN HORNET CSL
$5495
Reg. $68.00
Chicago PCC production model will also be available with the Kenosha, WI, paint scheme. 55027 Chicago PCC 55028 Kenosha PCC

O CAR TRUCKS $105.95
INSTALLATION AVAILABLE CALL FOR PRICE!

GREYHOUND SCENICRUISER
$5995
Reg. $76.00

TRACTION HEADQUARTERS
Featuring:
• O CAR • BRONZE KEY • RIVER MODELS • MTM • ST. PETERSBURG • PARTS • BOOKS • VIDEOS & MORE!

ATLAS 2 RAIL
TRACK SYSTEM
NOW IN-STOCK!

DUE MAY!
RESERVE YOURS NOW!

WE DISCOUNT ALL NEW PRODUCT RELEASES FROM:
• K-LINE • WEAVER • SUNSET • LIONEL • ATLAS • ATHBURN • MTM • KADEE • RED CABOOSE • PECOS RIVER • WALTHERS • BACHMANN • INTERMOUNTAIN

CALL FOR SPECIAL PRICES!

Chicagoland HOBBY INC.
Just 15 Min. from O’Hare Airport
5017 Northwest Hwy. Chicago, IL 60631 773-775-4848 Fax 773-775-6398
Mon - Thurs 11-7, Fri 11-8:30, Sat 10-5, Sun 12-4:30, Closed Sundays May, June, July, August & Sept.
Visit our web site: www.chicagoland-hobby.com e-mail: chicagolandhobby@aol.com

Gift Certificates Available
We Ship U.P.S. Please Add $5.00
We Carry New and Used Trains
We Buy and Sell Trains

O Scale Trains • 17
The Rules

1. The contest will run over three issues: 5, 6 & 7. Contest closes on March 31st 2003. The winner will be chosen and announced in the July 2003 issue. A panel of three judges will decide the winner.

2. The layout must fit in the room shown at left. The max dimensions are 11 feet wide and 14 feet long. Use only the area of the grid. Assume the ceiling is 8 feet off the floor.

3. The layout may be any style: loop, point-to-point, point-to-loop, whatever. Benchwork may be any style and any height.

4. There are two categories.
   - Category 1: Track must be 2 rail code 148, standard gauge 0 (i.e., a scale 5 feet wide). Minimum radius is 36 inches. All switches must be either #5 or #7 1⁄2. The Grand Prizes go to the Category 1 winner.
   - Category 2: Track gauge is anything you want, i.e., P:48, On3, On30, On2, three rail, whatever. No minimum restrictions. Category 2 winner receives $250 cash from O Scale Trains Magazine.

5. All subscribers to O Scale Trains Magazine may enter for FREE. Non-subscribers must include a $10 entry fee.

6. Track plans may be drawn/printed on paper or submitted in one of the following electronic formats: PDF, TIFF, or EPS on floppy disk or CD-ROM. Description of the layout should be typed double spaced on unlined paper or sent as an ASCII file. Every page of a submission should have the author's name or other form of unique identification on it.

7. Submissions must be mailed to O Scale Trains Magazine, PO Box 238, Lionville, PA 19353-0238 no later than March 31, 2003.

8. All submissions become the property of O Scale Trains Magazine and cannot be returned.

Hey! If you can’t draw a straight line without a ruler or holding down the SHIFT key, consider using track planning software. Atlas’ Right Track software is free. Visit: http://www.atlasrr.com/software/welcome.asp
## OST Dealer List

### Arkansas
- **Hobby Shack**
  - 1200 John harden Dr
  - Jacksonville, AR 72076
  - 501-982-6836

- **Mickey's Model Works**
  - 611 Court St, Ste 4
  - Conway, AR 72032-5417
  - 501-450-9423

### Arizona
- **Coronado Scale Models**
  - 1544 E Cypress St
  - Phoenix, AZ 85006
  - 602-254-9650

### California
- **All Aboard Model RR Emporium**
  - 3867 Pacific Coast Hwy
  - Torrance, CA 90505
  - 310-791-2637

- **Bruce's Train Shop**
  - 2752 Marconi Ave
  - Sacramento, CA 95821
  - 916-485-5288

- **Fulton Station**
  - 454 Larkfield Shop Cntr
  - Santa Rosa, CA 95439
  - 707-523-3522

### Colorado
- **Caboose Hobbies, Inc.**
  - 408-296-1050
  - Santa Clara, CA 95050

- **Train Shop**
  - 119 Vernon St
  - La Mesa, CA 91941
  - 626-796-7791

- **Original Whistle Stop**
  - 4290 E Colorado Blvd
  - Denver, CO 80209
  - 303-777-6766

### Connecticut
- **Just Trains**
  - 550-H Imhoff Dr
  - Concord, CA 94520
  - 925-685-6566

### Delaware
- **Mitchells’**
  - 2303 Concord Pike
  - Wilmington, DE 19803
  - 302-852-3258

- **Trains & Hobbies**
  - 2622 Capitol Trail
  - Newark, DE 19711
  - 302-266-8063

### Florida
- **Kirkland Hobbies**
  - 6516 NW 2nd Ave
  - Miami, FL 33150
  - 305-424-0977

### Georgia
- **Riverdale Station**
  - 6632 Hwy 85
  - Riverdale, GA 30045
  - 770-991-6085

### Georgia
- **Big Four Hobbies**
  - 326 W Main St
  - Somerville, NJ 08876
  - 973-219-0202

### Hawaii
- **Hobby Shack**
  - 2490 E Colorado Blvd
  - Honolulu, HI 96819
  - 808-524-9942

### Illinois
- **Chicagoland Hobbies**
  - 6017 Northwest Hwy
  - Chicago, IL 60631
  - 773-775-4848

### Iowa
- **Cedar Falls, IA 50613**
  - 912-804-3170

- **Des Plaines Hobbies**
  - 1468 Lee St
  - Des Plaines, IL 60018
  - 847-297-2118

### Indiana
- **Indianapolis**
  - 453 E Illinois St
  - Indianapolis, IN 46204
  - 317-827-1523

### Indiana
- **J's Hobby Haven**
  - 5303 Johnson Dr
  - Mission KS 66205
  - 913-432-8820

### Kansas
- **M&M Hobby Shop**
  - 206 W Main St
  - Somervile, NJ 08876
  - 908-429-0220

### Kentucky
- **M & S Trains**
  - 32575 Pettibone Rd
  - Solon, OH 44139
  - 503-761-1822

### Louisiana
- **M v Hobbies**
  - 277 Hinman Ave
  - Buffalo, NY 14216
  - 716-875-2837

### Maine
- **Norm’s O Scale**
  - PO Box 147
  - S Casco, ME 04077
  - 207-655-2550

### Massachusetts
- **Modelers’ Workshop**
  - 88 Lowell St
  - Methuen, MA 01844
  - 978-683-0885

### Maryland
- **Burrett Hobbies**
  - 31280 Groesbeck Hwy
  - Fraser, MI 48026
  - 586-296-6116

### Michigan
- **Eureka Trains**
  - 9920 Rhode Island Ave
  - College Park, MD 20740
  - 301-982-5032

### Minnesota
- **Mainline Hobby Supply**
  - 1724 SE Division St
  - Portland, OR 97228
  - 503-761-1822

### Mississippi
- **Quince Valley Designs**
  - 16413 Eureka Rd
  - Canton, MS 39046
  - 662-563-3122

### Missouri
- **Marty’s Model Railroads**
  - 6922 Graviss Rd
  - St Louis, MO 63123-4345
  - 314-638-8250

### Montana
- **Marty’s Model Railroads**
  - 6922 Graviss Rd
  - St Louis, MO 63123-4345
  - 314-638-8250

### Nebraska
- **George’s Trains**
  - 4020 Kietzke Ln
  - Reno, NV 89502
  - 775-285-5557

### Nevada
- **High Sierra Models**
  - 4020 Kietzke Ln
  - Reno, NV 89502
  - 775-285-5557

### New Jersey
- **English's Model RR Supply**
  - 102 W. Grove St.
  - Dunmore, PA 18509
  - 570-347-7909

### New York
- **K-Va Hobbies**
  - 277 Hinman Ave
  - Buffalo, NY 14216
  - 716-875-2837

### New York
- **Niagara Hobby & Craft**
  - 3366 Union Rd.
  - Buffalo, NY 14225
  - 716-681-6060

### North Carolina
- **Roe’s Hobby Shop**
  - 1724 SE Division St
  - Portland, OR 97228
  - 503-761-1822

### Ohio
- **Railroad Hobbies**
  - 119 Vernon St
  - La Mesa, CA 91941
  - 626-796-7791

### New Mexico
- **Adirondack Car & Foundry**
  - 160 Harwood Rd.
  - Gray TN 37615
  - 423-477-5790

### Oregon
- **George’s Trains**
  - 102 W. Grove St.
  - Dunmore, PA 18509
  - 570-347-8909

### Pennsylvania
- **G & K Hobbies**
  - 32575 Pettibone Rd
  - Solon, OH 44139
  - 503-761-1822

### Tennessee
- **K-Val Hobbies**
  - 277 Hinman Ave
  - Buffalo, NY 14216
  - 716-875-2837

### Texas
- **Pecos River Brass**
  - 560 E Church St
  - Lewisville, TX 75057
  - 972-219-0202

### Virginia
- **Grandadda’s Hobby Shop**
  - 4571 W Broad St.
  - Columbus, OH 43228
  - 614-274-1178

### Washington
- **The Inside Gateway**
  - 14725 Northeast 20th
  - Bellevue, WA 98007
  - 425-747-2016

### Wisconsin
- **Depot Drygoods**
  - 14725 Northeast 20th
  - Bellevue, WA 98007
  - 425-747-2016

### Wisconsin
- **Greenfield News & Hobby**
  - 6815 W Layton St
  - Greenfield, WI 53220
  - 414-281-1800

### Wisconsin
- **Non-US Dealers**
  - **Canada**
    - **George’s Trains**
      - 510 Mt Pleasant Rd
      - Toronto Ontario M4S 2M2
      - 416-489-9782

- **Switzerland**
  - **Trainmaster**
    - 3 Hochweidstr. Kilchberg
    - CH-8802
    - 011-411-715-3666

- **United Kingdom**
  - **Quince Valley Designs**
    - 17 West Street
    - Weedon, Northants
    - NN7 4QJ
    - 044-132-734-1374
Well, O Scalers, if the high cost of older O scale model Shays has kept you from adding a narrow gauge operation to your layout, you will be pleasantly surprised at the high quality and low price of the new Bachmann On3 Shay.

Bachmann started shipping their new Shays in December and they started arriving in a whole lot of homes just after Issue #6 of O Scale Trains Magazine went to press, so, although this review may not be the most timely, I will offer my comments as a long time fan of narrow gauge Shays.

This model features a heavy die-cast frame and boiler and retails for $275 but sells for around $160 through some dealers. About ten years ago, I paid around $500 for a used On3 US Hobbies brass 13 ton Shay with a Grandt Line conversion kit and I was extremely pleased with its looks and excellent slow speed operation, which is most important to me as an operator. Until now, that was my benchmark and I compared all other geared engines to that model for detail and slow speed operation.

A Bachmann source advised that their Shay represents a “could have been” older Shay that had been rebuilt several times and perhaps passed through many hands. However, another source pointed out that the cylinders are off-center to the Tee boiler and the only Shay with that feature was Lima’s Construction Number 122, built in 1884.

According to information from http://www.shaylocomotives.com, CN122 was a Class A 15 ton Shay with two 10x8 cylinders and weighed 23,500 pounds as built. She carried one ton of coal and her tank of 825 gallons of water added another 6,958 pounds for a total weight of 32,458 pounds, or 16.2 tons at the start of a workday.

The Bachmann model sports a steam generator and an electric headlight that was introduced by Shay about 1905. It would be easy to backdate the model it to 122’s as-built configuration. The USH Shay represents a more modern 13 ton “Baby Shay” with a conventional boiler and a crankcase design introduced by Lima about 1906. The Bachmann Shay measures 26’ 6” over the end beams and 7’ 6” across the end beams, compared to 23’ x 6’ for the USH.

You can purchase a painted, undecorated model that features a wooden cab and small diamond stack and includes three different fuel loads, wood, coal or oil tank with the appropriate enclosure boards, or you can purchase the steel cab version with a straight stack and spark arrestor. The latter version also includes all three fuel loads but it only comes in painted and lettered versions. I wanted the steel cab to represent a modernized oil burner and removing the “Colorado Mining Co” lettering was a pain for me as the lettering overlaps a tank seam and a bit of paint came off that seam along with the lettering. I maintain that, while the public may prefer painted and lettered equipment, more experienced modelers prefer painted and undecorated. It will require some serious work to remove the white painted stripes from the tank as it runs behind the rear sand reservoirs.

The cab window openings are 42” x 36” and have no glass so the superb cab details are very evident and there is lots of room for two crew members. It’s a tiny point, but if you leave the firebox door open, you can see what looks like a hot, bright fire burning inside. There are a bunch of detail parts being made for this loco and you can super detail it as much as you wish.

On the On30conspiracy List on the internet, a flurry of messages from early buyers indicated that some models were loud, some were jerky and there were a few problems with gears that were not properly lubricated but instructions were quickly posted to show how to reduce the noise and the complaints have slowed to a trickle, not unusual for a new run of a complicated model. At this time, not enough is known about its long term reliability.

The Shay is DCC-ready and the knuckle couplers are installed in the lowest of three coupler pockets. By pulling a pin with a pair of pliers, the couplers can be moved to two higher positions or a draw bar could be employed.
Readers Feedback

Much Appeal

Another very fine issue. If you’re not subscribing to this mag you really should consider doing so. Read the thing from cover to cover within 2 days of its arrival. Humorous response to a letter on tech specs from Harry. Another nice novice piece by Brian on track. I like the inclusion of something on DCC; especially for novices like me. But my two favorites were the follow-up on the Ricksburg tower and the DRGW to Rock Island Fowler conversion. Both had some very nice modeling tips. I won’t build the same tower but got some nice ideas for my own from the article; especially some nice interior details. I’m always looking for ways to expand my 1920’s fleet. Already have some CNW Fowlers, now I can add some RI too; thanks Charlie. There’s lots more that will appeal to others (Gordon’s layout, modules, diesel switcher, etc). Also really liked the article on detailing box cars (especially interiors) from Issue #5. Got every issue since the first one and they’ve all been worth buying. Great mag Joe.

Jeff Loverude

Auction Data A Plus

Regarding the mention of the Auction Data in Joe’s “Observations” column. I for one enjoyed it. I see it as a valuable tool. I’ve noticed the requests on the Otrains list from various members concerning prices grow through the years. Whether the request stems from inherited items, trains found at the local antique shop, or from a widow wanting to know, its extremely important information. I realize its a lot of work harvesting the data, especially added to your all ready heavy workload, but how about once every other issue, or once a year if the response to the data is still kind of lukewarm. Most of us avoid thoughts of our own mortality, but lets face it, our wives, or kids will need the info. someday as most of us don’t prepare, or keep an up to date inventory.

Paul Imhoff Baton Rouge, La.

Congrats!

Congratulations on your first year of publication. Who would have thought that a market as small as O Scale model railroading would support another magazine? But Joe Giannovario had a vision that paid off. OST has raised the bar on several levels, including schedule, features, circulation and quality. I am proud to be a charter contributor. Crapola from the Cupola was offered to almost every magazine published on model railroading and rejected. Joe couldn’t wait to tell this story. Thanks.

John C. Smith Pecos River Brass, Texas

Favorites Are Kitbashing

Hi, just wanted to let you know that issue #6 arrived. While I normally just sort of browse through it and put it aside to read later, I found I could not put it down and read the whole issue Saturday evening even though I normally do not spend Saturday evenings reading model railroad magazines.

Your advertisers list is still growing which is great. This issue has no less than four full color, full page ads so you must be doing something right! Some firms are still among the missing, to wit: Diecast Direct (big Corgi dealer), Kadee, NWSL, Old Pullman, and Weaver Models to name a few that I would like to see in OST.

Now on to the feature articles and I promise I will try to keep it short this time! The article by Roland Marx on rebuilding a K-Line MP-15 into a realistic model of an MP-15 complete with a state of the art drive system was really neat. It would be neat if K-Line and some of the other firms like MTH would sell just the body shells for some of their locomotives as it would really keep the cost down on these kitbashing (total rebuild more like it) projects.

Basically, I enjoyed all the articles in #6, my favorites being those subjects that involved kitbashing or scratch building and of course the excellent photos that you always have in Modeler’s Shelf.
Reader Feedback

Last but not least, thank you for mentioning T Bone Models in your Observations column. Jim [Christiansen] probably gives the best service of any mail order dealer in the O Scale community and as such really deserved praise. A lot of us (myself as well most of the time) are quick to criticize vendors when they give us lousy service but we forget to give the good ones praise when they deserve it.

Pete Klick, Sequim, Wash.

A Suggestion For Styrofoam

I must say that issue number six is a great issue, Gordon Whitlock’s C&O Boyertown Division is a masterpiece, Roland Marx did quite a job on that MP15. Makes me wonder if I can get an SW1500 the same basic way.

The main reason that I’m writing here is John C. Kathman in his article on making viaducts using the extruded polystyrene foam stated that he gets frustrating waiting for the Titebond to dry. While Titebond is a perfectly good glue to use, especially for building wood structures in O scale, it does take a long time to fully set. He could also use Latex Liquid Nails and it will set up and dry much quicker. Just a suggestion from another modeler who also works with foam a lot.

Gary Woodard, Brooksville, Fla.

Marx & Whitlock Score Again

Hello, I am happy to resubscribe for another year. I am enjoying your magazine a lot. I like your Dealer List when I go places. And, when I’m around home it helps me find places to shop. You know how it is when you go to a different hobby shop; you never know what you might discover. In OST#6 I liked the steam/diesel model roster on Gordon Whitlock’s C&O Boyertown Division. I thought it was a nice touch. It added an extra dimension to the story. The photos keep getting better and better. The article about the O Scale Modular railroads was very good. Roland Marx sure can do some amazing 3-2 rail conversion, can’t he? I really enjoy the auction data and hope you continue it. If it’s a pain, just do it every other issue. Product News & Reviews are always needed to find out if a kit is just what you are looking for or not. Because of your Event Listings, now I know about the April 6th O Scale meet in Hudson, Mass. I also enjoy the mix of articles for new comers like myself and experienced people. Looking forward to another year.

Paul Gorachy, Quincy, Mass.

DCC Info

I recently installed DCC on my layout. For my money Digitrax was the best option and the nearest dealer is only 200 miles away. That is considered in the neighborhood around here. After reading literature that stated O scale draws 8 amps and more I decided to test my locos. I had an operating session and made mental notes of the speeds used. Later I checked the voltage and amperage at those speeds. Here are the results: (see table below)

<table>
<thead>
<tr>
<th>Decoder Type</th>
<th>Voltage 6 Vol</th>
<th>Amperage 1.2</th>
<th>Amperage 0.72</th>
<th>Amperage 0.5</th>
<th>Amperage 0.2</th>
<th>Purchased</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weaver RS3</td>
<td>12.0</td>
<td>2.2</td>
<td>2.2</td>
<td>2.1</td>
<td>1.5</td>
<td>1992</td>
</tr>
<tr>
<td>Weaver GP38-2</td>
<td>7.2</td>
<td>2.2</td>
<td>2.2</td>
<td>2.1</td>
<td>1.5</td>
<td>1994</td>
</tr>
<tr>
<td>Red Caboose GP9</td>
<td>5.0</td>
<td>2.2</td>
<td>2.2</td>
<td>2.1</td>
<td>1.5</td>
<td>1998-</td>
</tr>
<tr>
<td>44-tonner</td>
<td>0.2</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td>scratch built</td>
</tr>
</tbody>
</table>

I included the year purchased to show which model type the locos are.

I am using all Digitrax decoders. The 44-tonner has a DH-121 with 1.5/2.0 amp rating. The RCs have DH-163P with 1.5/2.0 amp rating while the Weavers used DG-383AR with 3.0/4.0 amp rating.

Maybe most people would use a larger decoder in the Red Caboose but I run slow short trains and feel these decoders are large enough. Bye the way I set the command station for HO (12 volts) not O (18volts). I ran on N (8 volts) to check it out but decided against it.

A special thanks goes to Paul at Enginehouse Service for all his help and e-mails.

Richard Cooke, Marquette, Mich.

Scace A Treat

I just had to write you to tell you how much I enjoy the Magazine. I have gotten each issue from the first and have re-upped for 2003. I like all your writers and have avidly read each one, but I have to say that reading Brian Scace’s “Easements For The Learning Curve” is a special treat. His humor hits mine right in the right spot. I always learn something too, and I have been into O Scale 2 rail since 1996. The modular layout article is very timely as we here in western New York are trying to put a club together. The Get Real Productions centerfold photo is the best cause it covers both pages with the photo and barely a crease and no break in the photo. [Jeb’s] talent for doing O Scale scenes is second to none. So all in all, all I can say is keep up the great work. I look forward to each issue with bated breath.

Bill Young, Rochester, New York

Loves Those Photos

A new subscriber from Richmond, Va., called yesterday afternoon to give us his two thoughts on the magazine: (1) He thought he was back in the 40’s with all of the great photos, and (2) Not since he was teenager with his first PLAY-BOY has he spent so much time looking at pictures!

Track Looks Odd

Just wondering if anyone else has noticed this. Love the centerfold pictures, but you know I wonder how that rail stays on the ties. Not all of us use tie plates, but one certainly needs to spike that rail to the ties. If my memory is right every centerfold you have printed has that glaring deficiency staring you right in the face.

Good to see the module section in issue #6, however the corners are what give most people fits in designing and using. I hope the next section on modules goes to the corner and corners it.

I have only been in P:48 for about 10 years. I figure that a lot of people have figured out ways to do things that I am working on now, so the Really Obvious Tips sounds like a good thing to me.
Carmer Cuts Levers Ready Made

In OST#4, September ‘02, you had an excellent article on Carmer Cut Levers by Ed Bommer. For your readers who may not have the time or skill to fabricate their own, they are available commercially from us. These are photoetched 0.016” brass and work beautifully with San Juan or HSM Clouser couplers. Any coupler with a lift pin containing a heat-sink plate at this point, intended to carry away the heat. But this plate is mounted in contact with the case, so that only one of the two surfaces can radiate heat away. And the heat radiated by that one free surface is trapped inside the closed case, which has no ventilation.

With a saber saw, I cut out a rectangle in the bottom of the case, a little wider than the plate in one direction. This retains the two mounting screws that hold the plate to the case, but it frees the other surface of the plate to radiate heat away. Since the opening is about 0.25” wider than the plate on two sides, air can pass in and out of the case. With this simple modification, the thermal breaker has never tripped since.

The reason for the panel getting hot around the speed-control knob is that there is another heat-sink plate at this point, mounting four components that I think are the rectifiers for direct current, and this plate is also in contact with the case. I would like to move it away from the case; this would be simple if I could get the knob off, but MRC seems to have made this impossible—it snaps on permanently. I may get new
knobs from MRC and then cut off the present knobs so that I can move the plate. But the front panel doesn’t get as hot since I ventilated the case.

I don’t think this modification is dangerous in any way. The 0.25” gaps aren’t wide enough to allow fingers to get inside, and even if they did, all the 110 volt connections inside the case are insulated. I think plugging a floor lamp into the wall is a lot more dangerous.

I am disappointed with MRC for designing this unit so carelessly, and for making claims (30 volt-amps) that it can’t fulfill. But with these modifications, the Tech 3 works well for me.

(2) The MRC Controlmaster 20 is an even better proposition. It costs $120 to $150 and is rated at 85 or 100 volt-amps, depending on vintage. This would be 7 amps at 12 volts, or 5.5 amps at 16 volts. The metal case has ample ventilation openings, but they seem to be irrelevant, because this unit produces far less heat than the Tech 3. Whereas the heat-sink plate in the Tech 3 gets too hot to touch, in the Controlmaster 20 it only gets slightly warm, barely above body temperature. The circuitry in the Controlmaster 20 must be far more efficient. There is a fan to move air through the case, but I took it out because I didn’t like its noise. I can’t imagine why it would ever be needed.

I find the Controlmaster 20 to be far superior in power capacity, heat production, and the convenience of the tethered throttle. I will use the Tech 3’s in the shops and test tracks, where the meters are useful and the unit doesn’t operate long enough to get hot.

By the way, I don’t believe MRC has ever advertised either of these units on the back cover of MR or anywhere else. You have to find them in the hobby shops or in dealers’ ads.

At one time I had planned to use motor-driven variable transformers, controlled by momentary toggles placed all around the layout, and had laid in all the components. I abandoned that plan because I couldn’t face all the wiring it would require. Instead I have bought two of the Aristo Craft radio controls, but I haven’t tested them yet. They are not power supplies but only controllers, and they have to be fed by an outside source of 12 to 16 volts DC. The largest transformers I can find at Radio Shack are 12.6 volts at 3 amps (not enough voltage) and 26 volts at 2 amps (not enough amperage). I would want to use two of the former in series, or two of the latter in parallel. I hope larger transformers are available somewhere else.

Edward C. Miller, Broomfield, Colo.

Joe G. responds: Ed, thanks for the MRC info. Mr. Phillips should be glad to hear about MRC having what he needs.

No DC Power?

Thanks for the tip about power packs big enough to run an ABBA set of diesels. Since most ads are aimed at HO, most of us are not aware of the bigger units. Why ABBA sets? Since most of us have more locomotives than we can justify, why not install 6% grades and really use all that extra motive power?

Regarding AC to DC in a 3 rail to 2 rail loco conversion, is there any way to keep those great sound systems? Pushing the bell or horn buttons on an MTH power pack produces what kind of signal? With an oscilloscope, an electronic whiz could see the shape and/or frequency of the signal and design a circuit to duplicate it.

Like those center spread photos, but that Gar-graves track ruins the effect; it looks like there is nothing holding the rails to the ties, and the rail isn’t the correct shape. The oversized flanges of 3 rail locos are sometimes too obvious.

I’m a long-time advocate of modelers joining an operating RR museum to really get a feel for the prototype. The experience might get you a post-retirement job at a local short line, as it did with me. Hostling a real locomotive is the biggest kick, but grade crossings with last-second cars and trucks crossing really increases the blood pressure! Operation Lifesaver is lowering grade crossing incidents, but trespassing incidents are still high.

R. Lamar Scheuerman, Spring Valley, Calif.

Joe G. replies: Lamar, as I understand it the sound systems are basically the same whether it’s 2 or 3 rail. All command control systems convert track power to DC to operate the integrated circuits for speed, direction, and sound. The two main differences between 2 rail and 3 rail command systems are: (1) track power as DC or AC, and (2) the control signals imposed on the track power. If anyone can spoof the 3 rail control systems, it’d be Mike Reagan at Train America Studios [http://www.tastudios.com/], 4137 Boardman-Canfield Rd, Suite LL02, Canfield, OH 44406, 330-533-7181.

O Scale: The Next Generation

There is a new generation of O scale modelers on the horizon. They will be 2 rail modelers, with an eye for better detail and closer prototype appearance. They will see O scale for what it can be. An indoor scale that can have more comparisons to it’s big brother, the prototype. More working doors, hatches, gates and windows. Real, operating draft gear. More realistic lighting. Better sound systems and better mechanisms. Fewer molded on details (or none). Grab irons, roof walks, brake wheel housings, etc. Separate metal underframes. Real wood decking, etc. Can the manufacturers meet the needs of this new generation? Sure they can! If they start thinking beyond 3 rail toys and look beyond the perimeter of the box they’re in. Will the models cost more? Perhaps. Or not. It depends on engineering, materials and quantities. (This will leave out the brass imports). Will the manufacturers be willing to spend more money on R&D? Why should they have to? Look who they have to supply their R&D requirements, if they will ask AND listen. You are going to see more and more O scalers wanting the manufacturers to push the envelope. They will then have to be willing to assist the manufacturers with R&D to get it. And the manufacturers will have to listen.T he new modelers will have to be the Teachers and the manufacturers, the Students (Ah, come and sit down, young grasshopper!). The information is out there. Are we, as modelers, willing to give our time and materials to get what we ask for (even demand) from the manufacturers? Can manufacturers think beyond the box and the envelope? We’ll see.

Bill Burge, Marion, Iowa
Too Cold to Handle...

54’ All-Steel Express Refrigeration Cars

The Railway Express Agency 54 foot steel refrigerated cars are now in service... Over five hundred 54’10" all-steel express refrigerator cars were produced by AC&F between 1947 and 1948. Choose from the As Delivered (Off-white with Green and Yellow Stripe), 1950s green with red REA logo. These cars were also used by the Atlantic Coast Line and are available in the silver and purple paint scheme. Great Northern also used these cars and painted them in Empire Builder colors. All come with BX style trucks (not shown) and Kadee ready mounts. Get em while their hot...or cool.

Available in Multiple reefer numbers.

Suggested Retail $179.95 per car. Call your dealer or 1-800-3RD-RAIL.
Painting A Keystone Model Works Hopper

Harry A. Hieke Jr.

It may seem unusual to devote an entire article to the painting of a hopper car, however, this particular hopper car is, as you will soon see, quite unique. Secondly, this would be a good opportunity to discuss the painting of freight cars in general along with a description of the application of dry transfers and weathering techniques.

The subject of this article is the new Keystone Model Works Pennsylvania RR GLA hopper car. This car is built up in brass and, in my opinion, represents the culmination of years of improvement in brass models. There have been numerous fine 55 ton hoppers in the past, but in my opinion none match the quality, precision and wealth of detail offered in the Keystone model. The features that really impressed me were the completeness of the rivet detail both in the frame, interior and recessed ends and the quality of the grab irons. The grab iron pocket bolt and stud detail is, in my estimation, the finest ever. Not only are these details complete but the grab irons are the right diameter which are at least 1/8" or less yet somehow these lost wax castings are hard enough that they don’t immediately deform under pressure. The particular version I am working with has the Kadee coupler pocket although some customers were apparently lucky enough to obtain cars with a working draft gear. I have seen this detail and it is quite exquisite.

Preparing The Model

Enough praise for the model, let’s get into the heart of this article, which is painting this model and weathering it in such a manner as to not destroy the exquisite detail. I like to prime models before painting with several purposes in mind; (1) to provide a stable platform for the adherence of the color coat which in turn requires less build up of color, and (2) since the primer adheres better than the color coat, it gets into hard to reach places and also gives me feedback on the quality of the model surface before the paint is applied. Small imperfections can be caught at this stage and corrected. These would include small solder blobs, dust particles, scratches in the brass, et. al.

This particular model comes clear coated and I felt that it was necessary to strip the clear coat in an effort to preserve the integrity of the detail through the prime cycle. The first several photos show how I did this. The tools include a toothbrush, a camel hair paint brush with about 1/2" bristles, a tank large enough to hold a passenger car and regular lacquer thinner which is available from the hardware store. Acrylic lacquer thinner actually works better but is more expensive and is slightly more toxic. The clear coat came off this model fairly quickly. After this was completed I emptied out the old thinner poured in fresh thinner and stripped it again with great attention to the nooks and crannies, both in the ends on the interior and in the baffles on the underbody. I force dried this in an oven for about 15 minutes at the lowest possible setting. Unremoved clear coat now shows as a fine white film. There was very little of it but the car was stripped again to remove it.

Next, the model was washed with laundry detergent under warm flowing water. What I generally do here is foam up the surface of the model with bubbles using the toothbrush and paint brush to get into all the nooks and crannies. Wash this off and then using plain water use the force of the running water to remove any remaining particles. I then force dry this in the oven, as before, and now the model is ready for priming.

At this point the model should be handled with rubber gloves. At absolute worst, if the fingertips must be used only...
touch edges and never hold the model with a full fingerprint contact on a flat surface.

The primer that I like to use is one that I get in a quart bottles from an auto paint store and is what’s referred to as a “non filling acrylic lacquer” primer. This simply means it’s slightly thinner than a crack-filling acrylic lacquer primer. With this type of primer, acrylic lacquer thinner must be used because regular thinner does not dilute it well enough to flow through an airbrush. I use a garden variety single action airbrush with a one ounce bottle. The bottle and airbrush used must be absolutely clean.

I cut the primer probably 6 to 1 with thinner. I usually take the end of a paint brush and dip it in the primer and immediately transfer it to the bottle. I do this about six times for every one ounce bottle. The primer needs to go on wet and thin. The primer is pretty durable so a thick coat is simply not necessary. I spray the primer at about 20 psi or less. It dries very fast and the solvent evaporates almost as quickly as it hits the model. It has to go on wet so I like to spray under a strong light to make sure I’m not getting any dry particulate primer on the surface. One trick that I use here is after a portion of the model is sprayed, let’s say the interior of the hopper, I will go back and overspray it immediately with clear acrylic lacquer thinner. This evaporates fairly quickly but it goes into solution with the previously applied primer and gives it a flatter smoother finish. Caution must be used here not to apply too much primer or it will run. Another trick that I use is to follow right behind the airbrush with the heat gun. This gives me an immediate read out on the prior application.

The photos show the model in the position in which I placed it to apply the primer. The first application was to the interior which was done in two stages with the model lying on its side. I used a combination of circular and long strokes using the airbrush. A good rule of thumb here is never to start or stop the spray when the paint is in contact with the model. Always press the trigger before the spray hits the model and release the trigger after it has passed the model. If this is not followed there’s a good chance you’ll get a splatter or a “spider” build up on the model.

After the interior was primed, just as soon as I could get the primer without the brass shining through under a strong light, I then turned the model over and did the underside in the same fashion. The strokes going from right to left with the airbrush would have the nozzle at about 40 degrees to a plane of the bottom of the car. The strokes going from left to right would have the airbrush at 30 degrees going in the opposite direction. So in other words at the end of each stroke the wrist must be twisted. After this dries which should only take a few minutes carefully inspect under the strong light for reflections.

The hardest spots to paint on a hopper car are the walls of the baffles beneath the bolster, the inside of the bottom frame on this particular model, as well as the areas around the door mechanisms. Another trick here is to tap the trigger gently in hard to reach places this should always be used with very thin solutions and with the heat gun handy to avoid an accidental runs. This technique requires practice and a very light finger pressure needs to be utilized, however you can get paint in very hard to reach places using this technique.

After the primer coat is applied it is important to “finger test” the texture. If the primer was applied correctly, it will be very smooth. But if there was too much air in the mixture, the pressure was too high or the paint was too thin there will be a slight powder texture to the primer. If this is the case, don’t panic. Just take it over to the sink and wash it in warm running water with the toothbrush and paint brush and the scrubbing action will wash off the powder coat and the resultant model will be ready for paint.

**Painting The Model**

These Pennsy hoppers were supposedly painted oxide red. If you want to get a good opinion as to what color this is ask any Pennsy expert (there are millions of them). Ask ten experts and you’ll get about eleven opinions. If you study the old Kodachrome photos this color actually appears to have an orange hue. Weaver’s Scalecoat makes an excellent color which they call Oxide Red which is very close to this Pennsy color. However, due to the difficulty in obtaining Weaver paint in this part of the world (Virginia) I have gone to Model Master paints. It is also noted that Folklore makes an oxide red paint which the manufacturer actually suggests for this model. I find Folklore much more difficult to use than either Model Master or Scalecoat paint and the Model Master is much easier to obtain (although it is more expensive).

The mixture that I use for this model is as follows: 1 part British Crimson, 1 part International Orange, 1 part Gloss Top Coat and two parts lacquer thinner. These are all ½ ounce bottles Testors Model Master. This is thoroughly mixed in a one ounce spray jar and is tested against some white cardboard. It may need to be thinned more or less depending on how it flows on the cardboard. There are several photos here showing...
brush angles and car angles. I generally will place the car on a small cardboard box so that it can be easily rotated without touching the car. The bottom and the interior are painted in the same manner as when using the primer.

The trick now is to get this paint in the ends without causing excessive buildup. At this point it’s important to use the heat gun on a low setting so that the stuff immediately dries and you have feedback on the amount of buildup. It is important here to choose your airbrush angles so that you don’t spray across all of the end posts to get the air tank. This would cause a large buildup on the end posts and also a run. It is generally best to make several passes that is rotating the model on the cardboard box and four different planes as opposed to doing it all in one pass. In fact, if the paint is thin enough the first pass will barely show any color at all, but patience here will be rewarded in a beautiful, fine finish.

After you feel that the painting is complete it is important to let the model dry, either air dry it for 24 to 48 hours or force dry it in an oven. I use the lowest warm setting and generally let it dry for about 25 to 20 minutes. It is critical here to let it cool because it will be quite tacky when it’s lifted out of the oven.

After the paint is dry and smooth to touch it must be carefully inspected under the strong light while being twisted and turned in every conceivable angle looking for shiny brass spots or areas of exposed primer. There will inevitably be several of these particularly on the bottom of the frame. A touch-up using the airbrush is needed here.

**Lettering The Model**

These models come with a very excellent Greg Komar dry transfer set. The method which I found seems to work the best is to cut out the letters leaving upper and lower margins as large as possible or side to side margins as large as possible depending on the location and to apply these using ART STORE masking tape slivers or better Post-It note slivers. (Note: DO NOT use hardware store masking tape!) If at all possible tape them on top and bottom to achieve the most stable fit. Positioning is determined from photos and then measuring from a landmark, say the lip at the top of the side to the top of the letters. Once the transfers are properly lined up then I use either a pencil or a pen to gently transfer the letters from the transfer film to the car. The pencil or pen will leave a trail where it has been so you can be sure that you get the whole letter transferred. When this has been done for every given letter then lift up the film and see if any parts of letters have not been transferred. If this happens reapply the film tape and transfer the remaining parts of letters to the car side.

The most difficult lettering to apply here was the car number which goes on the center of the sill on the bottom. To accomplish this I cut out the letter and made two little tiny slivers which I attached to either side of the strip which basically says “PRR car #XXXXXX”. It went on very easily on one side but the other side had a pipe in the middle of the channel and it was difficult to get this letter transferred.

It is wise to use as many letters or numbers as possible in each application. For example, when transferring the car numbers these are the correct distance from the dimensional data so these would all be cut out in one piece. I was
not able to apply the car lettering so as to keep the spacing intact across the ribs. So I actually cut the rib spaces out of the transfer sheet and applied the lettering on a space by space basis.

**Weathering The Model**

In my opinion, the best weathering paints are the Floquil colors. For this particular model I used Weathered Black, Rust and Concrete. When mixing weathering colors I dilute them down to say one or two drops per one ounce bottle mixed with lacquer thinner. (Tip: Never mix lacquer thinned Floquil with undiluted Floquil. It catalyzes the Floquil and make it unsprayable.)

The first thing I did was give a light dusting of Weathered Black to the inside of the car. I is best to drop the pressure to ten or fifteen psi for weathering. After the interior was dusted black and dried, I next applied my rust mixture to all of the rivet joints, gusset plates, etc., on the inside of the model. I kept spraying these until a slight orange hue was obtained. Next, I repeated this process to the bottom spraying extra amounts of rust to areas that would be naturally rusty on the model, i.e., the couplers, areas around the doors, hinges, ratchets, dogs, these type of things and of course rivet strips too.

This process was repeated on the ends and in the openings at both ends.

I used a stencil technique to very gently make the letters run using the concrete mixture. (See the photographs.) I sealed the whole thing using Testors Dullcoat applied in several thin coats. If this is not done the weathering paint, being so thin, will tend to rub off with finger pressure.

Since the trucks are not available as yet from the manufacturer I used a pair of Red Caboose trucks which were appropriately weathered.
Southern Pacific had 49 SP Class locomotives pulling freight and passenger trains. Now only one remains, #5021. Get the famous #5021 or choose from two other numbers of the SP-2 Class.

Sunset Models is raising the bar with unbelievable details at prices thousands less than others.

- Working Gresley Valve Gear
- Working 3rd Cylinder Crank
- Working Cab Roof Vents and Tender Water Hatch
- Operating on your Layout of 55” Radius
- Operating within your budget (under $1200)

Show Your Support and Reserve Yours Today!

Features pioneered by Sunset Models:
- All brass construction with super detailing
- Fully detailed cab interior with painted dials
- "Quiet Drive" mechanism with ball bearing gearbox
- Numerous opening doors and hatches with detailed parts inside
- Full complement of working lights
- 9000 series Pittman motor with skewed armature for smooth low speed operation
- Sprung drivers made from coined brass centers and blackened carbon steel tires
- 55” radius or larger O Scale track
- Prototypical Details and dimensions

Please Note: The UP 4-10-2 will be produced at a later time.
During my working years, I have tried to co-ordinate our summer vacations with the National O Scale conventions. This experience, along with visiting many layouts that were open during the conventions, set our priorities for building a club-size layout. After retirement came the opportunity to put our ideas together. We needed ample space for all the engines I built over the years, plus the rolling stock I accumulated. Local town officials provided the permits and advice for building a 34' x 78' building. Plans were sketched on paper. Then the mainline track with elevation numbers was painted on the cement floor. My goal was to accommodate three different railroads inside one building. The AT&SF, CB&Q, and MKT from 1950 through 1970.

The majority of our equipment favors the AT&SF. Therefore, we have a big diesel engine facility, a good size yard (150 cars), long caboose track, an icing facility, and a car repair shop. Run-through trains in both directions have icing and refueling stations adjacent to the freight yard and engine facility. Mainline trains are controlled from throttles in a tower located in the middle of the room. We have a separate bench-level control panel for the engine facility and yard. Heading Eastbound from the yard, Santa Fe’s two-track mainline crosses the diamond of the IHB to Union Station. This station has six tracks with passenger platforms and two bypass tracks for freight. A coach and passenger car service area plus an REA Express building make excellent use of a station switcher. Heading West from the ATSF yard, the double track crosses a large canyon before disappearing in a mountain range. The Santa Fe provides us with long freight and cross-country passenger service, and lots of yard switching for freight and passenger trains.

Next, we’ll look at the CB&Q. Much of its track includes a large holding yard hiding behind a wall of city buildings in the East, and mountains in the West. Starting in the city, our three-track mainline enters the town of LaGrange, IL (Elizabeth’s hometown) with two stations (La Grange and Stone Ave.). Three push-pull commuter trains are assigned to this line. We cross over the IHB and head for Hinsdale (Bob’s hometown). First stop is the Highland Station and then Hinsdale, which is seen behind the town. Here the commuter trains disappear in a hidden siding before heading back east. Cross-country passenger and freight trains continue through farmland, across a large canyon on a steel viaduct, and into the mountain range. One person can be kept very busy operating the three control panels juggling commuters and long freights in this district. The CB&Q interchanges with the ATSF in the East with a short area of street running and in the West at a branch-line in the mountains.
Through an exclusive arrangement with former compatriots, publisher Joe G. gets NASA to take Landsat photos of the Jakl’s layout using IR photography. Right, and we’ve got some land in Florida for sale, too! Actually, Bob Jakl’s son, Ed, put a digital camera on a pole and took over 200 photographs of the layout from the air. Ed then stitched them together in Photoshop to get this amazing aerial view of the layout. We felt you would rather see this than a simple track plan.

The first train ran on Dec. 29th, 1992 at 10:00 PM. The first derailment occurred at 10:05. The layout contains over 2000 feet of track and hundreds of switches, all hand-laid code 148 and code 125 steel and nickel silver, spiked to over 50,000 homemade wooden ties. One main 1100 Watt power supply feeds the many transistor controlled throttles. Mainline operations and turnouts are controlled from the Control Tower. Switching yards are locally controlled from panels.
Sites Around The layout

1. Union Station
2. Downtown Building Fronts
3. CB&Q Hidden Yard
4. Refinery
5. Ship Dock & Warehouse
6. Ore Mine & Dock Control Panel
7. Pickle Factory
8. Town of La Grange
9. Rock Quarry
10. IHB Crossing
11. Ice Facility
12. 150 Car Freight Yard
13. AT&SF Car Repair Shops
14. Highlands Station
15. Village of Hinsdale
16. Yard Control Panel
17. AT&SF Engine Facilities
18. Fuel Facility
19. Commuter Train Siding
20. Price Canyon
21. Mountainous Area
22. Mining Town
23. CB&Q Engine House and Turntable
24. Steam Facility Control Panel
25. Coal Mine
26. MKT Yard
27. Grain Elevators
28. MKT Engine House
29. Yard Control Panel
30. Oscar Meyer Plant
The MKT is included in our layout since Tulsa, Oklahoma was our home when our three sons were growing up. Its operation is a switchman’s delight. Although the mainlines (two loops and two wyes) are controlled from the tower (as are the mainlines of the AT&SF and the CB&Q), three control panels at bench level control the yard and engine facility, the dock and quarry, and the coal mine and lumber mill. Starting at the engine facility, several industries are adjacent including a power plant, a publishing company, coal company, Westinghouse, and a furniture factory. Off to one end of the yard is Oscar Mayer meat packing plant and cattle pens. Part of the yard serves two large grain elevators and other small businesses. A branch line serviced by industrial switch engines runs into the dock and quarry area. This can keep one or two people rather busy.

As we head out onto the MKT main, tower permission is needed, and they take control. The REA is also served by the MKT, along with warehouses under the Union Station plus a refinery. At the wye there is a small passenger station for the dock and refinery employees. A loop veers off to the right, providing continuous running of one train, reversing a train, or serves as a storage area for two trains. Taking a wye to the left, a pickle factory is also served by the MKT. We climb a 1 1/2 per cent grade, cross the IHB (where there is storage for several cars), and stop for orders at another passenger station. A junkyard, grain elevator, box factory, and space for an express car are located on a single track behind the station. As we approach the Santa Fe, we pass the ATSF facilities and interchange track as well as MKT’s own icing platform. Another passenger station comes into view as we pass through the ATSF facility. Now we head downgrade and cross over a steel-arch trestle before coming to our second wye. On the right is a hidden continuous loop, and on the left is the large coal mine and lumber mill. As we pass through the wye, we need to back up for the passenger station on the far end of the wye. This station serves the rip-roaring town for the coal miners and lumber mill workers. Steam engines and roundhouse facilities are located here, as the coal mine owners run a variety of steam locomotives from various railroads. These look perfect pulling strings of coal hoppers and...
truss-rod coaches. Here, another control panel at bench level is very busy. The coal mine operation uses the old method of pushing empty cars underneath the control tower to the power plant, and loaded cars away from the coal mine facility.

Our layout is open several days after the “O Scale West” meet in February and also by appointment. Additional layout information and photographs are also available on our website: http://oscale.homestead.com

---

**X37 Boxcars**


**Central’s Latest Releases**

- GP38-2, GP40-2, SD40-2, SD40T-2 & SD45T-2
- The finest in modern O Scale Brass. 2 or 3 rail operation. Machined brass frames and fuel tanks, Pittman motor with dual flywheels. Your choice of gear ratios, wheelsets, detail parts, etc. Custom built to your specs. Kits $650 - $800. Custom built, painted and lettered $1100 to $1400.

---

**The Public Delivery Track**

**Locomotives** - 2 rail
- Atlas...
- MTH...
- Weaver...
- K-line...

**Box Cars** - 2 rail
- Atlas...
- Weaver...
- K-line...

**Refrigerator Cars** - 2 rail
- Weaver...
- Sabreline...
- Weaver...

**Covered Hoppers** - 2 rail
- Weaver...

**Coal Hoppers** - 2 rail
- Atlas...

**Tank Cars** - 2 rail
- Atlas...

**Flat Cars, Stock Cars, MofW**

- Atlas...
- Weaver...

**Gondolas** - 2 rail
- Atlas...

**O Scale Trains** • 35
How Long Have I Wanted One of Those?

Bob Garrelts

My introduction to model railroading was the summer of 1945 give or take a year. I switched to O scale in the mid fifties while working at New York City’s Model Railroad Equipment Corp, otherwise known as “Ma Websters.” Building steam locomotives became my first love. My railroad of choice was the Erie. For years I’ve harbored a desire to build one of those huge S class Berkshires with that large Lima Ash Pan trailing truck.

The Lima truck was articulated to the locomotive main frame with the hinge pin located behind the last driver. In this configuration it became part of the frame. A drawbar pocket was built into the rear of the truck frame and the tender drawbar was connected to the locomotive at this point. The firebox ashpan sat on top the truck frame and actually moved with the truck. I believe they all included booster engines.

There are friends who have the uncanny ability to probe the recesses of other peoples minds and somehow influence them. I have such a friend, Larry Berger from Kent, Ohio. I don’t remember when we first started talking about Berkshires but somehow we got on the subject of the trailing truck. I idly mentioned that someone should make parts and patterns out of styrene. John encouraged me to keep going so the next few days were spent adding details to the sideframes and hollowing out the cavity for the equalizing lever. Most added detail was made from styrene strips and shapes. Each side ended up as two pieces held together with two locating pins. Several patterns for the other parts were fabricated including the rear drawbar pocket that formed a box. It had to have a slight taper to allow the wax to be removed from the mold.

A total of 12 styrene patterns were made and sent to Dennis Mashburn in Texas to cast. The truck frame was composed of 18 pieces. Some parts were used twice. Dennis imbedded the styrene patterns in plaster and burned them out to make a cavity. Next he poured metal into the plaster to make the set of brass masters. From these masters he made the rubber molds to make the wax pieces. The need to go to metal masters is because the rubber molds are vulcanized at 300 degrees. Now you use the rubber molds to make more wax parts. Bury the wax in plaster. Burn out the wax and pour in the metal and lo and behold, parts for the truck.

The journals and spoked wheels were in the Precision Scale catalog so the next step was to assemble the truck frames. I decided it would be easier for me to do it rather than try to explain how to do it and that way I could control any inconsistencies. The main frames needed some straightening and hand filing for proper assembly. Most of the assembly was done using a small propane torch and 60/40 rosin core solder from Radio Shack. The bottom of the cavity in each side needed a flat piece of brass soldered across the opening. It was too thin to cast. I used my Dremel tool with a cut off disc and notched the frame for each piece and soldered them in.

OK, it’s not perfect. I can see things that a professional pattern maker could do better than I was able to do. A little more thought about how and where things got attached would have helped to make assembly easier. Actually, Jerry White, the custom builder, made the parts for the shorter version of this truck but the difference would be noticeable so it was onward and upward.

This was not my first venture in having parts cast by Dennis Mashburn. I’ve made patterns for smoke box door dogs, large alligator crossheads for the Berkshire, main rods and eccentric return cranks. One thing to keep in mind is shrinkage. Depending on the medium for your patterns, shrinkage can be between 2 and 4 percent. Lastly, every scratch or dent will be reproduced by this process so be neat and careful! If I can do it, you can too. Don’t wait for someone else to make it. It might not happen so go ahead and grab some tools and have at it!

◆
Castings as received from Dennis Mashburn. Some of the smaller pieces are used twice in the frame.

Assembled frame with wheels.

Assembled frame with wheels, showing Booster engine and plumbing under the draw bar box.

Another view of the assembled truck.

Rear view of truck showing draw bar pocket and booster plumbing.

---

**RED CABOOSE**

**O Scale Wooden Refrigerator Cars**
**Ready To Run**
**Future Releases**

**RC-519 PFE "Double Herald"**

**RC-523 Italian Swiss Colony**

Metal Wheels and Kadee® Couplers Included.

---

**Item #**  **Description**
RC-511*  PFE - Western Pacific - 12 Road #s IN STOCK $52.95
RC-513*  ART - 'Shield' Herald - 12 Road #s IN STOCK $52.95
RC-514*  ART - Wahsah Flag & MP 'Buzz Saw' Herald - 6 Road #s IN STOCK $52.95
RC-519*  PFE - "Double Herald" - 12 Road #: Future Release (Kits In Stock $37.95 RC-419)
RC-523*  Italian Swiss Colony - 6 Road #: $54.95
RC-530*  PFE - "Single Herald" - 12 Road #s IN STOCK $51.95
RC-531*  Northern Pacific - 12 Road #s IN STOCK $51.95
RC-535*  Western Fruit Express/GN - 12 Road #: Future Release

---

* The entire Red Caboose product line can be seen on our website. Product information including current road numbers, built-to-order dates, color information, future releases, new products and much more.

[Website Link] WWW.RED-CABOOSE.COM

P.O. Box 250 • Mead, CO 80542 • Ph: (970) 535-4601 • Fax: (970) 535-4251 • stacktalk@aol.com
Build a PRR E1

John Sauers

Part 2

The Boiler

The boiler templates are shown in Fig 1 at half size. Template A is for the smokebox, I usually emboss rivets beyond the needed length of the rows. I don’t always trust my math and allow a little for fudging that I cut off later as I fit the pieces together. The second course, B, is the main part of the boiler. Templates C & D are the front and rear of the firebox. The firebox itself, E, needs to be shaped into a Belpaire and Wooten shape as per the photo.

The smokebox, A, is soldered into the main boiler, B. Firebox ends C & D are soldered to the front and rear of the firebox section E after it has been bent to shape. At this point I cut a hole into the front of the firebox section so it is easier to solder the boiler to it. You will also need the clearance when we install the motor. Photo A shows the formed pieces lined up for assembly.

CAB

Figure 2, the template for the cab, shows a side and half the roof with the windows cut out. You need to double this to make a complete cab. Making the rivets for the cab should be followed according to the figure. The original cabs were made from wood and had a sheet metal covering. The four large round circles on each cab side are covering large bolts from the front and rear of the cab. I embossed the four small rivets around the outside first. Then I used a center punch to make the cover impression. Practice on scrap first. In my case, the punch made the covers stick out too far so I used a small hammer to lightly flatten the covers so they appeared correct. The front and rear of the cab need rivets embossed also. Form the cab and position it on the boiler using the
drawings. Mark where the front and rear walls should be. At this point you need to make a decision. I don’t think a model is complete if it doesn’t have cab detail. I soldered the front and rear cab walls in place on the boiler. This allows the cab sides to be removed. We will detail the inside later. Photo B shows the cab parts before assembly. Photo C shows the completed cab sides and roof.

Next step is the rear firebox hood. The hood has several rivets that need to be embossed. Shape the hood to fit the belpaire and solder in place. On my model I constructed a backhead and added it to the rear of the boiler. Details later. Boiler, cab, firebox are now complete. Set it aside.

**Cylinders**

Cylinder components are shown in Photo D and the details in Fig 3. If you followed the article on building the PRR B8a the same techniques are employed here but the details are different. You will construct the crosshead guide, crosshead and valve assembly. The guide is made using rectangular brass tubing. Cut a slot in the bottom. A flat piece of brass is used to fit into the rectangular guide and this is the "shoe" of the crosshead. The crosshead itself is shaped from flat brass, and the piston rod is brass wire. The collar is brass wrapped around the rod. The remaining pieces must be made up using whatever brass you can find. Rivets are embossed on .015" sheet brass cut to fit and soldered to the side of the rectangular guide.

**Valve Gear**

Now that we have the drivers in the frame and the cylinders completed its time to add the side rods, mainrods and crossheads. Siderods and mainrods can be obtained when you order the drivers from Locomotive Workshop. I was lucky enough to have suitable parts among the many boxes of valuable junk I picked up over the years. Add the siderods and run in the main drivers before adding the mainrods and connecting to the crossheads. At this point it depends upon how crazy you are for prototypical details. If you want the valve actuators to work, you can order the parts from Precision Scale Co.

**Pilot and Lead truck**

The pilot is constructed using a casting from Precision Scale Co. The beam on the prototype engine was made out of wood. The early pointed PSC pilot is not exactly correct but you can use it. The PSC casting shows wood grain very well. (See Fig. 4) The coupler pocket is tricky as the wooden pilot needed addi-
PRR E1... cont’d.

The bracing attaches to the top of the sill and the top of the coupler. Pay attention to the details in the prototype photos. The bolts and washers are castings soldered in place. The stanchions are made from solid brass rod tapered at the top, while brass tubing forms the collar on the bottom. A brass plate with cast nuts and washer all soldered to the top of the pilot beam finishes the pilot. I added air hoses with glad hands. The skirts are made from .015” brass, shaped and soldered in place.

The lead truck can be obtained from Locomotive Workshop, with or without the wheels. I elected to get them without wheels. The first step is to check the length of the truck and correct it if too long. I used 36” spoked wheels from Precision Scale Co. Also order lead truck attachment screw that will be used to attach the lead truck through the cylinder into the boiler. The lead truck needs brakes. Using cast brass brake shoes I soldered wire between the sides of the truck with the brake shoes attached.

Next issue... the Tender
Coming this summer, the ultimate miniature reproduction of the Union Pacific 4-12-2 in versions never before modeled. Shown above is our first prototype sample, versions to be completed encompass an operating period from the mid thirties to the end of service in the fifties. Our UP ‘Nines’ will incorporate all of the features and detail that our models have become known for in addition to some new innovations. Be sure to contact us for all of the details included in our color brochure.

To receive further information, newsletters and periodic updates please contact us by any of the following means:

Post Office Box 689 • Clarkston, Michigan 48347-0689 • 248-625-6396 • Fax: 248-625-7994 • Email: gwk@kohs.com • Web: www.kohs.com
REVIEW: Southern Pacific Freight Cars, Vol. 1: Gondolas and Stock Cars
Anthony W. Thompson, Author.
Published by Signature Press, 11508 Green Rd., Wilton, CA 95693, [www.signaturepress.com]. Cost: $60 - $65 depending on source.

Reviewed by Dan Sanger

The Southern Pacific Railroad is, perhaps, best known as the western half of America’s first transcontinental route running from the Pacific Ocean over California’s rugged Sierra Mountains and across Nevada’s and Oregon’s deserts to link up with the Union Pacific’s “Overland Route” for all points east on the continent. My favorite SP scenes are of enormous cab-forward articulated steam locomotives pulling mile-long freight trains over the passes and through the snow sheds and tunnels of the famous Donner Pass, California. The SP was one of the West’s largest railroads, and in addition to the original Central Pacific transcontinental line, it eventually combined more than 300 individual railroads reaching from Oregon through California’s rich coastal, inland agricultural, mountains, and deserts, to Arizona, New Mexico, Texas, and through a variety of loads including lumber, coal, iron ore, Kaiser Steel pipe, and even sugar beets in composite cars with side extensions. At one time or another these versatile GS gondolas could be found all over the U.S. with a variety of loads.

In 1950 the Southern Pacific operated a freight car fleet of about 65,000 cars. Like all first class railroads, SP’s freight cars were chosen specifically to serve on-line customers and the commodities which they shipped and received. Twenty percent of its freight cars were gondolas and four percent were stock cars. These cars are the subject of author Anthony W Thompson’s first volume in a series planned to cover all of PS’s freight cars.

Beginning with introductory chapters on SP freight car basis such as classification, painting and numbering, author Thompson goes on in 320 pages of well-written text, 537 photographs, and 30 scale drawings to describe virtually all SP (and subsidiary lines) gondolas and stock cars from the Harriman period (1900s) through the age of the big steam railroading to the modern dieselization era (1960s) with additional information on cars before and after these periods. In builder’s photos, shop rebuilding photos, on-line industry photos and train shots, the reader is shown everything from classic early Hart “convertible” ballast gondolas, ore cars, 65’ mill gons to my favorites, the SP general service “GS” drop-bottom gondolas, and much more.

The ubiquitous GS gondolas carried a wide variety of loads including lumber, coal, iron ore, Kaiser Steel pipe, and even sugar beets in composite cars with side extensions. At one time or another these versatile GS gondolas could be found all over the U.S. with a variety of loads.

Importers have been very good to O scale modelers in the past with Precision Scale Company, Pacific Limited and Division Point offering a variety of SP GS gondolas. This is reason enough to buy the book. There is even a rare photo of an SP USRA drop bottom composite gondola just like InterMountain’s new O scale model reviewed in OST#5 (November 2002). The 250 EP&SW USRA gondolas were inherited by the SP in November of 1924 and renumbered 45904 - 46153. Many lasted through the mid 1940s. One lasted in service until 1955.

The chapters on stock cars are equally comprehensive covering all new classes and rebuilds from box cars. In addition to the many SP and subsidiary lines stock cars, the book includes some photos of sister Harriman road UP and its subsidiary lines stock cars. My favorite photos in this section are of the cab-forward powered stock trains in the High Sierras (naturally) and the loading of U.S. Cavalry horses at Fort Bliss, Texas, in 1939.

So, whether you are a train watcher, or into operations, or like to build models of rolling stock, there is something for everyone in this book. Traction modelers, especially fans of Pacific Electric’s “big Red” cars will be delighted by the coverage and photos of PE’s gondolas and stock cars under overhead electrified wires. There are no SP narrow gauge cars in this volume, but “Narrow Minded” modelers would find these gondolas and stock cars at their narrow gauge to standard gauge transfer points and yards.

I recommend this book to all OST readers and eagerly look forward to Mr. Thompson’s and Signature Press’s next volume in the series, SP Cabooses.

REVIEW: Lionel Pullman Standard PS-1 40’ Boxcar.
Lionel LLC, 50625 Richard W Blvd, Chesterfield MI 48051 http://www.lionel.com/

Reviewed by Gene Deimling

Lionel has recently released several scale freight cars in O scale. The subject of this review is a very accurate rendering of the extremely common PS-1 boxcar. This was an excellent choice for Lionel since it was built in large numbers with many of the cars painted in colorful schemes typical of the 1950s and 1960s. The forty-foot PS-1 lasted well into the 1980s and maybe later.

The model is very well rendered when compared to the drawings published in the December 1982 Mainline Modeler. The model measures within an inch on all key dimensions. This may be the most accurate PS-1 in O scale available today. Weaver has produced this car for years with less-than-perfect details. The Lionel car reflects a twenty-year improvement in tooling technology, modeling information and expecta-
tions of the modeler. Lionel’s model is toolled and produced in China, as is the trend with much of the hobby.

The model is composed of an injection molded plastic body, floor and doors. Lionel used an etched Apex roofwalk and metal ladders, grab irons, stirrups, underframe and trucks to add durability. That the model comes with separately molded details lends itself to upgrading the details. I like this particular feature a lot.

My model was painted and lettered in a scheme used by the Western Pacific on two of their PS-1 cars built in 1952. The cars were equipped with a Pullman cushioned underframe. The letter and paint looks to be fairly accurately rendered. The paint is uniformly applied with sharp printed lettering. While I have plans to do a major upgrade to the car, I will try to preserve the paint and lettering. I will replace the trucks and couplers with scale trucks and 1/4” AAR couplers. The prototype was delivered with ASF A-3 trucks that are not available in O scale. The zamac ladders and grab irons will be upgraded with a combination of Chooch parts and scratch built ladders. The underframe will be built up to represent a cushioned Pullman frame. I will replace the roofwalk with a Morton style (correct for WP) rather than the Apex supplied on the Lionel model.

While most of you may find replacing the wheels and mounting Kadee couplers is all you need. The model looks better with scale trucks as shown in the photo. Lionel has imported three different road names to date. There were three schemes offered in the first run: WP color scheme as shown in this review, the Cotton Belt and the NYC. More are coming in 2003. Like most imports, the cars will be available in a limited quantity. The PS-1 retails for $54.95 and can be found in shops that specialize in three-rail.

Rich Yoder Models has been moving forward over the last year with several different projects. The GE 70 Ton end cab should have arrived in mid February. The Phase II units will ship mid March. The C&O Caboose should be arriving in April. FUTURE PROJECTS - USRA 50 ton Mill Gondola. This car project accommodates several railroads in the east reaching into the mid west: B&O, RDG, NYC, and PRR to name a few. These models will have drop ends, full underbody detail, drop vertical brake staff, and brass trucks for $225. RESERVE NOW. GE 45 TON Centercab - This model with side rods is for that industrial park, shorelines or for that small switching layout. Rich will be taking reservations for the next several months. The anticipated build date is June with a price of $335. The PRR H21a hopper is a project that has long been requested. This project will be one of the finest cars ever built in O scale. Reservations are being taken now with cars to be delivered in August at a price of $220, or with Crown trucks at $240.

Sylvan Scale Models is proud to announce the release of our first O-Scale kit; O-3051 CN 1929 Single Sheathed Boxcar with Dreadnaught Ends. This polyurethane resin kit features a one piece body casting for easy assembly, and includes both wooden and steel doors, steps, ladders, grab irons, brake gear and decals.

Less trucks and couplers. $79.95 CDN, $59.95 US. Available at hobby shops or direct, add $7.50 S&H. Money order or cheque payments; no credit cards.

GST and PST (Ontario only) to be added to cost of kit(s) and shipping.

Ultra Scale II Models PO Box 1200 Maple Valley Wash 98038 www.choochenterprises.com

Ultra Scale II, a division of Chooch Enterprises, announces two new boxcar kits: a Northern Pacific 40’ AAR War Emergency wood sheathed boxcar, and a PRR 40’ Round Roof boxcar. Both are cast in a super-detailed one-piece resin body. Kit #662 (NP) and Kit #666 (PRR) come complete with all details (less trucks), including San Juan cou-
Product News & Reviews

Downtown Deco
4319 Rainbow Dr.
Missoula, MT 59803
406-251-8005
downtowndeco@montana.com

Downtown Deco announces the release of 3 new limited edition kits in O scale. The St Maguire Hotel, Park Station and Far East Imports are all based on the same structure which fits a 5" by 8" footprint. The kits feature crisp Hydrocal castings, laser cut wood doors, trim and windows, laser cut matte board roof, signs, a small brick storage shed and complete assembly and painting instructions. Other than the sign sets included, the only difference is the roof color. The import company also comes with a laser cut 3 wood sign. Only 100 of each kit will be made and they will not be rerun when sold out. Price is $119.95 + $5 s&h.

BTS informs us that their EBT #12 2-8-2 in On3 kits are currently in stock and the semi-kits (assembled frames drivers, rods, cylinders and motors) will be arriving soon. Kits are $750, while the semi-kits are $900. These locomotives feature photoetched brass frames, lost wax brass and pewter details castings, pewter cab, boiler and tender. Their next offering will be a Baldwin 0-6-0 circa 1895 (as used by the EBT) in both O standard and P:48. Bill Wade also mentions that there are only a few Cabin Creek coal tipples left from the limited run of 50 kits. If you want one, it’s $550. BTS is also offering the EBT Orbisonia Station in three versions, 1908, 1935 and 1955. The station will fit a space 16 x 19 inches. The station kit sells for $400.

Ed Duddy informs us he has lowered the price on his code 148 nickel silver track, both weathered and non-weathered. Weathered track is now $7.83 for a 3 foot section. Non-weathered is $7.33 per piece. The track features Delrin® ties with six to eight spikes per tie and a realistic wood grain pattern. Buy a pack of 30 sections and get a 10% discount. Buy 50 and get 15% off. Buy more than 50 pieces and the price per section drops to $6.66. Shipping is $10 minimum or 3% of the order, whichever is higher. Send $5.50 for Ed’s 2 rail catalog, $5.00 for hi-rail, or $6.50 for both ($8.50 for Priority Mail delivery).

House of Duddy
5 Tealwood Dr.
Creve Coeur, MO 63141
314-994-7319

Ed Duddy informs us he has lowered the price on his code 148 nickel silver track, both weathered and non-weathered. Weathered track is now $7.83 for a 3 foot section. Non-weathered is $7.33 per piece. The track features Delrin® ties with six to eight spikes per tie and a realistic wood grain pattern. Buy a pack of 30 sections and get a 10% discount. Buy 50 and get 15% off. Buy more than 50 pieces and the price per section drops to $6.66. Shipping is $10 minimum or 3% of the order, whichever is higher. Send $5.50 for Ed’s 2 rail catalog, $5.00 for hi-rail, or $6.50 for both ($8.50 for Priority Mail delivery).

C&O Locomotive Number Plates
Wilbur Epperly
1115 Main St
Barboursville, WV 22504
304-736-7765
www.candoplates.com

Mr Epperly is offering for the first time in O scale C&O etched brass number and builder plates. Oval number plates are available with or without numbers. Numbers are available separately. Three number plates for Hudsons and Greenbriers are offered, as are plates in Alco and Lima shapes for Kanawhas. There are 5 different Alco builder plates, 3 Baldwin, A Lima and a Rogers plate. And, he’s got a lot more. Price sheet and photos for a #10 SSAE.

E.B.T. Models
BTS
PO Box 561
Seffner, FL 33583
813-643-1105
www.btsrr.com

BTS informs us that their EBT #12 2-8-2 in On3 kits are currently in stock and the semi-kits (assembled frames drivers, rods, cylinders and motors) will be arriving soon. Kits are $750, while the semi-kits are $900. These locomotives feature photoetched brass frames, lost wax brass and pewter details castings, pewter cab, boiler and tender. Their next offering will be a Baldwin 0-6-0 circa 1895 (as used by the EBT) in both O standard and P:48. Bill Wade also mentions that there are only a few Cabin Creek coal tipples left from the limited run of 50 kits. If you want one, it’s $550. BTS is also offering the EBT Orbisonia Station in three versions, 1908, 1935 and 1955. The station will fit a space 16 x 19 inches. The station kit sells for $400.

Prairie Railway Display
23633 491 Ave
Gaylord, MN 55334
507-237-2782

Harold Storm offers a full line of Model Railroad wall mount train display cases. Woods available are Oak, Red Oak, Walnut, Cherry, Maple, and Butternut. Cases are made with acrylic sliding doors, although glass is available. The cases are made with biscuit joinery and the shelves are screwed in from the back. The shelves are grooved for wheelsets. Prairie has been making cases for more than 20 years. A 2 ‘ x 5’ case suitable for O scale models is $227. Prairie has cases in stock but will also take custom orders. Give them a call. Prairie also sells their cases through hobby shops, inquire for wholesale pricing.

Underground Railway Press
PO Box 112790S
Burke VA 22009-1279

Underground Railway Press has released its One-Source Scale Model Railroad Industry Directory for 2003. This 16th edition lists over 950 active manufacturers and publishers in N, HO, S, O and larger scales, in both standard and narrow gauges. Covered are Canadian and U.S. companies. Each listing contains the name of the company, mailing address, primary product produced and catalog requirements. Directory URP_500 is $9.95 plus $2.50 P&H. This is not available in stores but only from URP.
There has been a lot of news and happenings since my last column in issue #5. Recently, the Proto Journal website was moved to a new home and has been given a new name. The new site is called the Proto48 Modeler and can be found at this address on the web:

http://www.proto48.org/

Mike Sisk donated space for the new site. Most of the original content has been carried over to the new site. George Losse has done a great job of reworking the site and coming up with new graphics for the masthead. We hope to continue to use this platform to reach modelers inside and outside of O scale.

There are several new Proto48 products to talk about this issue. In issue #5, we started providing information on Proto48 products. We would like to continue with some new items that have either come out or are coming out shortly.

Rich Yoder Models has imported a very nice 70-ton AAR truck in Proto48. The truck is brass with steel wheels and comes fully assembled/finished. They are available in for $30/pair direct from Rich on his website. Yoder Models has announced several new diesels in Proto48 including the Baldwin S-12. The S-12 has never been done in O scale and should be real popular. If you are interested, you should contact Rick Yoder via his site and let him know of your interests.

Protocraft has finally received their shipment of Proto48 drivers for the Sunset Southern Pacific F-3 and F-5 2-10-2 locomotives. They will sell for $325 and are very limited in availability. You should contact Norm Buckhart if you are interested. His telephone number is (415) 563-1771 or by email at protocraft48@yahoo.com

Last but not least, House of Duddy is selling Proto48 flex-track in Code 138 rail. You can contact him at Otrains7@aol.com

Now that you have some idea of what is available and where to buy it, the next question is how do you start. It seems that a number of people look at Proto48 as one of those good ideas but too hard to do. I have noticed that a person who becomes interested in the gauge buys a few things and lososes interest. It is best to start out with the understanding that it will require patience and time to work in Proto48. If you have neither you should look elsewhere.

I started out with an old Atlas F-9 plastic diesel and converted it to Proto48 many years ago. This model is still a good starting point. You can pick them up at a local swap meet or on eBay. Northwest Shortline (NWSL) sells a neat conversion set including axles and gears for the model. At this point you have around $100 invested. A cheaper way is to buy only the conversion wheels from NWSL for around $10. Of course, you can also convert the Atlas SW-8/9 for the price of wheel sets from NWSL. It takes around thirty minutes. You can convert it back if you change your mind about Proto48. Older Weaver single motor drives and Red Caboose GP-9s convert quickly using NWSL replacement axles.

Next, you will need some track. House of Duddy sells flex-track and bundles of six pieces. Some retailers like High Sierra Models or Des Plaines Hobbies sell a four-foot length. This will get you up and running. Converting cars is simple. Change the trucks. If you want a simple conversion buy wheel sets from NWSL for trucks like Red Caboose or Athearn.

Turnouts will require some effort. There are no commercially available turnouts available today. You can buy lost wax nickel silver castings from High Sierra Models or Right O’ Way. Several companies sell a pre-assembled Proto48 turnouts. Turnouts made for On3 could even be reworked to standard gauge. Nearly all On3 has been built to Proto48 wheel and turnout standards. You will need to spike the turnout down to wood ties. Before long you will have the makings of a little switching layout or diorama.
Crapola
from the
Cupola

John C. Smith
Pecos River Brass

Chapter VII

This column is my story about how I got started in the brass business; how I learned business and most important my experiences in the brass business. That involves many trips to exotic places. To me, Korea fits that category.

There were two things that happened to me on my first trip to Korea in 1987, and although one is related to this business, and the other is not, they both made a profound impression on me. I asked Jun, president of GangSan Models if there were places to go to watch trains. First of all, there is NO model railroad hobby in Korea at all... none, nada, etc. There are toy and model stores, but no model trains, of American or Korean prototype. They just don’t exist. It occurs to no one to model railroads or even play with toy trains. Therefore, grabbing your camera and getting up early to “chase” trains was a strange concept to Jun, but he did just that.

Jun, his 7 year old son, Jun Hee, and I left early on a Sunday morning and went to Seoul Station to watch trains. Seoul Station is a beautiful big station that has since had a new modern mall added to it, but a very unique structure representing Korean architecture and also very functional. There are lots of trains in Korea. The freight cars are all painted dark grey, government owned and boring to look at, but the diesels are built by EMD and GE and imported into Korea, making the railroads to American standards.

The passenger trains are both subway and interurban. Some are electric and some are diesel, and Korea is far ahead of the USA in mass transit. The trains are common, crowded, and frequent. You don’t have to wait more than a few minutes for the next train. We had to buy a ticket to go down to the track level at the station for about $.50, and then we could stay as long as we wanted to watch them come and go. The high speed “bullet” trains are built by SamSung and they are very similar to the Amtrak Genesis locos. As are many things in Korea, this experience was a paradox of new trains, but with the frequency of American traffic at union station in the 1940s... modern technology and ancient architecture. It was an enjoyable day for all of us.

I was staying at the New Korea Hotel in Anyong City, about an hour south of Seoul, and away from the mainstream of international business. One morning I woke up to the sounds of drums. In my previous life I was a musician, and spent more time than I care to think about in a marching band. I knew that sound. A simple drum cadence in the distance was unmistakable. I immediately put on some clothes, went down to the lobby desk and asked them if there was a parade or celebration today. There was no way I was going to communicate with this staff. They all smiled, bowed and said “thank you very much.” I knew something was up.

I ran back up to my room, got my camera and a couple of rolls of film and ran back down to the street to see what I could find. It wasn’t long, as the Koreans like their parades in the early morning so they can get to work. The crowd started to gather on the main street, and I was immediately happy that I was very tall and they were very short. The noise in the distance started to get closer to me and to my amazement and delight, there was a parade. I was in for a treat. This was an ex-band director’s delight.

The first band was as contemporary as an American high school band, except for the uniforms (or costumes to me) in that they played “western” music with trumpets, trombones (up front where trombones belong) and all the instruments that I was accustomed to seeing. Then there were the scouts, and organizations marching, and a float or two, followed by another band, very similar to the first, but obviously from another school.

After more floats and walking groups, another band, but this time, much different. This was a band of older musicians (Korean Shriners no doubt) with more traditional Korean drums and instruments, playing a more traditional music, the Korean Folk Song in the pentatonic scale. What a treat. Then there were more floats, and more bands on floats, and more walking bands of older musicians, all playing more traditional Korean music. The parade was long.

Under the street, there was a huge shopping mall and there were sidewalk entrances to go down to these shops and to the other side of the street. After just a short time, I discovered this, and decided to cross under the street to the other side to get the sun to my back for photography. I spent a good hour shooting a bunch of film of this experience. I was so excited, the people around me were amazed. Of course, they were amazed already by my size.

Then the last music group came by and the crowd was starting to disperse. As the crowd thinned, one of the members at the end of this group noticed me. Like several of the more traditional Korean bands of older people, this band was marching single file, not in a block. I guess it made them look like a bigger group. This man was playing a wind instrument of some type. He stopped, looked at me and bowed to me. I immediately turned toward him and bowed also. He smiled, waved and quickly ran to catch up with the rest of the band. When you are 6’4”, 275 pounds and Anglo, you tend to stick out in a Korean crowd. I caught his attention and he knew that I was seeing something that I had never expected or seen before.

This has little to do with importing and trains, but it is an experience that I wanted to share with you in this column, because it is all part of the Korean experience. ♦
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!

B.T.S.
Celebrating over 20 Years of
Service since 1979

P O Box 561
Seffner, FL  33583
Phone:  813-643-1105
Fax:      813-681-7326

Web: www.btsrr.com
www.master-creations.com
E-Mail: bill@btsrr.com
S.A.S.E. for price list
$6.00 s&h on all US orders.
Full Catalog - $5.00

NCE™
goes wireless

Model railroaders’ number one choice in Digital Command Control introduces the cordless cab!

Introducing wireless technology that has all the bullet-proof performance you expect from NCE.
• Every Pro Cab™ function is available
• The only 2-way wireless DCC system available that provides full functionality
• No annoying delay in speed control.
• Features engage instantly and on the fly
• Easily retrofitted to existing NCE cabs

The NCE Power Pro DCC systems bring you power and simplicity unmatched by other manufacturers. NCE has the widest array of decoders offered for all scales and “silent running” is standard.

At your dealer now. For more information and request a free catalog email or write:

The Power of DCC

NCE Corporation • 899 Ridge Road • Webster, NY 14580 • www.ncedcc.com
Buy-Sell-Trade ads are $5 for 30 words plus your address information. Additional words are $0.25 each. Subscribers are permitted one free ad per subscription cycle. All B-S-T ads are prepaid. You may send ads by postal service with a check or money order. Ads sent by email or called in must use a credit card. See our contact info on page 2.

FOR SALE: Pecos River Brass Airslide Covered Hoppers: Northern Pacific; Santa Fe; Burlington Northern; CSX/Chessie; D&RGW; GATX; $199. 50' Grain cars: Burlington Northern; Cook Industries; Chicago & Northwestern; D&RGW; Klemme Grain; Mid-Iowa; Percival Grain; Western Pacific $255. SASE John Clemens, 5273 97 Way N, St. Petersburg, FL 33708-3752

FOR SALE: OMI Bascule Trunnion Double Track Lift Bridge. Brand new in the box, mint, $694. Tom Thorpe, 3768 Foulk Rd, Boothwyn, PA 19061

FOR SALE: Yoder Chesapeake & Ohio twin hoppers, radial ends, Dreadnaught ends, peaked ends, Oval w/notched ends, flat ends: $199 unpainted; painted, weathered, Kadees, $249. Pennsylvania Glca, Glca's. Western Maryland hoppers, Covered hoppers, Wood Chips, SASE for listings. Ph: (727) 391-3135 John Clemens, 5273 97 Way N, St. Petersburg, FL 33708-3752

WANTED: Saginaw H-10 and Saginaw E-6, as well as a Saginaw E-6 tender. Also Erie Stillwell combine made by The Car Works. Phone: 203-762-3829. Bob Morgan, 190 Sharp Hill Rd, Wilton, CT 06897-3126


FOR SALE: Sunset Models - UP 9000 4-12-2 (2nd run Dec. 2002); UP Big Boy, 4-8-8-4 (last run): SP AC6, 4-8-8-2; $1500 each. PRR P5a boxcab, $800. Overland - PRR P5a (streamlined) custom painted $850. List of O scale locomotives SASE to Dave Richter, 5426 Granot Rd, Bensalem, PA 19020 or eastrains@att.net, ph: 215-639-3864.

WANTED: Code 197 rail, brass or nickelsilver preferred. Will consider steel if priced right. Ph: 608-781-6093 or email to: scottandnancy@charter.net

FOR SALE: UP Turbine Collection. Four different MTH 2 rail locomotives, cabooses, books, VHS tapes. Send email for spreadsheet or mail SASE. Email: choo2chkk@comcast.com. Charles Ostroff, 2 Fenwick Lane, Pennsville, NJ 08070-3402

FOR SALE: SS Trainmaster, Ptd PRR; PSC Pullman HW Club-Buffet Combine; USH UP Steel Caboose; MG Clinchfield Steel Caboose (SF Type); D&RGW Water Buffalo 4-8-2. Phone: 330-758-1561 William R Burns, 7455 Westview Dr, Youngstown, OH 44512-5550

WANTED: SP Steam, Diesel and Passenger cars, any condition.

EVERYTHING MUST GO: Dismantling 50' x 27' Layout. Call or email for 6 page list. Grant Townsend. Ph: 561-310-3992 days 561-793-1395 evns. gtownsend2@aol.com

---

Stevenson Preservation Lines
O Gauge Kits and Parts from past Master Modelers
Catalog 2002-1 Price: $1.00

Baldwin Model Locomotive Works
Lobangst
Adams & Sons
Lenoir
Kansas City Kit
Hines Lines
Alexander
Pearce Tool Co.

Call 856-629-9702 Between 6 and 10 PM EST

---

O Scale Realty
Realistic Weathered Structures in O Scale Scratchbuilt From Your Photos, Plans or Ideas!
(Will also build & weather your kits)
Hotrod57ford@hotmail.com, or phone: 973-472-745B • mickman777@yahoo.com
75 Woodridge Rd, Clifton NJ 07012
Ed Alexander was an agent for custom builders Fred Icken, Paul Egolf and others in the 1920s. He promoted O scale at the 1933-34 Chicago World’s Fair where he designed an O scale layout for the C&S RR display. Ed was one of the first to establish a mail-order company specializing in O scale locomotives, cars, structures and parts. Kits ranged from a NYC #999 4-4-0 to the famed Alexander PRR GG1. Ed also produced a set of cast aluminum PRR heavyweight passenger cars marketed under the E.P. Alexander label.

Ed was also a prolific author writing in many model magazines and authored many books about prototype railroads including (but not limited to): American Locomotives in 1941; The Pennsylvania Railroad, a Pictorial History in 1947; The Collector’s Book of the Locomotive in 1966, and Down at the Depot; American Railroad Stations from 1831 to 1920 in 1970. As one can see, Ed was not one to rest on his laurels.

Ed is also considered to be the “father” of the Train Collectors Association. The group that would eventually incorporate as the TCA in 1957 first met at Ed’s residence in late 1954. Ed held TCA Honorary Charter Member number 4. Ed was inducted into the O Scale Hall of Fame in 2000 at New Orleans.

---

**Tips from Neville Rossiter**

**Perth, Australia**

When OST asked me if I was prepared to do a regular column, I thought immediately how can I, an Aussie, living in an O scale wilderness, in a city which most Americans have never heard of, tell them how to go about modeling in O Scale, a gauge that not to long ago was restricted to the older generation of Railroad modelers and some of them very good ones at that. Anyway, I accepted the challenge and here I am.

I have been in O scale for the last fifteen years. I’m no master modeler, I would describe myself as a (Can I say it) HO modeler working with O scale items mainly plastic and diesel locos to rub it in.

Anyone that knows me would say that I am obsessed with building layouts and detailing them and they wouldn’t be too far off the mark.

I like the structure side of O scale and have built many buildings, mostly kits, and virtually all modified in some way. I am also a bit of an impatient type of modeler if it takes more than three weeks to build I lose interest so I have to work fast and put a hold on the detailing.

Hopefully this column will throw some light on some fresh ideas over the next few months. So, here goes!

1. When squaring styrene pieces I use a large 12 inch flat smooth file clamped to the bench.

2. When building large O scale structures or small ones too, I cut a piece of cardboard for the base to make sure it fits the space on the layout, then transfer the cardboard onto 1/8" styrene for the base, don’t throw the cardboard away! Trim it and use it for the template for the roof (if it is flat). Again, I use 1/8" styrene.

3. I always keep a pen and note book close by when working at the bench. I use them to write down ideas or tips or a better way to build a kit then file them away.

4. Never be frightened of having too many clamps. I have a number of different types which I use constantly when building my structures. O scale buildings are big so you need plenty of clamps.

---

**Advertisers Index**

- Andersen’s Train Station 35
- AtlasO IBC
- BTS 47
- California Roadbed Co. 35
- Central Locomotive Works 35
- Chicagoland 17
- Get Real Productions 51
- Jim Hackworth Model Trains 52
- Harry Hieke 51
- House of Duddy 50
- Keil-Line Products 8
- Keystone Model Works 29
- Kohs & Co. 41
- NCE Corp 47
- O Scale Kings 56
- O Scale National Convention 52
- O Scale Realty 48
- O Scale Signals 17
- P&D Hobby Shop 17
- Pecos River Brass 48
- Precision Scale Models IFC
- PRR Brass 48
- Public Delivery Track 35
- Red Caboose 37
- Rons Books 59
- Ry Models 16
- Stevenson Preservation Lines 48
- Sunset Models Inc. 25/30
- T Bone Models 56
- Tom Thorpe 16
- Weaver 40
- Whitehall Models 51
March 2003

1, Pennsylvania, Wind Gap
Eastern “O” Scalers - Plainfield Fire Hall, 6480 Sullivan Trail - 9:00 a.m. - 1:00 p.m. Admission: $5; (spouses & children under 14 are free), tables are $16.00 for the first table (includes one admission) and $12.00 for each additional table. Info. or reservations, SASE - EOS, PO Box 1781, Bern sale. PA 19020; (215) 639-3864, eostrains@att.net Bring an index card with your name and address etc., for a $1.00 off your admission.

Weekends - Carlstadt, New Jersey
New York Society of Model Engineers 77th Anniversary Exhibition at the Society headquarters, 341 Hoboken Rd, Carlstadt, N.J. 5,000 square feet of HO and O scale 2-rail layouts, RR memorabilia and related exhibits - Fri 7 pm to 10 pm, Sat and Sun 1 pm to 6 pm. Admission: $5, children $1. Info: Andrew Brusgard, 537 Malcolm Rd, Union, NJ 07084; (908) 686-4856; Web: http://community.nj.com/cc/sme/

11 & 25, Columbus, Ohio
Central Ohio O-Scale Engineers (COOSE) Public Operating Session - Kingsdale Shopping Center, 1787 Kingsdale Ctr. Saturday 10 am to 4 pm; Sunday Noon to 4 pm. Admission is free. Info: David W. Richter, 1410 Stoneygate Ln, Columbus, OH 43221-1555.

15 & 16, Arlington Heights, Illinois
Chicago Midwest O Scale Meet sponsored by Hill's Hobby, at the Arlington Park Sheraton Conference Ctr, 3400 W Euclid Ave (hotel 847/394-2000), No 3-rail or large scale products permitted. Operating O, O Tracton & P.48 display layouts, home & club tours and model contest.

15 & 16, New Bern, North Carolina
Carolina Coastal Railroad's 8th Annual Model Train Show at the New Bern High School, 4200 Academic Drive. Seven operating layouts in N, HO, Sn3, O and G scales, New/used model railroad sale, door prizes, raffle, clinics. Show 10 am to 5 pm. Admission: $4, children under 12 free with adult. Info: Joe Hofmann, (252) 638-8872, email: hofmanjne@conncet.net

April 2003

5 & 6, Timonium, Maryland
The Great Scale Model Train Show & The All-American High-Rail & Collectors Show at the Maryland State Fairgrounds. Admission: $6, children under 12 free, family max $12. Vendor costs: 8’ tables $55 (includes 2 worker’s passes for the first table and 1 for each add’table), free electricity if you bring your own 50’ cord. Info: ECSMR, 5226 Thunder Hill Rd, Columbia, MD 21045; Howard Zone, (410) 720-1306; email: hanzo12@homecast.net; web: http://www.gmsm.com/

6, Massachusetts, Hudson
New England O Scale Train Show by Metrowest Model RR Society, O Scale 2 & 3 Rail (no tinplate), Hudson Elks Hall, 99 Park Street - 10 am - 4 pm, $4 adults, $1 children 5-12 yr., kids under 5 yrs. free with adult. White Elephant table, sales & exhibits, operating layouts, model display area, door prizes, food on site., 6 ft. vendor tables $15 before 3/1 and $20 after (helpers must be registered), setup 6:30-10 am. Info: Bill Pirtle, 196 Lincolan Street, Hudson, MA 01749; (978) 562-6879; E-mail: bill196@aol.com, Club website: www.trainweb.org/metrowest

8 & 9, 2003 - Columbus, Ohio
Central Ohio O-Scale Engineers (COOSE) Public Operating Session - Kingsdale Shopping Center, 1787 Kingsdale Ctr. Saturday 10 am to 4 pm, Sunday Noon to 4 pm. Admission is free. Info: David W. Richter, 1410 Stoneygate Ln, Columbus, OH 43221-1555.

11, Illinois, Villa Park
Scale Model Railroad Swap Meet Friday, 6:30 PM - 9:30 PM (Doors open at 5:30 PM for seller setup) Villa Park VFW Hall - 39 E. St. Charles Rd. Villa Park, IL 60181 (Located 1 mile west of IL Rt. 83 on St. Charles Rd.) Sponsored by: Prairie Scale Model Railroad Club - Located in Lombard, IL Admission: $4.00 (Spouses & Kids under 12 free with paying adult) Tables: $10.00 (One admission included with table purchase) Please limit items for sale to scale model railroad and railroad related items (NO LIONEL/TINPLATE) For more information or to reserve a table Call: 847-702-0811 (leave message). E-mail: info@psmr.org, Snail Mail: Prairie Scale Model Railroaders, PO Box 5962, Vernon Hills, IL 60061

May 2003

10, St. Paul, Minnesota

10, Merchantville, New Jersey
Cherry Valley Model RR Club Spring O Scale Train Meet. Grace Church, Maple Ave & Center St. Call Charles Jacobs 856-234-1898 for info.

June 2003

8-11, Irving, Texas (Dallas)

7 & 12, Sherman, Texas
In conjunction with the 2003 O Scale National convention, the DFW O Scale Club layout , The Texas Midland, will be open for visitors on Saturday June 7th and Thursday, June 12th to accommodate convention travelers. All are welcome. Large 28 x 22 steam & diesel layout with scenery and two staging yards. Also, 13x9x13 U shape branchline that visitors may switch. Also, PRR station and tower signs, RR memorabilia and toy train display. Hours 9 am to 10 pm both days. Located 60 miles north of Dallas, rear of 1605 Skyline Dr. on the west side of Sherman. Please call or write so we know you’re coming. Brady McGuire, 1605 Skyline Dr., Sherman TX 75092; Phone: 903-868-2726

12-15, Pueblo, Colo.
Steel City Steamer Convention of the Arkansas Valley Div. NRRA. Registration before Apr. 1, $35., $40. thereafter. Info Gerald Long 719-547-2243; www.pcisys.net/~innocpts2
Whitehall Hobbies
Specializing in Brass Locomotives
1431 Windrush Circle, Blacklick, Ohio  43004
Voice: (614) 861-0018 - Fax: (614) 861-3034
JWTrains@aol.com

Get Real Productions
Prototypical Model Railroad Photography

Whitehall Hobbies
Specializing in Brass Locomotives
1431 Windrush Circle, Blacklick, Ohio  43004
Voice: (614) 861-0018 - Fax: (614) 861-3034
JWTrains@aol.com

Get Real Productions
Prototypical Model Railroad Photography

Through the use of lighting, smoke, fog, and steam, our photographs project special moods and portray the romance of the rails. Our artistic images are all photographed in our studio and are untouched for added realism.

Call or write for our color brochure.
“Our photos make model trains look real!”

Get Real Productions
11 Out of Bounds Road
Palmyra VA 22963
Voice: 434-589-2660 • Fax: 434-589-4898 • kjkriigel@aol.com
MARKET PRICES

**OM #0289/0291 F3 AB Set, C/P D&RGW, OB**...
$1495.00

(Above in ABA Set $4550.00)

**OM #0561 ATSF FM “Erie Built” A Unit, F/P**...
$3095.00

**SS PRR I1 2-10-0, LN, 2-Available** each...
$1150.00

**PSC PRR B-6, 0-6-0 w/Straight Cylinders, LN, OB**...
$1450.00

**USH SD45, C/P SP, OB**...
$725.00

**USH SD45, C/P SP Bloody Nose**...
$1950.00

**OL GN 2-2-2 #5001/5002 Set, C/P**...
$4550.00

**OM #0561 ATSF FM “Erie Built” AB Set, C/P**...
$1795.00

**OM @0206 RS11 High Hood, N/P, OB**...
$1095.00

**OM @0206 RS11 High Hood, N/P, OB**...
$1095.00

**USH NYC L46b, Kienleischmidt Drive, C/P, OB**...
$2195.00

**USH SD45, C/P SP Bloody Nose**...
$1950.00

**USH SD45, C/P SP Bloody Nose**...
$1950.00

**USH NYC L46b, Kienleischmidt Drive, C/P, OB**...
$2195.00

**USH SD45, C/P SP Bloody Nose**...
$1950.00

Layaway Available

Where The Eagle Meets The Chief!

**2003 O Scale National Convention**
Sheraton Grand at DFW Airport • Sunday, June 8 thru Wed, June 11

Hosted by Pecos River Brass, The Prime Time Model Railroaders & The DFW O Scalers

Contact the hotel at 972-929-8400. Ask for the O Scale national room rate of $92 sgl/dbl.

NO parking charges. Room rates good for 3 days either side of the convention.

Rates – Full fare (spouse & children under 16 free): $45 • Sale tables: $40 • Banquet: $45

Activities – Trade Show/Flea Markets • Clinics • Model Contest • Layouts • Tours

For more information contact John C. Smith, Pecos River Brass, 560 E Church St, Lewisville TX 75057 USA • 972-219-0202 • john@pecosriverbrass.com
DAY 3 — One of the big draws for some folks at these “round robin” conventions is a chance to see things with their family that they would not ordinarily see. Yep, we got zoos and our elephants are bigger and better than your elephants. We got the ORIGINAL Six Flags, and water parks. We got the biggest shopping malls with the best stuff at the best prices. And we have art museums with pictures in them that use colors you’ve never seen before. We got cowboys and cowgirls, biggest honky-tonks in the world, best tasting beer, biggest slabs of dead cow muscle, and probably more bull than you’ve ever been asked to absorb. But we do have a lot of fun, and our goal at O Scale 2003 is that everyone goes home saying that they had the best time this year than they have ever had. We are going to have a party, a celebration of O Scale. We are going to have more than just a convention.

Things are changing every week with regards to the convention. I say, don’t get to the show late. Even if you don’t want to ride the Tarantula steam train, or partake of the BBQ feed after the train returns, the Sunday evening opening ceremonies are a “don’t miss.” I said we were going to have a party, a celebration of O Scale, and I mean that. After the BBQ, noted author John B. McCall will give us an overview of the Texas Eagle and the Texas Chief and tell us several first hand stories of his experiences in those days. The slide show I talked about in the Day 1 installment, has expanded to an audio visual show. It will be professionally done, and I promise you that you will remember and talk about this performance for years to come. Think back on all the O Scale Nationals that you have attended, and there are many. Remember the show(s) that everyone talks about? Well this will be that show in the future.

Clinics will be terrific. Yes, there will even be clinics for the ladies on Monday and Tuesday mornings. One of the topics will be rubber stamps, and the other is being considered as I write this. We have lined up the great John Armstrong to talk to us on Monday night. About 12 years ago at a Santa Fe Modelers Convention, I saw John Armstrong give a talk and pack the house. It is still the most fun I’ve had at a model train convention in my life. Don’t miss it. There will be clinics on benchwork, electronics, signaling, photography, detailing your scene, or if you prefer, clutter and we are still working on more clinics.

There will be a model contest and if you have never entered before, this will be the year. There will be substantial prizes, including a brass car for first place winners. Judging will be done professionally because the prize stakes are high. All kinds of categories, including photos will be offered. If you have any questions about the contest, send them to me by email (john@pecosriverbrass.com) and I will forward them to our contest chairman.

Last issue I talked about the Dallas tour, and this time I’ll talk about the Ft. Worth tour. The differences between Dallas and Ft. Worth are night and day. One famous politician from Ft. Worth always took a sack lunch with him when he had a meeting in Dallas. He would say, “I ain’t spending a dime in a city where the East petered out.” Yes, there

is big money in both cities, and big business and big talkers, but if you get in your car and drive from about 30 miles East of Dallas all the way to 30 miles West of Ft. Worth, you will see the difference in every mile.

The Ft. Worth tour will include a brief stop in downtown Ft. Worth to visit the Texas & Pacific and Santa Fe Depots. After all, tower 55 is where the Eagle Meets the Chief. September 11th has affected more than you can imagine, but as the model railroad industry is down, so is the real railroad car industry. Trinity Industry promised us tours three years ago, but as of now, there is no freight car production in Dallas/Fort Worth. They once had as many as 11 plants and now there is nothing. We will be able to visit the car rebuilding shops, north of Ft. Worth in Saginaw, and that is worth the effort.

On Monday and Tuesday, two or more busses will leave for Ft. Worth, all going to a different location with about an hour at each place. Most sites can only accommodate about 50 people at a time, so we will rotate around Ft. Worth with new groups arriving as others leave.

The convention cars have been picked and all the data is at the manufacturers. These cars will include the PRB Double Door Auto Box Car in Santa Fe Texas Chief, and Texas & Pacific... duh, “Where the Eagle Meets the Chief.” Three hundred of each car will be done in 2 road numbers, and price will be $50 each. Weaver will be producing their four bay 100 ton open hopper car lettered for the host railroad, TEXAS WESTERN. Two hundred cars in 6 road numbers will be produced. Price is $50 each. Weaver is producing 100 each of Santa Fe and Missouri Pacific 60’ ACF covered hoppers and they will come with PRB Brass underbodies for 3 bay grain service. These cars will be $85 each. All cars will come with diecast trucks, and Kadee Couplers. The only place you can buy them is at the 2003 Convention. I will not sell them before the show opens, and if there are any models left after the show, I will sell by mail order. All proceeds will go to the O Scale National 2003.

Well that is Day 3, Tuesday, and I certainly hope you have enjoyed the tour. I’ve seen it all before and can’t wait to share it with you. Whether your interest is in the trade show, clinics, tours, or just sitting around telling lies about your modeling skills, Day 3 should be worth the trip. Next issue, I’ll talk about Day 4, the finale. In case you were planning on coming early and leaving early, please reconsider. I said we were going to have a party and I mean it. Day 4 is your final day of shopping, some tours, more clinics, and the banquet. I’ll talk a lot about the banquet and party in the next issue, but if you think your $45 dollars is just a waste on over-priced, small-portion, bad service, boiled chicken, you will be wrong this year. I’ll tell you more in the finale. For those of you who wish to make it a vacation, stay the week and bring your family. The hotel will extend the rates for 3 days on either side of the convention.

John C. Smith
O Scale National 2003 Host
Corners and Module Extensions

Curves – The outside radius at the track center is 84". With an additional 6" to the edge of the module, the outside radius of the module is 90". It takes three modules to make up a 90° corner; or 12 modules to go 360°. The width of our corner modules is only 24". We tried to match our 30" wide straight modules but the size and weight of the 30" corner module made it very uncomfortable to move and transport. (See drawing Corner-24.)

We selected a distance of 4" between rails on the curves. (The suggested NMRA spec is 5".) This will clear an articulated on the inside and an 80’ passenger car on the outside track at the same time. Since the distance between track centers is 4" on the curves and 3 1/4" on the straight modules there is a need for an easement. Going into, and out of each 90° section has the same track spacing of 3 1/4". A typical corner configuration is to have three modules in a 90° corner, a straight module (six feet) then another 90° corner to complete 180° at one end. This eases stress and drag on the locomotives pulling long trains and looks better too.

The outside circumference of a single 30° module curve is 48” along the outside perimeter. This specification came from the width of a sheet of luan. The fascia on the corners are laminated with three layers of 1/4” luan with the grain of the luan going up and down (vertically). If you make the curved modules bigger for a greater radius, you can’t use 48” widths of luan. Besides, making the curves bigger means making ‘more’ modules to make up one corner.

The club owns the corner modules of the Metrowest club. This way, members can come and go without transferring ownership. Another reason for club owned corners was moving the corners. If they were member owned, all corner ‘owners’ would be required to attend all the setups. Besides, some members don’t want to own a module, but they do like to do scenery. Members can scenic ‘the club owned corners without the responsibility of storing or purchasing.

Outside Module Extension

The module extension kind of came out of necessity. Our club’s Vice President Bill Wheeler, had built a New Haven diesel-servicing module long before we had started building our club modules. But his servicing area is a dead end. So there was a decision to either make a lot of modifications on his facility to run trains through his module and make it compatible to the rest of the club modules. Or, we make some modifications to our modules so we could include his module. We chose the later for two reasons. 1.) So we could use Bill’s New Haven module without him doing a lot of work. 2.) And, because it was “different”. Most module setups go roundy-round with much of the yard and switching area inside the module loop. With the extension going outside the loop the public can see stored cars and engines, and it added visible switching. Besides, there are members in our club that had also built switching type modules with lots of switching and storage tracks. These would also be right at home next to Bill’s facility.

We had to make this extension as simple as possible for us to build too. Below is the criteria we worked into the extension setup.

- The loop could be run without the extension being connected.
- There would be a minimal of “incompatible” modules.
- There would be a minimal number of pieces and be easy to assemble.
- Trains could enter the extension
from either direction.

-The extension could be added to any of the four corners of the loop.

The first criteria would be easy to meet. Just leave off the extension and ‘spike’ the switch. And, in case a train did go through the switch, put a nail at the end of the line so the engine and cars don’t fall the 48” to the floor. That’s a scale 192 feet.

The only construction difference between the regular corner and the extension corners is that they have a flat face rather than the curved fascia. (See the Corner-flat-front drawing.) This makes it easier to match up the extension modules to the outside of the corner. Of course, there are mainline track differences with turnouts and diamonds in the trackwork on top.

Essentially, there is only “one” dedicated six-foot module that butts up to the corner module fascia. (See the Mod-extension drawing, module “A”.) This module has an end that is contoured to match the fascia of the flat fronts of the corner modules. Thus, one end of this module has a point. There’s a block of wood (called a locating block) on the corner module to keep the point of module “A” in the same place after clamping.

Module “B” could be considered a dedicated module because it has that sweeping wye and mainline turnout and diamond. However, it is a standard sized six-foot long and 2 _ foot wide module. If not being used in the extension, this module could be used anywhere else in the module system.

Then there’s that pie wedge section “D”. This is a filler to connect the mainline coming into the wye. This can be a simple pie shaped module or it can be made into a bridge. Whichever you choose will work. But be careful! This will be a good size bridge on a curve. Be sure to make it a truss bridge to keep derailed cars from falling that scaled 192 feet to the floor.

Module “C” is optional. Remember the standard straight modules have track 6” on-center from the front fascia. This module has a turnout and diamond that can switch the mainline to either side of the module to make that the front of the next module. The unused mainline can be used as a storage track. I say this is an optional module since a standard module can be used in its place. However, without this module the viewing side of the module will always be on the same side. And it may be the wrong side. See the drawing for clarification.

Once this corner module extension project has been overcome, there are plenty more options in track designs that can be pursued! There is the extension with inside corner modules added. (See drawing Loop-&-extension drawing.) Then there’s the Loop-to-loop extension. This will take a duplication of the extension project described here. But the possibilities are endless. After thinking about some of these possibilities, I hope I’ve inspired a few clubs to “think outside the loop”. (Pardon the pun. I couldn’t resist! Jimi.)
Metro West
OScale Modular Railroad

Some references for O Scale Modules
OSN #97, Summer 1988, Ultralight Modules, Dave Miecznikowski
OSN #98, Fall 1988, Lightweights grow legs, Dave Miecznikowski
OSN #99, Winter 1988, Lightweights Turn the Corner, Dave Miecznikowski
OSN #111, Spring 1992, Modular Interchange: Transition Modules, Rich Godfrey
OSN #113, Fall 1992, Modular Interchange: Modules at Home, Rich Godfrey
OSN #114, Winter 1992, Modular Interchange: Rounding the curve, Pt I, Rich Godfrey
OSN #115, February 1993, Modular Interchange: Rounding the curve, Pt II, Rich Godfrey
OSN #117, June 1993, Modular Interchange: Over the Hill, Pt I, Rich Godfrey
OSN #120, February 1993, Modular Interchange: Over the Hill, Pt II, Rich Godfrey
OSN #140, June 1997, Modular Interchange: Foldup Portable, Rich Godfrey

Add more straight mods between 90° corner mods if desired.

Locating Block
To switching modules and engine servicing facilities
6’
6’
Tracks here if this is the front
Tracks here if this is the front

How To: Get Started in 2-Rail O Scale
Realistic • Accurate • Affordable
Come Discover Modern O-Scale Models at These 2-Rail O-Scale Meets

February 13-15, 2003, San Francisco, CA area
February 14-15, 2003, Indianapolis, IN area
March 14-16, 2003, Chicago, IL area
March 15-16, 2003, Cleveland, OH area
June 1-2, 2003, Dallas, TX area
June 20-22, 2003, Washington D.C. area
September 12-13, 2003, Indianapolis, IN area
September 13-14, 2003, Chicago, IL area

Send SASE for information
Visit www.oscakings.org for links to many 2-rail O-Scale sites.

This ad runs twice a year, so check it in 6 months for meets that have been added or changed dates.
To list your 2-rail only O scale meet in this ad, please contact O Scale Kings, PO Box 428, Cottage Grove, OR 97424-9381
Ad sponsored by O Scale Kings, and the above listed meets.

T-BONE MODELS
“O” Scale
CUSTOM PAINTING & REPAIR
Dealer for Pacific Limited
Sunset & Weaver
T-Bone Models James Christensen
32264 Cleveland
Cottage Grove, OR 97424-9381
email tbone@epud.net
541-942-5237
Send SASE for information
Milk car fans have been blessed with yet another version of a wooden milk car, the prototype was built by Merchants Dispatch Transportation Company MDT and this model was imported by Lionel LLC as a 3 rail semi-scale car. A detailed review of these Lionel cars appeared in O Gauge Railroading, Run 190, December 2002, page 95. These cars are excellent candidates for 2 rail conversions. They feature diecast sprung trucks, a removable roof to reveal two milk tanks and operating side doors. They come in four lettering schemes, Hoods, Pfaudler, New Haven Dairies and REX (Railway Express). Comparing these cars to prototype photos they are very authentic except for the REX car which there never was a prototype. I would like to thank Robert Wagner for getting original lettering drawings for three of the cars and for passing them on to Bob Lavezzi who so thoughtfully offered them to Lionel to have these fine cars produced in China. Thanks Bob and Bob.

**Converting The Trucks**

The 2 rail conversion of these trucks is a simple enough matter. I found Athearn 33” Delrin wheelsets with pointed axles to be the most economical choice unless one just has to hear the “wheel clicks” on rail joints, then I would recommend NWSL wheelsets. Here then is the truck conversion process. Remove the trucks from the cars by removing the bolster screw. Then remove the side frames from the bolster by removing one screw on each frame. Be careful not to lose the truck springs.

The coupler assembly is now free of the frames but still “trapped” around the bolster assembly by four brass rivets. Drill out the four brass rivets holding the coupler mechanism and remove from bolster assembly. You will need the two piece bolster so don’t toss them away.

With an Xacto knife or a pair of diagonal cutters carefully pry out the plastic bearing inserts from side frames.

Insert two 0.020” shims or washers and re-insert the plastic bearings in the side frames. This compensates for the shorter length of the Athearn axles. Attach an 0.020” washer with ACC to each truck bolster to allow it some room to rock slightly on car.

Reassemble the trucks. Put the springs back on the side frames and tilt the springs slightly inward. Carefully slide the lower bolster into place capturing the springs on the locating pins and fixing the bolster into the slots on the side frame. Very carefully, rotate the assembly and repeat on the other side. Holding both sides frames against the lower bolster, assemble the upper bolster to the frames with the screws you removed in step 2. Slide the Athearn wheelsets into place and you are done with the truck conversion.
(Note from Joe G.: I noticed that the upper bolster might interfere with the coupler mounting if left as delivered from the factory so I used a Dremel and a cut-off wheel to remove the coupler tabs. This renders the truck unsuitable for restoration to 3 rail operation. If that bothers you, leave the tabs alone. Just be prepared for a shortened truck swing.)

**Installing the trucks and couplers**

Carefully remove the roof by prying away the sides at the slot on top of each side door so you can set the car on a block of wood to drill needed holes in floor for coupler and truck mounting.

Drill the truck mounting hole in the body bolster with a #43 drill and tap 4-40 to reinstall the trucks with 4-40 screws and springs to stabilize car body.

To mount Kadee couplers requires a shim of 0.140". I used ⅝" X ⅜" x 0.125" thick aluminum plus a 1" x ½" x 0.015" brass shim. The shim is used to solder on steam and airline fittings. The 0.125" shim could be made from wood, styrene, or brass and the airline fittings glued in place.

![Diagram of coupler mounting](image)

Take the measurements from the figure above and mark the hole locations required. I used an 0.040" piece of styrene as a shim against the inside of the end sill and located the 0.125" aluminum coupler mounting pad on the center line of the car. I then marked the hole locations and drilled and tapped for 2-56 screws. Mark the hole locations on the brass shim and drill clearance holes for 2-56 screws. Now, attach the mounting pad to the car. Then locate the brass shim and place an assembled Kadee coupler on the shim. Using the front and back mounting holes, attach the coupler box with 2-56 screws. Repeat on the other end of the car.

Check the ride height and coupler height with a coupler gauge. If you don’t have one of these, you need to get one or make one. Here are the converted car and a factory original out of the box end to end and side by side.

[Joe G. notes: The underside of the car is a bit squirrely. Lionel placed all the brake rigging on the bottom of the center sill. Although we didn’t tackle this for this article, a future project will be to remove all the factory brake rigging and reinstall it in a more prototypical manner. Ironically, the center sill has the impressions of slots cast into it where the brake fulcrums would pass through the sill. This should make it easy to convert.]

You can improve the appearance of the roof walk immensely by scribing joints in the roof walk boards about every 18-20 feet, preferably at a support saddle. With a sharp scriber press in dimples to simulate carriage bolt heads at each joint and support saddle.

Amazingly, the handholds and grab irons on this car are separately applied.
You should carefully pry them out to 0.040" away from car body with an Xacto chisel blade. On one side of the car the grab iron is not located correctly on the end of the car. Drill new holes for correct location which should be the same as on diagonal end of car.

There are a few other nice lettering schemes for this type of car, Supplee Milk and Breyers Ice Cream, to name a few and if you choose to repaint one of these cars I would use the REX version as there never was a prototype car lettered for REX. I did not have any luck removing the REX lettering chemically so I carefully scraped it off with an Xacto chisel blade without disturbing the body paint and repainted the car body with Floquil Pullman Green. The lettering should be removed for repainting as I think the heavy pad printing would show after repainting.

This is a nice addition of a milk car that has never been done before and Lionel is to be commended and encouraged to bring them out in other lettering schemes.

Ed note: These cars came in quietly in September 2002 and literally disappeared off dealers' shelves in a matter of weeks. I searched the Lionel website catalog and could find no mention of these cars. No dealer I spoke with had cars in stock and I called a dozen of the largest Lionel dealers in the country. The two cars shown here were purchased on eBay, one for $56 (about $1 over retail) and the second at a absurd price (such is the nature of auctions).

Sources tell me that Lionel will rerun these cars in different road names again in the Spring of 2003. I'm also told those nice sprung express trucks will soon be available separately for about $8 a pair as part number 610-7331-05 from Lionel dealers.
Above left & right: This is a module built on a hollow core door by Bernie Winkler. It is to show the arm chair O scaler who lives in an apartment that a lot can be done in a little space and can be quite prototypical. The diesel is a Lionel converted to 2 rail and the cars are MTH.

Above left & right: These photos were taken on the MetroWest O scale Modules described in OST this issue and last issue. That’s Dave Taylor’s Atlas SW-9. It’s been modified to be a true B&M engine by adding the outside hand railing and placing the horns to the proper position. Another of Dave’s works. This is a Red Caboose GP-7. Almost out of sight on the long hood he’s added the box to the nose that handles the B&M commuter train nose gear. Yes, he’s added the proper louvers too. “One louver at a time from quarter round stock.”

Above left: Judging by the workers, looks like the next gondola load of scrap metal is due in any time! Above right: Looking at that couple on the seat, they are more interested in something else, than that freshly shopped New Haven Boxcar! You have seen his layout in the first issue now don’t miss Neville Rossietr’s beautiful new O scale modules coming up in future issues. Neville promises us he will describe the techniques and materials he uses to build them.

At right: A shop scene on Steve Miller’s Coos & Deschutes RR (see Steve’s letter in Reader Feedback this issue).
Above: Sam Shumaker is hard at work assembling and detailing a PSC USRA 0-8-0 kit to NYC specifications.

Left: You’ve seen this loco before in the raw in OST#2, page 46. It’s Buzz Burnley’s redetailed US Hobbies PRR K4s. Buzz did all the work, including the paint and sound system.

Above: Dick Bregler acquired a set of Joe Fischer cars from Bill Wolfer in 1980. They had been on Mack Lowry’s large layout in Ohio and were in a very dirty and dusty condition. Dick estimates they were built in the late 40’s. Shown is car #3703, a P70 coach.

Left: Pete Hess’s LIRR G-5 (a reworked Weaver model) passes a crowd of railfans out for a day of photos and fun on the Central Jersey O Scalers modular layout.

Above: Sam Shumaker is hard at work assembling and detailing a PSC USRA 0-8-0 kit to NYC specifications.

Left: A NYC H5q 2-8-2 by Sam Shumaker
Observations

Joe Giannovario, Editor/Publisher

Happy Birthday to us! Yes, friends, we’ve made it to the one year mark. Seven issues under our belt and every one of them delivered on time, as promised! It’s been quite a year for us. We started with 48 pages, 16 in color, and here we are with 64 pages and all of them are in color. One thing that has stayed pretty much the same is our content to ad ratio. Even as we added pages and new advertisers, we’ve added more of the content you’ve been asking for. Except for the Hi-Railers. I heard a lot from this group as we were starting up the magazine. As I said then (and repeat now), show me the good stuff and I will publish it. Except for a couple of photos, I still have not received any good Hi-Rail material. So, if you guys are still out there, let me hear from you.

I am very pleased with our roster of contributing editors. Bobber and Pecos John have been with us from day one. Gene and Brian came mid-year. Ted Byrne was a late addition in 2002. And I am so very pleased to welcome Neville Rossiter to the masthead. Neville will be doing a regular feature called “The Workshop.” It begins with this issue. For those of you who missed OST#1, it featured Neville’s Bay Ridge Harbour RR based on the Brooklyn, New York, harbor. However, Neville’s version is located in Perth, Australia. (You can download free copies of issues #1, #2 & #3 from our website.)

For those of you still considering entering our Design A Layout Contest, March 31, 2003 is the deadline. And remember, the minimum radius is now 36 inches.

Jimi Smith is back with Part 2 of his O scale modular article. This time he covers the all important curves and transition modules. We hope you find it useful. Modular railroads seem to be very popular these days. We have an article planned for a future issue that will show you how to make the simplest of modules for almost any space.

Since I wrote last time about Weaver’s long awaited 2-8-0, it has finally arrived. Delivery began in mid-January. Initial reports are that it is one sweet runner (even if its heritage is somewhat of a question). We’ll have a detailed review later in the year. And welcome to Weaver, Keil Line and House of Duddy as new advertisers this issue!

The most frequent request we get at O Scale Trains is for modest sized O scale layouts. Well, in this issue we give you a choice from the teeny to the humongous. Marshall Vine’s Vine Street is a mere 2 x 7 feet. Bob and Elizabeth Jakl’s pike is a whopping 34 x 78 feet. Fitting nicely in between is the Pennsylvania-Reading Seashore Line at 19 x 25 feet. Take your choice! Something for everybody.

Okay, boys and girls, let’s remember these are toys, albeit expensive ones, but toys nonetheless. And, we’ve been asking for a nice, small, steam engine for quite some time, Babbitt locos notwithstanding. So here we get what we’ve been asking for and then some trash it because it’s not perfect! I’m not saying there’s no room for discussion but, jeez, some people are really hard to satisfy. Remember, the only person who makes no mistakes is the one who does nothing.

In reality, we are experiencing the best time ever to be an O scale modeler. There are more O scale 2 rail and hi-rail models now then ever before, and most of it is affordable. The state of the art in brass production has given us some of the most exquisite models ever seen (e.g., the Kohs N&W Y6b). Advances in materials for casting resins and RTV rubber for molds allows the manufacture of limited run, high quality, rolling stock kits. Laser cutting and milling machines permit great new wooden and plastic structure kits. New die cutting techniques combined with superior injection molding materials and cheap overseas labor allows what is know as the “mass customization” of rolling stock and motive power. Companies traditionally noted for their toy-train products have started producing to-scale items that require only a change of trucks and couplers to make the O scale grade. Anyone see the K-Line NYC Hudson for under $500? It looks brass but it’s not. If they made a 2 rail version, they’d double their sales. And K-Line has scale streamlined passenger cars, too. Even Lionel made a 2 rail locomotive last year, a PRR T1. And this year, Lionel surprised us all with a scale GS gondola, PS-1 40’ box car (see the review this issue), and the wooden Milk reefers (see the conversion article in this issue).

The Southern O Scalers (S.O.S.), are a new module O scale 2 rail club and they’re seeking new members. Join them in the Atlanta-Metro area and surrounding states. Call Dan Mason 770-928-8618 or email him [danielmason@mindspring.com].

Keep high ballin’!
NEW! 50 TON WAR EMERGENCY HOPPER

Some Features Include:
- Unique construction in die-cast and ABS
- 50-ton Bettendorf die-cast sprung trucks
- Minimum radius curve (2-rail): 24"
- Full interior details
- Minimum diameter curve (3-rail): 0-27

For the 2002/2003 Fall Winter Catalog, please send $1 to the address shown below.
AAR 50’ DD Box Car in C&O, B&O, WM, & PM

ALSO in MAY
AAR 50’ DD Box w/ Opening End Door in Santa Fe and Union Pacific
AAR 50’ Single Door Box Car in CB&Q and Erie
(Undecorated kits will also be available)

IN STOCK NOW
DRGW 1951 PROSPECTOR & ROYAL GORGE NOW WITH LIGHTS & INTERIORS
(Some models available unpainted for your own road choice)

Check out our website at http://www.pecosriverbrass.com

Pecos River Brass
560 E. CHURCH • LEWISVILLE, TX 75057
Phone and Fax: (972) 219-0202
john@pecosriverbrass.com • visit our NEW website at http://www.pecosriverbrass.com