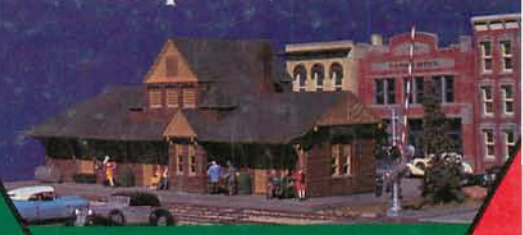
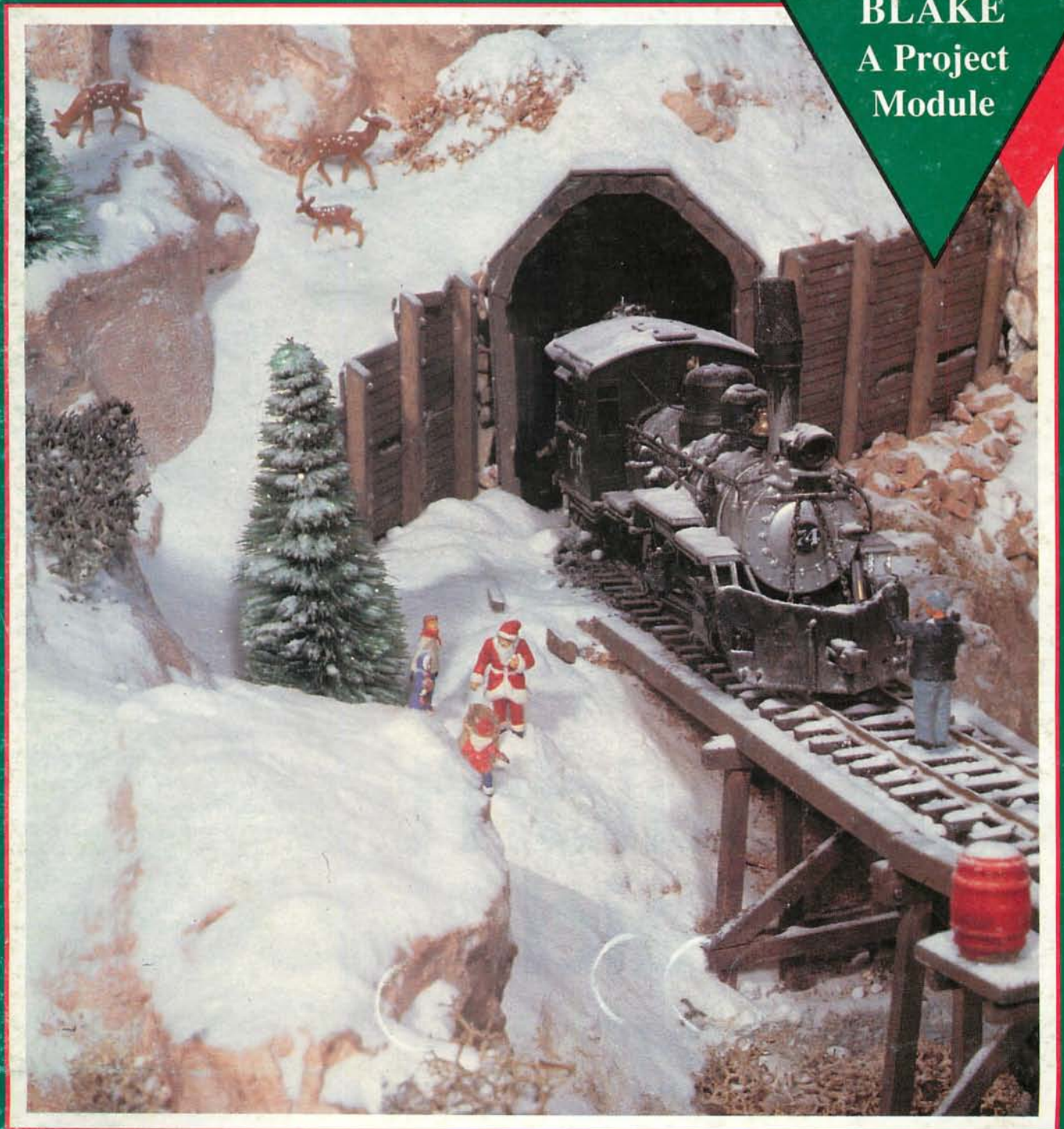
DECEMBER 1991 $2.95 (Higher in Canada)

# MODEL RAILROADING

## A Depot for Blake



## BLAKE
## A Project Module



HIGHLIGHTS OF THIS ISSUE:

- Chris Komloski's Crystal Valley & Central Railroad
- Modeling a CSX Sand Storage Tower
- Cotton Belt Caboose 'Bashing
- Behind the Scenes: Of Cliffs and Tunnel Portals
- N&W Passenger Service — Part IV
- Track Planning for Operation
- HOn30 Saw Filer's Car
- Diesel Detail: Tidewater Southern RS1


"There is an overall fineness of detail here and everything is carefully rendered in scale. The mechanism is similar to the BL2 and runs even better."

*Railroad Model Craftsman, October 1991*

"Life-Like has done an excellent job. The models are loaded with details and are a perfect match for the prototype measurements. Our sample ran smoothly straight from the box. Its low speed is excellent."

*Model Railroader, August 1991*

"For the first time we have an ALCO FA with proper contours over the windshield and through the nose. Life-Like is certainly to be commended for the accurately reproduced scale locomotives."

*Mainline Modeler, May 1991*

"Something truly remarkable—functional diaphragms with sprung doors! What's even more remarkable is that the FA2 and FB2 close couple at scale 3′ with the already installed dummy knuckle couplers. Atta boy, Life-Like!"

*Model Railroading, May 1991*

"This one runs better than the BL2 with some incredible details like see-through step treads, working side louvers and accurate rear wall details."

*Rail Model Journal, July 1991*



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PROTO 2000 SERIES™

*A New Standard of Excellence in HO Scale*

# December 1991

VOLUME 21 NUMBER 12


*Photo by Martin Lofton*

## FEATURES



## DEPARTMENTS



## ABOUT THE COVER

Santa visits with some children on Chris Komloski's Crystal Valley & Central Railroad. For more on Chris's bi-level layout see Chuck Stevens' article beginning on page 34. *Photo by Bruce Nall.* INSET: *Model Railroading's* project module of Blake starts to take form. Starting on page 52, editor Randy Lee discusses the concept behind Blake and examines Life-Like's new station. *Photo by Randy Lee.*

# TO THE EDITOR

## Vermont Railway

Dear Mr. Lee:

The article in the September issue on the Vermont Railway's rolling stock was quite interesting to me.

I would like to add to Mr. Melvin's suggestions for modeling these cars, based on his pictures and N scale models I've picked up in the past few years. Some people may find discrepancies I haven't noticed; hopefully most will be happy to know what's available (in N scale).

1. VTR 62, a covered hopper, looks just like the Atlas series 37xx covered hopper. The only problem might be if the VTR's roof hatches are square, not round.

2. VTR 524, a 40′ boxcar, looks a lot like the MicroTrains 20xxx series. The car end on the model appears to be wrong, but the rest of it looks good.

3. VTR 1200, a 52′6″ gondola, looks like the MicroTrains 46xxx series. The ends are separate pieces in this kit, so it could easily be modeled with the ends down, as in the picture.

4. VTR 293, another 40′ boxcar, looks like the MicroTrains 20xxx series. The car end looks correct; the door is wrong.

5. VTR 6007, an ACF Center Flow three-bay covered hopper, can be simulated with Atlas' four-bay car. Someone, possibly Brooklyn Locomotive Works, did a special run of these cars in the VTR scheme a year or two ago. I saw VTR 6007 yesterday in Albany, NY. It looks more yellow than the orange shown in the picture. The color seems more like that of CLP 3035 or VTR 13037, although I didn't have the magazine with me.

A comment on some of the modern boxcars. The captions state that CLP 3035, VTR 4029, and VTR 3505 can all be modeled using the same model. To me, the side panel nearest the end seems to be shorter than the other side panels on CLP 3035 and VTR 3505, while all the panels are the same length on VTR 4029.

6. CLP 3035, a 50′ boxcar, can indeed be modeled using an MDC product. #8262 (LEF&C) is already yellow, or #8250 is undecorated. The picture is scaled so that the ribs on the left end of the car line up quite well with the model; the rib spacing looks very good.

7. VTR 4029, a 50′ boxcar, looks like a MicroTrains 25xxx series product.

8. VTR 60, a 70-ton covered hopper, looks like an excellent match for V-Line's model of the same. Arnold also makes a good replica (#53xx). The picture doesn't show the hatches on the prototype; this might be a discrepancy.

9. VTR 3505, another 50′ boxcar, can be modeled using MDC #8262 or #8250, like CLP 3035 described above.

10. VTR 317 may also be modeled with MicroTrains #20xxx. The car end doesn't look exactly right, and the door is wrong.

11. The trailer pictured in the lower right on page 53 looks similar to the one advertised by MicroTrains on page 66 (of the September issue). The herald on the side seems too small and too far back on the model, but it's a start.

I hope the above adds to the value of an interesting article by Mr. Melvin.

Speaking of Vermont, the Central Vermont has a very neat yard in Burlington. It seems to have several easily modelable industries and other features — a bulk oil facility, a grain/feed unloader, a team-track ramp, minor engine facilities, and possibly other things of interest. It's all located near the Lake Champlain waterfront, and the north end of the yard is very accessible. CN, CV, GT, and GTI power have all been there. If you have anyone in northern Vermont who's looking to write an article, this would be a good subject. Perhaps Mr. Melvin is interested?

Geoff Dunn
E. Greenbush, NY

## CB&StL

Dear Mr. Lee:

I found Joe Atkinson's article "The Council Bluffs and St. Louis — From Branchline to Layout" in the October issue extremely interesting. My father was track supervisor of the Wabash for the section from Stanberry, MO, to Council Bluffs, IA, from August 1940 to July 1945. I attended junior and senior high school in Shenandoah during this period and spent many hours in the station shown in Figure 1.

My father's office was a partitioned-off area in the rear corner of the waiting room to the left of the operator's bay. The entrance to the right of the operator's bay led into another waiting room which also provided access to the room occupied by the operators and the agent as well as access to the freight room on the right or west end of the building. During the time period most familiar to me, there was a house track along the south side of the track. During major shipping periods the nurseries, I believe there were five of them at that time, used this team track to load nursery stock into boxcars. A military camp was located on the west side of Shenandoah. Before the war this was a CCC camp. However during the war it was converted into a POW camp and was occupied at different times by Italian and German POWs. I remember on several occasions seeing the German soldiers at the station loading boxcars with nursery stock.

The Wabash operated one passenger train in each direction during the time I lived in Shenandoah and to the best of my knowledge until the end of passenger service. The westbound train, No. 11, departed from St. Louis at 7:50 p.m. with both the Omaha and Des Moines sections. It arrived in Moberly at 11:10 p.m. where it was split. The Omaha section departed at 11:15 p.m. and the Des Moines section at 11:20. The Omaha section continued west on the Kansas City mainline to Brunswick (Kelly in the article), where the Omaha branch joined the main, arriving in Shenandoah at 5:56 a.m. and in Omaha at 8:20 a.m. The equipment was turned in Omaha during the day and departed Omaha at 8:20 p.m. as Train No. 14 for St. Louis. It arrived in Shenandoah at 10:07 p.m. The eastbound Omaha and Des Moines sections were joined at Moberly leaving Moberly at 4:40 a.m. with arrival in St. Louis at 7:55 a.m. Due to wartime restrictions on the availability of film, the arrival of the eastbound train at night and the arrival of the westbound train early in the morning, my photo opportunities were somewhat limited. Based upon my recollections of 45 to 50 years, I believe that the passenger trains were powered by J2 class Pacifics.

Freight service on this branch consisted of one through freight which operated, I think, at night and a local operating between Stanberry and East Switch (Council Bluffs) each way daily except Sunday. The locos were powered by Class G1 Prairies. Since I didn't see much of the through freights, I can't say for sure what power was used on these trains but, I suspect that they utilized the same Class G1s. I do not remember seeing any of the Wabash Mikes operating on this line at any time.

The station at Shenandoah was probably the only station which was operated on a three-trick (24 hours) basis between Omaha and Stanberry. I fondly remember spending many hours with the second-trick operator learning Morse code and trying to copy train orders from the Moberly dispatcher. I was a dismal failure.

Thanks for a fine article which helped me recall some fond memories. I believe Joe Atkinson has captured the spirit of this section of railroad quite well.

Ed Dabler
Bay St. Louis, MS

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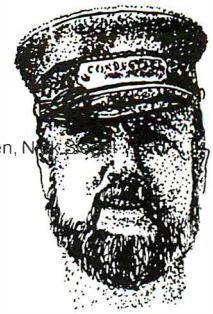
# EDITORIAL




S Danielsen, N[illegible]

## A Box Unopened

Last night, on my way home from the office, I stopped at one of my regular haunts...a hobby shop. This isn't a particularly unusual event since I frequent several of Denver's model train stores more than a few times each week. But last night's visit taught me a lesson.

As Christmas approaches, our thoughts turn to the joy of sharing the holidays with loved ones and to the delight of giving...and receiving...presents. An important part of the delight of a present is its opening. It doesn't matter whether we are the recipient or the giver; the opening of each present is looked forward to with great anticipation.

As each present is unwrapped, countless thoughts race through our minds. If we are the givers we wonder...*Is it what she (or he) wanted? Will she love it? Is it the right size? The right color?* In similar fashion we hope that our presents are just what we *wanted* (whether we *needed* them or not).

Now take a minute and think of what Christmas would be like if we exchanged presents, admired the wrapping, thanked the giver and then put them back under the tree *without ever opening them!* Sounds kind of dull, doesn't it? In fact, it sounds downright stupid. But as stupid as it may sound, many of us do this very thing regularly...and not just at Christmas.

I remember the presents that my great uncle Mike used to give my father when I was a kid. You may ask why I remember his gifts to my father rather than his gifts to me, but the explanation is really rather simple. We always *knew* what Uncle Mike's present was *before* my dad opened it—a tie that he had probably received as a gift at least ten to 20 years before but had never worn. They were always wide, loud and at least a generation out of style. Dad didn't need to open the package to know what was inside, but he always did anyway.

This anticipation of a given expectation can lead many of us into a trap. If we think we know what is inside a box, we may decide not to open it. This point was brought home to me last night at the hobby shop. Those of us who have been in the hobby for more than a few years have accumulated a wealth of information and opinions. Included in that collected body of "knowledge" is information about the manufacturers and the products they make. For many of us, this means we no longer "need" to open a box to know what is inside.

If this scenario describes you — as it does me, then it's time for you to join me in re-evaluating some long-standing opinions and to re-examine some products that may not be what we expect. As editor of *Model Railroading* I may have more opportunities than most modelers to "know"about the changes, new products and manufacturers in our hobby. But last night I learned that opening a box (with the shop's permission) could open my mind as well.

The particular box that caught my attention was from a shipment of Athearn rolling stock that had been recently received by the shop. Included in that shipment were their new IMPACK™ cars and a new rerun of their Hustler locomotive, but what interested me was some of their "regular" rolling stock included in the shipment. Even though this and several other boxes carried labels for items I have been familiar with for years, an examination of their contents revealed equipment with new paint, crisper lettering and even lettering on the car ends.

Athearn isn't the only firm making changes for the good. The past few years have brought about a rash of changes for the better among several manufacturers. This forces us to stop placing labels or making generalizations about the quality, accuracy or desirability of a particular firm's products.

It's time to open some boxes again. You may be surprised. From all of us here at *Model Railroading*, we hope that this holiday season will bring you only pleasant surprises.

Randy

Randy Lee
Executive Editor

# THE SANDHOUSE

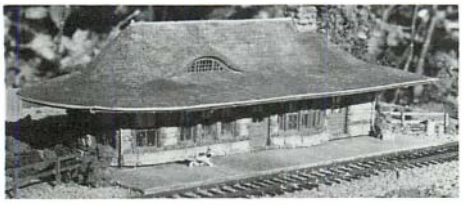
## A Product News Column

*Editor's Note: Please talk to your dealer first regarding any new products. If you would like additional information from the manufa please don't forget to include a number ten, self-addressed,*

### HO Scale


*Wm. K. Walthers, Inc.*, 5601 W. Florist Ave., P.O. Box 18676, Milwaukee, WI 53218, has added the following new products to their HO scale line:

- Brach's Candy Factory (#439-556, $44.98) is a three-story, brick industrial building.
- Brach's single-bay Airslide® limited-run three-pack (#932-9068, $29.98).
- GMC Step Van (#439-931, two for $7.98) is a one-piece urethane body with metal wheels. Kit includes decals for various businesses, including Brach's.



*Railway Design Associates*, 241 Silver St., Monson, MA 01057, has announced their new model of the East Brookfield (MA) Station on the B&A (NYC) line. The model replicates the cut-stone construction and unique rounded end of the prototype in polyurethane. It comes complete with accessories and detailed assembly, painting and weathering instructions. Retail $49.95.

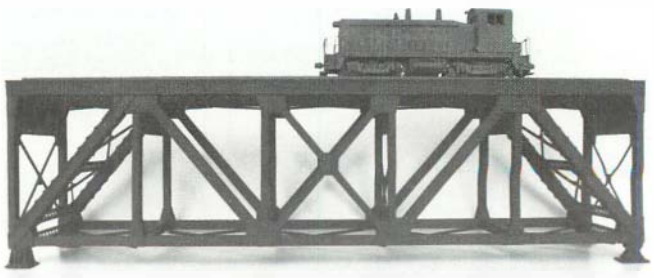

*Sunshine Models*, Box 4997, Springfield, MO 65808-4997, is offering the Erie Buckeye-end (Kit #18.1) and the C&O Deco-end (Kit #18.2) versions of the 1937 AAR 40′ steel boxcar. Both feature the Viking roof; the C&O version includes a Creco door. Half the Erie cars rode on National Type B trucks. Both series were built in 1936-37 by ACF and General American and lasted on the roads into the '70s. Retail $25.00 plus $3.00 shipping for up to five kits. MO residents add 5.975% sales tax.

*Micro Engineering Co.*, 1120 Eagle Road, Fenton, MO 63026, has released two HO through-girder bridge kits. Kit #75-520 ($8.95) is a 50′ single-track bridge, while kit #75-521 ($13.95) is a 50′ double-track version. These injection-molded plastic kits feature detailed moldings of all structural parts including plate girders, lateral bracing, crossbeams, stringers, rivet plates, etc. HO code 83 bridge Flex-Trak™ and a "concrete" trough(s) which allow the bridge to be built with either an open or ballasted deck are also included.


*Campbell Road, Inc.*, P.O. Box 146, Winchester, KY 40392-0146, has introduced a new series of dry-transfer lettered Athearn 34′ twin hoppers with a different road number on each car.

- 610 Clinchfield — black. Number series 47000-49999.
- 630 L&N — oxide red. Number series 65200-67000.

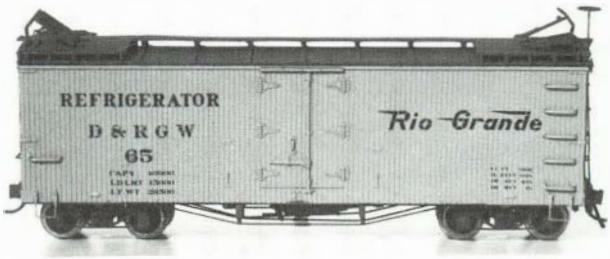
Other 50-ton Athearn hoppers include: C&O 1937 scheme (#600), C&O 1954 scheme (#605), Nickel Plate Road (#640), N&W ribbed side(#650), Wabash ribbed side (#660) and IC (#670). The underframes, weights and trucks are painted to match the car. Fully assembled, they retail for $11.99 plus $4.00 shipping for up to four cars.



*Timber Products, Inc.*, 2029 E. Howe Ave., Tempe, AZ 85281, has a number of deck and through truss bridge kits in the works (including S and O scale versions). The first BridgeMaster kit.

#116-1, is a five-panel deck truss bridge with an approximate span of 121'. It has been designed so that it can be used for either single- or double-track applications. The kits feature one-piece truss frames that are laser-scored, embossed styrene. Bridge track is not included, but Central Valley's or Micro Engineering's bridge track can be used. Estimated release date is Dec. 15 and the estimated retail is $39.95.

*Cape Line Models*, Box 493, Wilbraham, MA 01095, has added two new General Steel Casting passenger trucks to their line. Based on the 41-E truck, both a friction-bearing (#T-53) and a Fafnir roller bearing-version (#T-54) are offered. Cast in white metal (pewter) with correct right and left brake cylinders, each retails for $9.95.



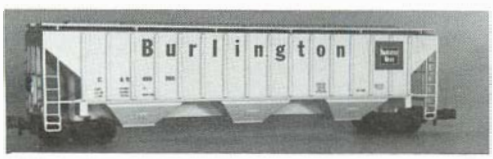

*Precision Scale Co.*, 3961 Highway 93 North, Stevensville, MT 59870, is offering plastic kits of the Denver & Rio Grande Western 30' wood reefer with either plastic or brass trucks. The cars are equipped with machined metal wheels and decals designed by Thin-film and produced by Rail Graphics. They are designed to use Kadee HOn3 couplers. PK-607 (plastic trucks) retails for $22.95; PK-608 (brass trucks) retails for $24.75.

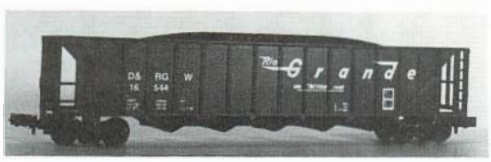
## N Scale

*Design Preservation Models*, P.O. Box 280, Crestone, CO 81131, has added the following kits to its N scale lineup:

- 507 Corner Apothecary is a three-story brick corner building.
- 508 Crestone Credit Union is a two-story stone-front structure with brick back and sides.

These kits are injection-molded styrene and are typical of American Victorian structures still found throughout the U.S. Each retails for $6.98.



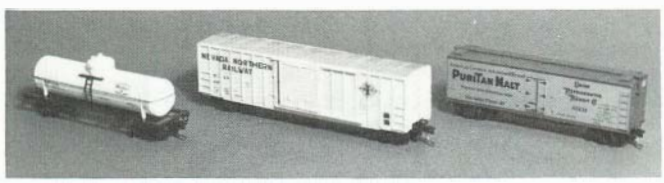




*Precision Masters, Inc.*, P.O. Box 28094, Lakewood, CO 80228-0010, has added the following cars to their line:

- C&S/Burlington Route 16-rib, 4740 cu. ft. covered hopper cars (Road Nos. 459005 and 459019) are gray with the Burlington and reporting marks in red and the Burlington herald in black, red and white.
  Kit #1529...$9.25.
- Burlington Northern five-bay, rapid-discharge hopper car (Road No. 520677) is black with white lettering.
  Kit #1310-1...$7.25.
- D&RGW five-bay, rapid-discharge hopper (Road No. 16544) is black with white letttering.
  Kit #1311-1...$7.25.

*Micro-Trains*, 720 S. Grape St., Medford, OR 97501, has added the following new N scale freight cars to their line:

- Alaska Railroad 50' double-plugdoor boxcar without roofwalk (Road No. 10817) is dark blue with yellow and white lettering. Build date October 1965.
  RTR #75010...$9.85. Kit #75019...$9.15.




- PuriTan Malt 40' double-sheathed wood reefer (Road No. 40636) with plugdoor is dark boxcar red with black lettering on yellow sides and white lettering on red. For the first time, the door detail work has been printed on this Union Refrigerator Transit Co. car. Build date March 1927.
  RTR #49350...$11.85. Kit #49359...$10.50.
- Mobil ACF 39' single-dome tanker (Road No. 11129) is white with black lettering and red and blue herald. Build date March 1926.
  RTR #65120...$14.75. Kit #65129...$12.95.
- Nevada Northern Railway 50' single-door ribside boxcar (Road No. MISS 235) is antique white with aluminum roof, black lettering and black and white herald. Build date June 1980.
  RTR #25510...$9.85. Kit #25519...$9.05.

Micro-Trains is also offering a new coupler conversion kit for Life-Like's new BL2. Their 1163-series kits are offered in four colors so the modeler can match the pilot to the locomotive catwalk. The following colors are offered: black (#1163), aluminum (#1163-1), blue (#1163-2) and yellow (#1163-3). Retail $10.95.

*Microscale Industries*, P.O. Box 11950, Costa Mesa, CA 92627, has the following decals now available in N scale:

- 60-174 Old Time Billboard Reefers — Jersey Gold, "W" Brand, Midwest Hennery
- 60-614 Conrail Diesel Locos GE Factory Paint 1970-91
- 60-631 BN 20th Anniversary GP38
- 60-634 Containers — Itel, BN-Itel, Interdom, 48' — Rail-Bridge 45'
- 60-635 UP Lightweight Passenger & Special Cars 1947-91
- 60-636 UP Heavyweight Passenger & Special Cars 1947-91

- 60-637 Santa Fe Super Fleet GE Dash 8-40BW Locos
- 60-639 L&N Alco FA2 & RS3 Locos

- MC-4051 J. B. Hunt 45′ & 48′ Trailers & Tractor

These N scale decals are available for $3.00 each.

## O Scale (& Gauge)

*Cal Scale*, (a division of Bowser Mfg.), P.O. Box 322, Montoursville, PA 17754, has O scale lost-wax brass castings of the PRR antenna support system for E units (#190-3049). Retail $16.95.

*Bowser Manufacturing Co., Inc.*, P.O. Box 322, Montoursville, PA 17754, is offering O gauge restoration wheels for the following Lionel and Ives steam locomotives:

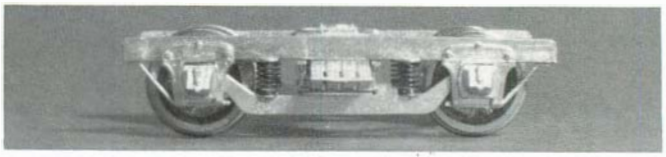
- Lionel #257, 258, 259, 261, 262 and 262E and Ives 257 and 258 — Red Set (#49044); Black Set (#49045)
- Lionel #255, 260 and 263 — Red Set (#49042); Black Set (#49043)

All sets have two geared and two plain wheels. Retail $23.00.

*Microscale Industries*, P.O. Box 11950, Costa Mesa, CA 92627, has the following decals now available in O scale:

- 48-127 UP City of San Francisco E2 Diesels
- 48-128 UP City of Los Angeles E2 Diesels
- 48-129 J. B. Hunt 45′ & 48′ Trailers & Tractor
- 48-130 CSX 48′ Insulated Intermodal Container

These O scale decals are available for $4.00 each.



*Precision Scale Co.*, 3961 Highway 93 North, Stevensville, MT 59870, is offering O scale Harriman passenger car trucks (#9139). They are Pullman-style, four-wheel Commonwealth trucks with a cast frame. They come assembled and feature a separate pedestal, 8′ wheelbase, 36″ wheels. The bottom is equalized and fully sprung. Retail $37.50 per pair.

*P&D Hobby Shop*, 31902 Groesbeck, Fraser, MI 48026, has announced the availability of their O scale F3B, F7B and F9B diesel locomotives. The units are compatible in appearance with the former Atlas and the Atlas/P&D "A" units. Operationally, they are compatible with the Atlas/P&D F9s, P&D GPs and RSDs and Weaver RS3 and FA and FB units. Undecorated, they are offered as shells ($57.50), dummy units with tanks ($165.00), single-tower powered units ($275.00) and twin-tower powered units ($295.00).

## Z Scale

*Micro-Trains*®, 720 S. Grape St., Medford, OR 97501, has added the following new Z scale freight car to their line:

- Dow Chemical Co. single-dome tanker (Road No. GATX 62536) is black with white lettering. Build date August 1956.
  RTR #14409 (with Marklin®-compatible couplers)...$11.55.
  RTR #14409-2 (with Magne-Matic® couplers)...$13.20.

## Multi Scale

*Craftworks*, (c/o John Rendall), Box 2689, Niagara Falls, NY 14302-2689 or Box 90, Baysville, Ontario, Canada P0B 1A0, has released two limited-edition craftsman kits in both HO and N scales. The Austin Bros. lumberyard includes a lumber store with warehouse, covered siding, two-tier lumbershed, machine shop and wood fencing. Retail $39.95 (HO); $19.95 (N).

The Dalton branchline yard, which is suitable for branchline and backwoods use, includes enginehouse with machine shop, small depot, branchline water tower, pump house, storage and supply sheds, tool shed, small sand shed with storage bins, derrick and ash-pit. Retail $49.95 (HO); $24.95 (N).

Both kits feature board-on-board construction with templates, instructions, color photos and metal castings. Brochure is available for $1.00 (refundable with purchase).

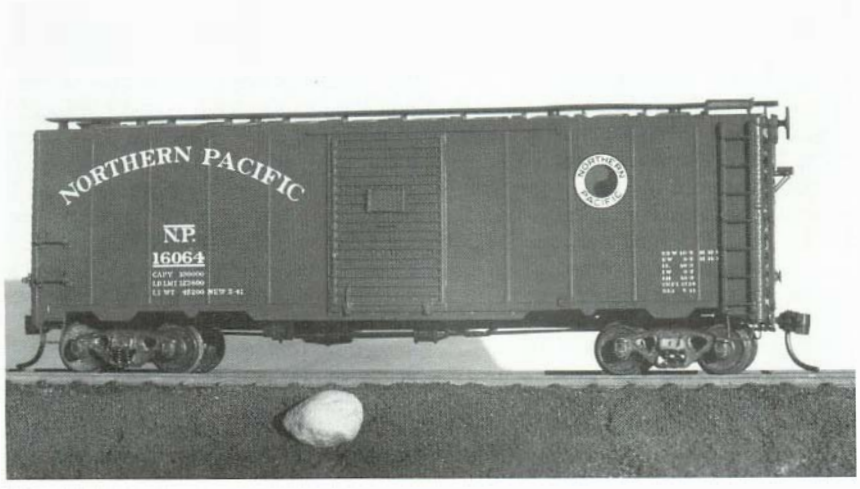

*Timberline Designs*, 7178 W. Roxbury Ave., Littleton, CO 80123, is offering a line of handmade "generic" pine trees in a variety of colors and sizes. Although made by a "bottlebrush" technique, these trees don't look like bottlebrush trees because of the variations of branch lengths and density and the application of "foliage." Northwoods green, lodge pole green and deadwood brown are the colors offered. Six ½″-2″, three 2″-4″ and two 4″-6″ trees are $5.49 per package. One 9″-12″ tree is $8.98. Add $3.00 for shipping. CO residents add 3.8% sales tax.

HO SCALE REVIEW

# Standard Boxcar by IMWX

**by Mike Nesbitt**

*Photo by the author*




**IMWX's "standard" boxcar is shown with Kadee couplers and sprung trucks, which are not included.**

What is a "Standard" boxcar? According to IMWX (Innovative Model Works), it's an AAR 1937 40' single-door boxcar...the first standardized American freight car design to be widely produced by a variety of builders and sold to a wide range of customers. IMWX recently introduced their HO scale version of the 1937 AAR boxcar, and it will set a new standard for freight car kits.

The plastic kits by IMWX are definitely not of the "shake-the-box" type. The only details that are cast on are the integral things such as rivet heads, the rivets and ribs on the doors and the ribs on the roof and Dreadnaught ends. Other details, such as ladders and grabs, brake gear and rigging, and placard boards, are separate pieces which require installation. The result, after careful assembly, is a realistic boxcar with more detail than many modelers generally see.

Having such a high degree of detail, many parts are very small. IMWX has made a real attempt to keep all the plastic details in scale. Notes regarding these small parts are included in the instructions with precautions about removing them from the sprues. They must be cut from the sprues; never try to twist them off.

A section within the four pages of instructions lists recommended tools which should be on hand before assembling this kit. Another section lists the parts included in the kit and a short list of those which are not included—couplers and weights. The actual assembly instructions are then explained in several steps. The only thing the assembly instructions lack, something that is dearly missed, is a drawing or exploded view of the car and its parts.

The car itself is very nicely done. The floor, ends and sides are cast as one piece. Doors are not operable, but they must be installed. Two kinds of doors, Youngstown and Superior, are included. The below-the-floor detail is quite complete and is installed rather easily. Side and end details, ladders, grabs and brake gear on the "B" end of the car, fit well without the need to enlarge the holes made to receive them. One part that truly needed fitting on the car built for this review was the brake wheel; it was just too tight for the hole in the housing.

Kadee #5 couplers were added, utilizing the Kadee coupler pockets that come in each envelope. Coupler pockets come with the kit, but they required modification to be fitted with Kadees. The IMWX kit includes Walthers' rigid plastic trucks but they were not used on this particular car. This detailed car needs a set of sprung trucks, in my opinion, and a set of metal-wheeled sprung Bettendorfs from Clover House were screwed to the bolsters.

The last major piece to be glued into place, using Hebco's excellent Tenax-7R plastic welder (which was being tried for the first time), is the roof. Before doing that, however, the car needed to be weighed. With that in mind, this almost completed boxcar was rushed to the post office where accurate scales told me it weighed only two ounces. Back at the workbench, another two ounces of A-Line's tape weights were added to the floor of the car to bring the total weight up to four ounces. Then the roof was firmly glued into place.

While no difficulties were encountered during the assembly, this is not a quick-to-build car kit. It could be put together in one sitting, certainly, but the car featured here was leisurely built over the course of three evenings. This is a car that deserves to be put together well, and this one was completed when it received a clear protective dull coating to take the sheen from the paint.

The paint job on the IMWX cars is one of the very special attractions of their kits. The car, painted for the Northern Pacific in this case, comes painted a Mineral Red with the exception of the underframe, including the bolsters and crossbearers. No additional painting was done and no touch-up painting was needed.

In addition to that, the lettering on the IMWX cars is done very well. Even the smallest data printing is clearly legible and end numbers are included. Four different car numbers are available for the Northern Pacific. Several other road names plus an undecorated version are also made. The car number is listed right on the label on the end of the box, which makes shopping easier when a builder wants another number.

The detail and lettering on the IMWX kits is more than very good. These features put their cars in a deluxe category. These decorated kits are priced at $13.98; the undecorated kit is priced at $10.98. They are available at model railroading hobby shops.

As I mentioned earlier, this model of the "Standard" boxcar will set a new standard for plastic HO rolling stock...a "deluxe standard."

MULTI SCALE REVIEW

# Black Diamond Miniature Coal and Coke

by Larry Smith

One problem with operating a coal-country railroad is finding enough good-looking miniature coal to fill all of those hoppers and spill on the ground. A new company has entered the market to fill this gap in our scenery requirements — Black Diamond Miniature Coal and Coke.

Black Diamond has produced four sizes of coal for their line with the possibility of a fifth being released in the near future. They are Stoker, Egg 1″-2″, Lump 4″-6″ and Mine Run. If this coal looks good it's because as one of our famous soft-drink companies used to say, "It's the real thing." Although they have labeled their coal with HO scale sizes, they could obviously be used for other scales.

I used the coal to upgrade a coal load I had from White Ground. One of the problems with cast loads is that they look like cast loads. I painted the cast load with white glue and sprinkled Black Diamond's Mine Run coal on top of the cast load. I was very pleasantly surprised. The individual pieces picked up the light and reflected it back giving the load a more vibrant look. I made coal piles around the layout and got much the same results. The nice thing about these packages is the price for the quantity you receive. Other products are priced at $4.95 for 14 oz. Black Diamond's price is $1.75 for 16 oz., a considerable savings.

One item Black Diamond provides with their coal (and coke) is a breakdown of the cost to load a hopper with each of the products on the market. I have never seen a hobby manufacturer do this type of comparison listing. They also provide a listing of the weights of various cars light and loaded with a full load of their coal and with various other materials. Again this is very useful information.

The other useful product they have is their coke. This is the first time I know of that coke has been offered in a scenery product. It has a nice gray color and comes in an assortment of sizes. You could screen the bag of material and get several sizes of coke to use in different locations. It is offered for both HO and O scale. After seeing Dean Freytag's article in *Model Railroader* on building the coke works, I got to thinking you could even paint the coke with International Orange to get the hot-coke look, fresh from the oven. The coke comes in the 16 oz. bags and sells for $2.50.

Currently these products are only available direct from Black Diamond. Contact them at: Black Diamond Hobbies, 963 N Main, Sullivan, IN 47882.

MULTI SCALE REVIEW

# Circuit Works Conductive Pen

by Erwin Chaim

*Photo by Randy Lee*


Now *here* is a very useful product! My first thought was, I wonder if it would make a turnout with a plastic frog conductive, so that at slow speed, short-wheelbased steam and diesel locomotives will not stall.

I cleaned the plastic frog thoroughly and then applied the silver. After five minutes it was dry, and I tested it with my ohm meter and, by golly it worked! After 15 minutes I lightly polished the surface with a track-cleaner eraser and ran my first diesel through the turnout. It worked beautifully. I tried it on an N gauge layout, but I see no problems using it on an HO layout as well.

As far as durability due to wear, only time will tell, but it's very easy to reapply.

My second experiment turned to grain-of-wheat bulbs on/in buildings. I applied the Circuit Works silver paint in two strips down the side of a plastic brick building. Using a hot soldering iron, a little flux and solder, I very quickly touched the soldering iron tip to the silver strip and wire. It melted right into the plastic and held in place. I then resilvered the solder joints (two on the bulb wires and two on the base that connected to the transformer). I waited five minutes and applied electric power. And again, SUCCESS. The light bulb glowed brightly!

After 24 hours of drying, one can spray or hand paint over the silver strips to make them nearly invisible. This product may now make it possible to "*wire*" *plastic* streetlights, signals and billboards where real wires cannot be concealed. Check it out. The Circuit Works Conductive Pen is available from F&H Enterprises, 7501 McFadden Ave., Huntington Beach, CA 92647. Retail is under $15.

A special insulating overcoat pen is also available but was not evaluated.

# Your trek plan for the weekend...

### ◆ ALABAMA

***Birmingham, AL***
**Event:** NMRA-SER Steel City Div., Model RRers Meet
**Date:** Nov. 29-Dec. 1, 1991, 1 PM to 6 PM (Fri.), 9 AM to 6 PM (Sat.), 1 PM to 6 PM (Sun.)
**Location:** National Guard Armory, 5601 Oporto-Madrid Blvd. S.
**Information:** Mike Broadway, 3209 Inverness Ln., Birmingham, AL 35242, (205) 991-0626

### ◆ CALIFORNIA

***San Mateo, CA***
**Event:** O Scale West Meet
**Date:** Feb. 7-9, 1992
**Location:** Dunfey Hotel
**Admission:** Family $10; Tables—first $15, additional $10 each
**Information:** Send LSSAE to: Rod Miller, O Scale West, P.O. Box 50261, Palo Alto, CA 94303

***Turlock, CA***
**Event:** 13th Annual Open House and Swap Meet, San Joaquin Valley Division, T.T.O.S.
**Date:** Dec. 1, 1991, 10 AM to 3 PM
**Location:** Arts Building, Stanislaus County Fairgrounds, 900 N. Broadway
**Admission:** $2 per person donation, family $5
**Information:** Jack Fisher, 642 Park St., Turlock, CA 95380-4734, (209) 632-3287

### ◆ DELAWARE

***Delmar, DE***
**Event:** Delmarva Model RR Club 6th Annual Holiday Open House
**Date:** Dec. 7, 8, 14, 15, 1991, 11 AM to 5 PM (Sat.), 1 PM to 5 PM (Sun.)
**Location:** Delmarva Model RR Club, 103 E. State St.
**Admission:** Free
**Information:** Charles A. Russell, (301) 749-7974 (home) or (301) 548-5515 (work)

***Delmar, DE***
**Event:** Delmarva Model RR Club Open House
**Date:** Jan. 12, 1992, 1 PM to 5 PM
**Location:** Delmarva Model RR Club, 103 E. State St.
**Admission:** Free
**Information:** Charles A. Russell, (301) 749-7974 (home) or (301) 548-5515 (work)

### ◆ FLORIDA

***Bradenton, FL***
**Event:** Sarasota Model RR Club Swap Meet
**Date:** Dec. 8, 1991, 10 AM to 2:30 PM, Close-out Auction 3 PM
**Location:** Bradenton Municipal Auditorium, 100 10th St. West
**Admission:** Adults $3, teens $1, kids 25¢
**Information:** Don Freeman, 4821 Palm Aire Dr., Sarasota, FL 34243, (813) 355-8948

***Hollywood, FL***
**Event:** Lauderdale Shoreline Model RR Club Module Show
**Date:** Nov. 23-Dec 24, 1991, Mall hours on Sat. and Sun.
**Location:** Hollywood Fashion Center Mall, 101 S. St. Rd. 7
**Admission:** Free
**Information:** Richard Azwell, 5131 SW 87 Ave., Ft. Lauderdale, FL (305) 434-6538

### ◆ ILLINOIS

***Chicago, IL***
**Event:** Lake Shore Model RR Assoc. HO Open House
**Date:** Dec. 8, 1991, 11 AM to 4 PM
**Location:** Calumet Park Field House (downstairs), 98th and Lake Michigan
**Admission:** Free admission (donations accepted)
**Information:** Dan Bissonnette (708) 331-1913 or Dan McHugh (708) 857-8484

### ◆ INDIANA

***Indianapolis, IN***
**Event:** Model RR and Toy Train Swap Meet and Sale
**Date:** Dec. 7, 1991, 10 AM to 3 PM
**Location:** Celebration Hall (former K of C Hall), 220 N. Country Club Rd.
**Admission:** Adults $2, family $3
**Information:** Rudy Stanko, 8601 Stonewall Dr., Indianapolis, IN 46231, (317) 243-7249

### ◆ MICHIGAN

***Dearborn, MI***
**Event:** Allen Park Model RR Club's 18th Annual Flea Market and Show
**Date:** Jan. 12, 1992, 11 AM to 4 PM
**Location:** Dearborn Civic Center, Michigan Ave. at Greenfield
**Admission:** Adults $2, under 12 free with adult
**Information:** A. Zombor, 12973 Wesley, Southgate, MI 48195, (313) 283-5060

***Dearborn Heights, MI***
**Event:** Div. 6, North Central Region, NMRA — 12th Annual Fall Train Show
**Date:** Dec. 1, 1991, Noon to 4 PM
**Location:** Canfield Community Center, 1801 Beech Daly Rd., South of Ford Rd.
**Admission:** Adults $2, children $.50
**Information:** John Gavasso, 29049 Kendallwood, Farmington Hills, MI 48334, (313) 553-4783

***Saginaw (Bridgeport), MI***
**Event:** NCR Div. 7 — Mid to Upper Michigan Area Meeting
**Date:** Jan. 12, 1992, 2 PM
**Location:** 1st of America Bank, 5540 Dixie Hwy., Bridgeport
**Admission:** Free
**Information:** Carl Goodman, 2065 Sunset Ln., Saginaw, MI 48604 (517) 753-7940

### ◆ NEW JERSEY

***North Haledon, NJ***
**Event:** Garden State Model RR Club 34th Anniversary Open House
**Date:** Nov. 29, 30, Dec. 1, 6-8, 13-15, 7 PM to 9 PM (Fri.), 1 PM to 5 PM (Sat., Sun.)
**Location:** 575 High Mountain Rd.
**Information:** Doug Earls, (201) 696-0336 after 5 PM

***North Haledon, NJ***
**Event:** Model Engineers RR Club of North Jersey O Scale Annual Open House
**Date:** Nov. 29, 30, Dec. 1, 6-8, 13-15, 7 PM to 9 PM (Fri.), 1 PM to 5 PM (Sat., Sun.)
**Location:** 569 High Mountain Rd.
**Admission:** Adults $3, children under 12 free with adult, otherwise $1
**Information:** Mike Yackovetsky, 1135 Green Pond Rd., Newfoundland, NJ 07435, (201) 697-1056 7-9 PM

***Union, NJ***
**Event:** Model RR Club Annual Sound and Light Show
**Date:** Nov. 29-Dec. 1, Dec. 6-8, 13-15, 1991, 7 PM to 10 PM (Fri.), Noon to 9 PM (Sat.), Noon to 6 PM (Sun.)
**Location:** Jefferson Ave.
**Admission:** Adults $4, under 12 $1.50, seniors $3, group rates available
**Information:** Ken Stiefle (evenings) (201) 373-2762 or (908) 964-8808

### ◆ NEW YORK

***Fulton, NY***
**Event:** Oswego Valley RR Assn.'s 10th Annual Christmas Town Express—Model RR Exhibit
**Date:** Dec. 14, 15, 9 AM to 9 PM (Sat.), 9 AM to 5 PM (Sun.)
**Location:** Fulton War Memorial, W. Broadway (Rt. 3)
**Admission:** Free, donations accepted
**Information:** William J. Nickolas, RD#1, Box 371, Oswego, NY 13126, (315) 342-0028

### ◆ OREGON

***Corvallis, OR***
**Event:** Corvallis Society of Model Engineers 1991 Annual Open House
**Date:** Nov. 30, Dec. 1, 7, 8, 1991, 10 AM to 5 PM
**Location:** Adair Village, 5 miles north of Corvallis on Hwy. 99W
**Admission:** Donations — adults $2, children 7-12 $1, under 7 free
**Information:** Norman Yates, 4365 NW Queens Ave., Corvallis, OR 97330, (503) 757-2525

***Portland, OR***
**Event:** Columbia Gorge Model RR Club 44th Annual Show
**Date:** Nov. 30, Dec. 1, 10 AM to 6 PM
**Location:** 2505 N. Vancouver Ave.
**Admission:** Adults $2.50, under 12 $1.25
**Information:** Phil Maggs, 2925 SE 164th Ave., Portland, OR 97236, (503) 761-9527

### ◆ PENNSYLVANIA

***Ambridge, PA***
**Event:** Ohio Valley Lines Model RR Open House
**Date:** Nov. 30, 1991, to Jan. 26, 1992, Weekends only, Noon to 6 PM
**Location:** 287 4th St. (2nd floor rear)
**Admission:** Adults $2, children $.50, under six free
**Information:** Lee Ryglinski, 4028 Forest Dr., Aliquippa, PA 15001, (412) 266-4787

***Pittsburgh (Gibsonia), PA***
**Event:** Pittsburgh Model RR Historical Society's Holiday Train Display
**Date:** Nov. 29, 30, Dec 1, 6-8, 13-15, 20-22, 26-29, Jan. 3-5, 10-12; 6 PM to 10 PM (Fri.), 11 AM to 5 PM (Sat. & Sun.); extended hours of 11 AM to 10 PM on Nov. 29 & Dec. 27 and 11 AM to 5 PM on Dec. 26
**Location:** 5507 Lakeside Dr., Gibsonia
**Admission:** Adults $3, 12 and under $1
**Information:** William Humphrey, 5507 Lakeside Dr., Gibsonia, PA 15044, (412) 444-6944

***York, PA***
**Event:** Miniature RR Club of York 48th Annual Open House & Show
**Date:** Dec. 1, 8, 15, 22, 29, 1991, 1 PM to 5 PM
**Location:** 381 Wheatfield St.
**Admission:** Adults $2, children 6-12 $.50
**Information:** Alan J. Frame, 2430 Opal Rd., York, PA 17404, (717) 767-4998

### ◆ VIRGINIA

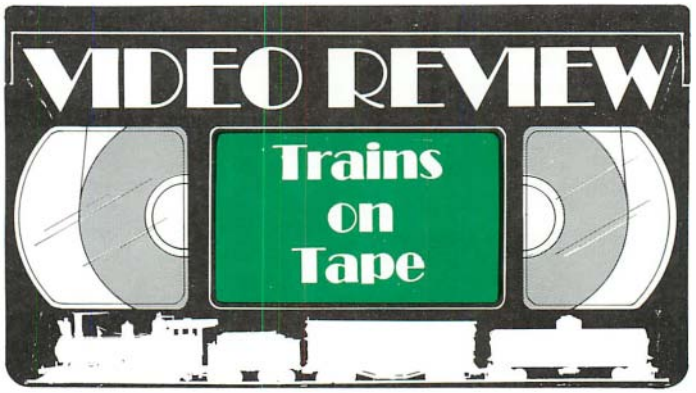
***Vienna, VA***
**Event:** Northern Virginia Model RRers Open House
**Date:** Dec. 14, 1991, Jan. 18, Feb. 15, 1992, 1 PM to 5 PM
**Location:** 231 Dominion Rd. (Washington & Old Dominion RR Station at Ayr Hill Rd.)
**Admission:** Donations accepted
**Information:** Call (703) 938-5157 Tuesday evenings or on day of open house

### ◆ CANADA

***Mississauga, Ontario***
**Event:** Erin Mills Model RR Assn. 10th Annual Beginners Clinic
**Date:** Jan. 25, Feb. 1, 1992, 12:30 PM to 5 PM
**Location:** Jan. 25—St. Andrews Presbyterian Church, 293 Queen St. (South Streetsville); Feb. 1—Sheridan United Church, 2581 Truscott Dr. (Clarkson)
**Admission:** Adults $6, 12 and under $3
**Information:** Pat Konkle, 2233 Blue Beech Cres., Mississauga, Ontario, Canada L5L 1C2, (416) 820-6114

### ◆ NEW ZEALAND

***Masterton, New Zealand***
**Event:** Wonderful Wairarapa 1992 Convention
**Date:** April 17-20, 1992
**Location:** Wairarapa College, Pownall St.
**Information:** The Secretary, Wonderful Wairarapa 1992 Convention, PO Box 627, Masterton, New Zealand




by Richard D. Forest, Esq.

# Pennsylvania Glory III
## — Herron Rail Services

The Pennsylvania Railroad was a legend throughout its life, and it truly deserved its title "Standard Railroad of the World." The Pennsy always did things in a big way, with multiple track mainlines, huge traffic volumes, by far the biggest electrification in the Western Hemisphere, and big and heavy power.

The "Standard Railroad of the World" also did things its own way, with its own design of very distinctive locomotives, flying junctions, and various types of home-designed cars, especially the famous P70 coaches that became a hallmark of the PRR. The Pennsy, as one would assume, spawned legions of eager fans and modelers (as a former PRR tower operator and train dispatcher I count myself fortunate to be part of that large fraternity). Virtually any new model that comes out is available with PRR decoration, and Bowser markets a complete line of models of PRR steam power; can any other road make such a claim?

Herron Rail Services, in the latest of its "Glory" series of videotapes, continues its coverage of the Pennsylvania Railroad that was started in "Pennsylvania Glory I" and "Pennsylvania Glory II." The footage is from mainly color 16mm movies shot during the late '30s, '40s, and early '50s by noted cinematographers John Prophet, Bob Flack, David Williams III, Ben T. Young, Jr., and Dr. Howard Blackburn.

The tape covers wide areas of the vast PRR system, and, in addition to the expected locations of Horseshoe Curve and Rockville Bridge, it shows such obscure places as "Kendel" Tower in South Elmira, NY, on the now-abandoned Sodus Point branch. There is nice footage at Elizabeth, NJ, where the four-track Central of New Jersey mainline passes under the four-track PRR mainline; a nice scene catches a class CNJ camelback ten-wheeler on a suburban run.

The tape shows virtually all types of Pennsy steam, with some real delights, such as the rarely photographed T1 duplex steam locomotives, and, rarest of the rare, the Q2 duplex. We see legions of I1 Decapods, M1 Mountains, K4 Pacifics, L1 Mikados, and everything else; some first-generation diesel power is shown at the end of the tape.

A highlight is a view of the famous "race" of the eastbound *Broadway Limited* of the PRR and the *20th Century Limited* of the NYC from Englewood, IL, on Chicago's south side; the photographer was stationed in a vestibule of the eastbound *Broadway*. The two trains pull east together, with the *20th Century* powered by a Niagara 4-8-4; this one scene justifies the tape. There are other views at Englewood, with both steam and diesels; the best of both the PRR and the NYC are captured.

There are views of steam engines taking water from track pans, which were a fixture on the busy Pennsy. The material on Horseshoe Curve is especially good, with many excellent and varied views of all kinds of great stuff. Movies from the rear of a train going up the Hill really capture the flavor of the most famous stretch of Pennsy track.

As is usual with Herron tapes, the film material is excellent quality 16mm, some black and white but mostly color, and film-to-tape transfer is excellent, being done by the Disney studios. Sound dubbing is advertised as being partly from actual recordings of PRR trains, and it is good but quality is not equal to that of the film. Musical scoring is tasteful and consistent with the dignity of the subject matter. Narration is generally informative but not excessive. An innovation is a map of the Pennsylvania system on the inside of the cover jacket, so there is a handy map reference; some mapwork in the tape itself would have been better, but any maps are welcome. There are a few parts where the editing is non-existent, such as a quick shot of a DDI in Flushing, NY, where all the rest of the scenes near that short shot are several hundred miles from Flushing. However, taken as a whole, this is a real gem for fans of the Pennsylvania, and modelers will find the varied consists especially interesting; the modeler can do just about anything and be consistent with the prototype. To the army of Pennsy fans, this is a tape in the "must have" category.

Pennsylvania Glory III, Herron Rail Services, 2016 N. Village Ave., Tampa, FL 33612, (800) 783-3886. 57 minutes. $49.95 plus $3.50 ($5.00 for Canada) shipping. FL residents add 6% sales tax.

# On TRACK

## The Lap Siding

by Jim Mansfield

*Illustrations by the author*

On page 26 of the issue is the second part of a series on track planning. A lap crossover is mentioned in that article. This type of crossover is the subject of this month's column.

On a heavily traveled single-track line, some of the advantages of double track are gained by the use of passing tracks that are at least twice as long as the length of an average train. In this way, two trains can be in the siding awaiting meets while leaving the mainline open for other trains to pass. If the two trains in the siding are of the same class (priority) and are running in the same direction, this solution is okay because the first train in can be the first out when it is time to move the trains.

If, on the other hand, the trains are of different class or are going in opposite directions, problems can exist that cause delays because of extra moves required to get the trains underway. The following is an example of a typical problem that could be faced: two third-class trains going in opposite directions must pull into the siding to allow a first-class train to pass. Each train has to pull into the end of the siding and proceed toward the other, thereby facing nose-to-nose in the siding. Once the first-class train passes, one of the third-class trains would need to back out of the siding, then proceed ahead on the mainline. Once the train is clear of the siding turnout, the remaining train could pull forward and leave the passing siding. The extra backing move by the train in the siding delays both of the third-class trains.

A track arrangement that allows much greater flexibility for the quick handling of both short and long trains is the lap passing siding. Figure 1 shows the basic setup for a lap siding. The name of this track configuration is derived from the single crossover in the middle of the siding. This crossover "laps" two shorter sidings together. It is a favorite in the prototype because of its flexibility and because a single operator stationed at the crossover can keep things moving in both timetable and train-order operations. The single operator can hand up orders and throw the two turnouts.

For the model railroad layout, all the advantages of the prototype can be used. For the above example concerning the two third-class and the first-class trains, each of the third-class trains can pull into the siding and sit nose-to-nose with the crossover between them. Once the first-class train passes, the train in the right end of the siding can take the crossover and proceed down the mainline. As soon as this train is in the clear, the other train can pull out of the left end of the siding, proceed through the right end and then pull out on the mainline. This eliminates the need for the backing move.

Another advantage of the lap siding is the use of it as a long passing track for trains longer than average or for making "running meets" with average-length trains. In the first case, a long train can pull into and stop in the siding. After the mainline train passes, the train in the siding can pull out on the main track and advance up the line.

On the other hand, if one or both of the trains are shorter, the short train can pull into the siding from, say the right end, and instead of stopping, it can run slowly while the other train coming from the left passes on the mainline. As soon as the mainline train's caboose clears the siding turnout on the left end, the turnout can be aligned for the siding so that the train in the siding can proceed out on the mainline without ever stopping. This eliminates the lost time of starting a train and is especially useful for making passes and meets on grades.

In some congested areas, the idea of the lap can be increased to three average siding lengths with two lap crossovers. If high-speed turnouts are used on the ends of the resulting long siding, almost full-speed running can be accomplished. If turnouts on the ends of the siding are the equilateral type (commonly called the wye turnout in model railroading), full-speed running can be accomplished using turnouts with number-eight frogs. This long siding, with or without the lap crossovers, is commonly called a relief track. The presence of the two lap crossovers allows this relief track to pass four average trains at a time.

Another arrangement for the lap siding is given in Figure 2. It is functionally identical but is more attractive for modeling purposes. It has the "feel" of two separate stations, thus giving the impression that the mainline is longer. It is also fun watching the trains zig-zag through the lap, particularly when two trains are moving.

In next month's portion of the track-planning series, there is a discussion of working the lap siding into the Jersey Western trackplan. The siding is designed to fit into a corner of the layout and the actual lap sits in the middle of an S-curve. This configuration aids in the view and scenery design of the passing siding.

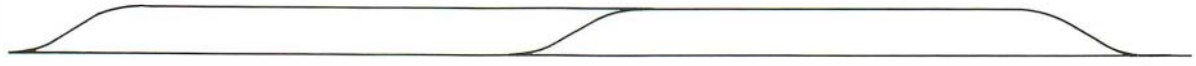


Figure 1 — The basic setup for a lap siding is simply a long (at least two train lengths) passing siding with a crossover in the middle. The siding's name is derived from the crossover "lapping" short sidings together.

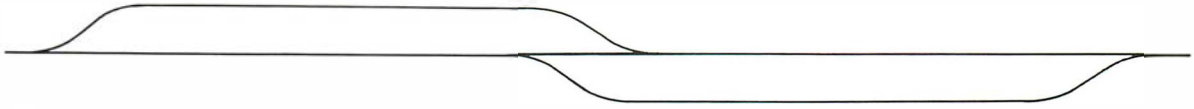


Figure 2 — This variation on the basic lap siding gives the feel of two separate stations being located along the passing siding. It is also fun to see trains passing each other as they zig-zag in the middle of the siding.


# Everything Old is New Again

by Larry Smith

The freight car kit of the '90s is a far cry from its ancestor of 30 years ago. The detailing parts and the specific prototypes available boggle the mind. The pioneers of our hobby never imagined the refinements added to the hobby as they struggled with the development of operating standards. They did not worry about what equipment operated on specific railroads.

The "decade of the freight car" had its origins in the early '50s, when some of the kit manufacturers decided to bring out kits for specific prototype cars. Pioneers such as Ulrich, Ambroid, Northeastern, Main Line, Silver Streak and LaBelle were the Westerfield, Accurail, Sunshine and McKean of today. Those first kits were either metal and/or wood. Plastic cars were first introduced in the '50s but were looked down on by the "craftsman" segment of the hobby and the term "shake the box" originated. It was the introduction of the plastic car and locomotives that led to making the model railroad available to everyone, not just the craftsman.

Car kits have evolved over the years to reflect our requirements for rolling stock. Wood and metal kits have all but vanished from the 1992 Walthers catalog and have been replaced by new kits of plastic and resin. Many of us have become so "sophisticated " that generic freight cars will no longer suffice. I find myself in the same situation, even modeling in narrow gauge. I only want East Broad Top prototype equipment.

One result of our quest for prototype fidelity has been a major increase in the price of freight cars. Plastic kits now routinely sell for $7.95 and up. Resin kits start at $20.00 and go higher. I can understand the latter as these kits have a small production run and are very labor intensive to produce. The only way to avoid spending a lot of money is to scratchbuild or find some of the older craftsman kits at the hobby shop or flea market. Recently I started building some of the older kits and have had a lot of fun. I will share my experience with you about how I obtained my kits and some of the pitfalls of building them.

## A Kit History

Four major names come to mind as top wooden kit producers from days gone by, Main Line, Tru-Scale, Northeastern and Ambroid.

Three of the companies are still in business but do not manufacture car kits today. Tru-Scale sold off the "Silver Streak" line to Walthers, who in turn sold the line to Ye Olde Huff-N-Puff, who had also purchased Main Line. Both of these lines are still produced today by them. Tru-Scale is still manufacturing their famous roadbed and other supplies but is no longer in the car business. Ambroid still manufactures adhesives and Northeastern produces wood but they no longer produce car kits.

In June 1957 Ambroid contracted with Northeastern to produce a limited run of freight cars called "1 of 5000." The first was a 50', single-sheathed, door-and-a-half boxcar based on a Southern Pacific prototype. This was the beginning of today's limited-run market. Ambroid continued to issue the 1 of 5000 kits about every six to nine months until March of 1962 when the twelfth car was issued. Kits included a Von Allmen pickle tank, NC&StL caboose, vinegar tank, Pennsylvania outside-braced reefer, Western Union material car, Mathieson dry-ice car, a double kit for a wood N&W hopper and a Milwaukee gondola, ACL phosphate hopper, combination reefer and poultry car, StLIM&S stock car, and a NYC container car.

Evidently, this concept was successful because Ambroid announced a second series of 1 of 5000 kits the following December. The second series included ten cars that were produced until 1967 when production ceased.

Beginning in December 1967, Ambroid announced a new limited-run series: the Heritage Series. It was obvious from the advertisements that Ambroid had contracted with Quality Craft to produce the new kits. Ambroid produced 18 of these kits until 1974, when the series name was changed to the Prestige Series and only one kit per year was produced. This continued until the early 1980s when Ambroid ceased distribution of the kits.

Something unusual began to occur in the early 1970s. The first production run of the 1 of 5000 kits began to show up in unexpected places. I had purchased some of the first-run kits and a couple of second-run kits and was looking for more to add to my collection. I like to build kits and wanted to add them to my fleet or display them. I was not interested in them as an investment, and I'm glad I wasn't as later events would

prove how risky this would have been. I was rummaging through some kits at a Mid-Central Region convention and found a Northeastern kit lettered Hockomock Railroad Caboose. I opened the box and found kit No. 3, the NC&StL caboose kit. I immediately purchased the kit and added it to my collection. Later that year, Division 9 of the Mid-Central Region sponsored a model railroad show in Huntington, West Virginia. The division was looking for methods of teaching people how to build craftsman-type kits at the show. The Model Railroad Industry Association advertised that kits to use for demonstrating kit construction were available to groups sponsoring events. The division sent for the package and received several types of car kits. One of the kits included in the package was half of the No. 8 kit, the N&W wooden hopper car and again it was in a Northeastern box. I immediately volunteered to build this car and after finishing the car added it to my collection.

These two situations began to raise questions about the availability of the 1 of 5000 cars. I had been unable to purchase the first kits from the original series because I didn't know of their existence and even if I had, I didn't have the skills to build them at that time. So now ten years after the first kits were issued I had found two at less than market price. Most of the original kits were being sold in flea markets at three to four times their original cost, thus driving them out of my reach.

When the new Walthers catalog was issued that year Northeastern had a listing for all of the kits. With that, the bottom fell out of the collectible market. The collectors were livid, but there was nothing they could do about the situation as Northeastern owned the rights to the kits. Ambroid continued to distribute the new line of cars until they eventually dropped out of the market. When this occurred Quality Craft added some of the more popular kits to their regular line. Quality Craft decided to concentrate on the O scale market and sold the line of cars to Gloor Craft where some of the cars are still produced today. During this time period I continued to purchase Ambroid, Northeastern, Gloor and Quality Craft kits, putting them on the shelf looking for a day to start building them. Recently I decided to start building these kits as a break from my current projects.

## Kit Overview

When you first open one of the wooden craftsman kits, new or old, you may be overwhelmed by the number of pieces. Very few, if any, parts are cut to fit, and the only things recognizable are the metal castings for the brake cylinders. There is usually a very good scale drawing of the car — something not usually found in the plastic and resin cars on the market today.

The first thing I do is see what I can replace with better castings. I usually replace the brake system with Grandt castings and the grabirons with Detail Associates. It's amazing how few freight car detailing parts were available until the mid-1980s. In the past, the only thing available were Northeastern grabirons.

The next item I replace is the wood parts used to represent steel. Those of you who have worked extensively with wood can get a very smooth surface that gives the appearance of metal. I'm one of those who can't. I learned about this trick at the 1984 Kansas City NMRA national convention from Doug Taylor. Doug models the East Broad Top, which requires a large fleet of hoppers. The only cars available at the time were the Quality Craft two- and three-bay hoppers. They took a long time to build with the sealing and sanding required to get the look of steel. Doug replaced with wood with .040 styrene and attached the metal parts from the kit to the new sides and ends. This made a very nice-looking hopper. I have since done the same thing to the horizontal-braced hopper kit for the Erie car produced by Ambroid.

One of the most unusual kits I have worked with is the Ambroid Atlantic Coast Line phosphate hopper. These cars were built with side-loading doors of wood construction. The bottom of the car was sheet steel with steel bracing. I substituted the wooden angles and channels with Plastruct angles and channels of the same size. I laminated .010 styrene to the wood sides where the steel would show and glued the angles and channels to the plastic. This not only saves time but makes for a better-looking car. If I have situations where appearances are not important I use the wood supplied with the kit. Usually, this applies to the underframe and the related parts.

If you locate an older kit and decide to build it, be careful of the metal parts. These kits contained metal parts made with the metal zamac. Zamac was an alloy that became brittle and disintegrated with age. I once had a Varney SW-7 made from this metal. I was using it to pull a ten-car train. The stress from just this small number of cars caused the metal to fracture where the cab met the hood. The entire cab section of the locomotive came apart and fell to the tracks, shorting out the layout. This same metal was used for early castings and could crumble when handled. If you are suspicious of the castings used with the kit, make a quick mold of them and cast them using the various materials available for this purpose. Another problem area encountered is with material for truss rods. Today, most of us use monofilament and Grandt turnbuckles where previously we used wire and oversized stamped-metal turnbuckles. The wire can rust and in the case of my New York Central container car, it can break.

The next step is to identify the wood used with the kit. Early Ambroid kits did not have a color code for the wood and it was "by guess and by golly" as to the correct size to use. Another problem that may be encountered is the wood being very brittle or out of square. Purchase an additional supply of sizes used in the kit just to be safe. The older kits were notorious for not supplying enough wood to finish the job.

## Finish and Lettering

Over the years, the quality of the lettering of our equipment has improved. Just as in our expectations of the quality of our cars, we have come to expect the same of our lettering. The quality decals we take for granted today were not available in the past. Very little research was done on car numbers and how specific cars were lettered. The first decals were manufactured in the 1940s (Champ just celebrated their 50th anniversary); however, most manufacturers did not include them in their kits until the early 1960s.

The first kits manufactured were simple blocks of wood using paper sides with all of the lettering and data already printed. This did not allow much flexibility in your choice of number for the car. The next development in car lettering came in the form of preprinted car sides on the wood or metal car sides rather than on paper. This again limited the flexibility for more than one car number.

When plastic cars entered the market, the tradition of prepainting the cars with just one number continued. This created problems for model railroaders that required a large fleet of cars as all kits for a specific roadname had the same road number. This has been somewhat rectified today because kit manufacturers change the number on the cars with each production run. The next evolution in the kit lettering process was the use of decals. This allowed the modeler the luxury of being able to letter the car for a specific prototype with the least amount of work.

Several construction approaches can be used when you find one of the older kits that have preprinted car sides. You can assemble the car using extra care and leave the wood for painting after assembly. I have used this method with some moderate success; however, I recommend prepainting the parts first and then attaching them to the car sides. Most kits provide the proper paint match for the car sides, thus taking the guesswork out of the paint process.

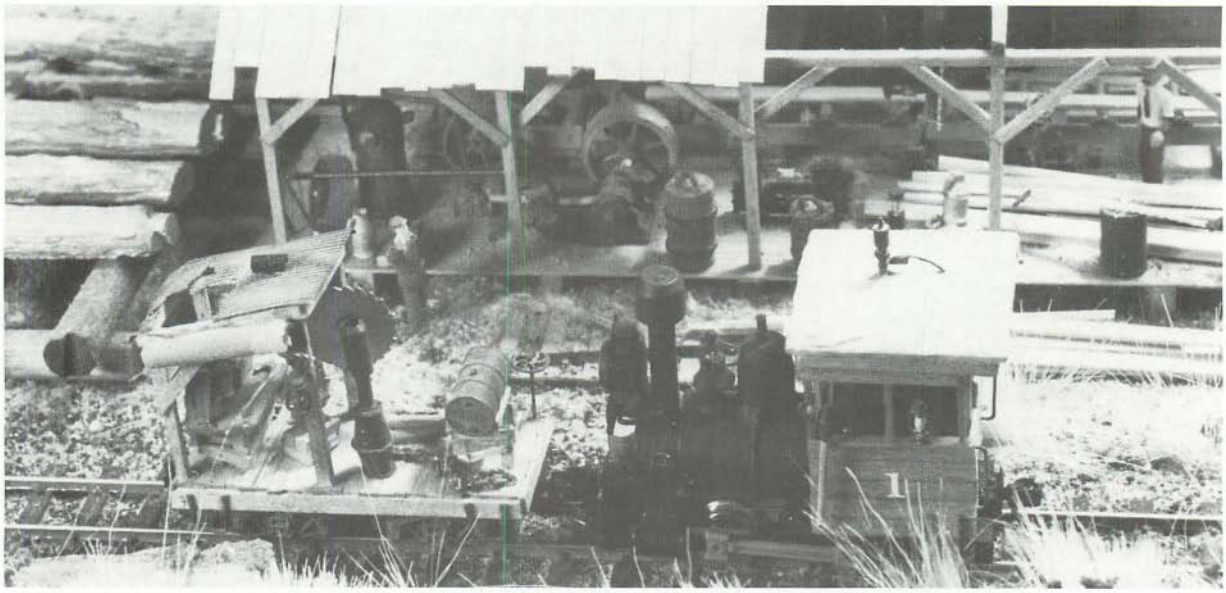
If you can find one of the older kits and have never tried them, I highly recommend you do so because you will find a very nice experience waiting for you.

Next time, learning from others.

# HOn30 Saw Filer's Car

by Dr. Allan Kaufman

*Photos by the author*



**1 – Porter No. 1 delivers the author's HOn30 saw filer's car to his Hadlyville sawmill...it's about time those saw blades were sharpened!**

One of the pleasures of modeling a narrow-gauge logging railroad is designing and building interesting rolling stock. I decided that my HOn30 railroad needed a "saw filer's" car to serve my small backwoods sawmill. This maintenance-of-way car is an enjoyable scratchbuilding project since it is based upon an easy-to-construct frame and shed design. Depending on the type of castings you select for your model, a variety of maintenance cars could be created for your particular railroad — welder's car, fire fighter's car, water car, etc.!

I began the saw car by drafting a full-scale template for the frame (Figure 1) onto a piece of thin brass sheet (K&S Engineering Products – Shim assortment). The frame was designed as a simple rectangular shape with two end and two side flaps. Once the drawing was completed (you may use my drawing as your template), I carefully cut out the simple shape using a pair of sharp scissors. Using the edge of a steel modeler's rule as a bending jig I bent the flaps of the frame to 90° angles. The shim brass sheet is thin and was very easy to fold. The folded flaps (ends and sides) of the frame should measure 3/32"; however, their size is not critical since 1/8"-wide basswood strips are glued onto the sides of the ends.

The next phase of construction involved covering the brass frame with strips of basswood (Photo 2). I used 1/8" x 1/32" wood to trim the ends and sides, and 5/32" x 1/32" basswood for the wood deck of the frame. The basswood was stained *before* gluing the pieces to the frame. A small amount of Floquil Grimy Black dissolved in Floquil Dio Sol provided a realistic "grayish" weathered tone to the wood. Once the wood was dry I trimmed the pieces for the sides, ends, and top deck planking, then glued them to the frame using epoxy cement.

After the trim and decking had dried to the frame, I constructed simple truck bolsters and coupler pads and added them to

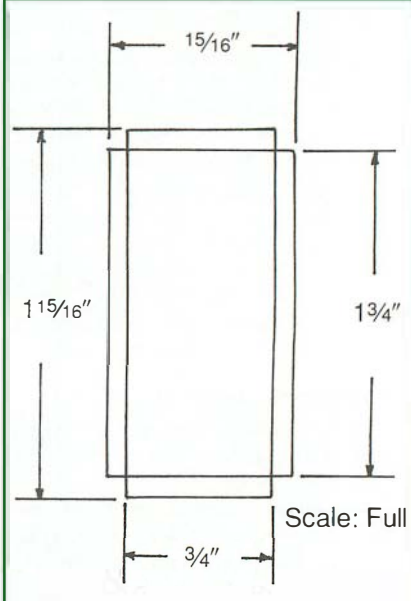



Figure 1 — Frame Layout

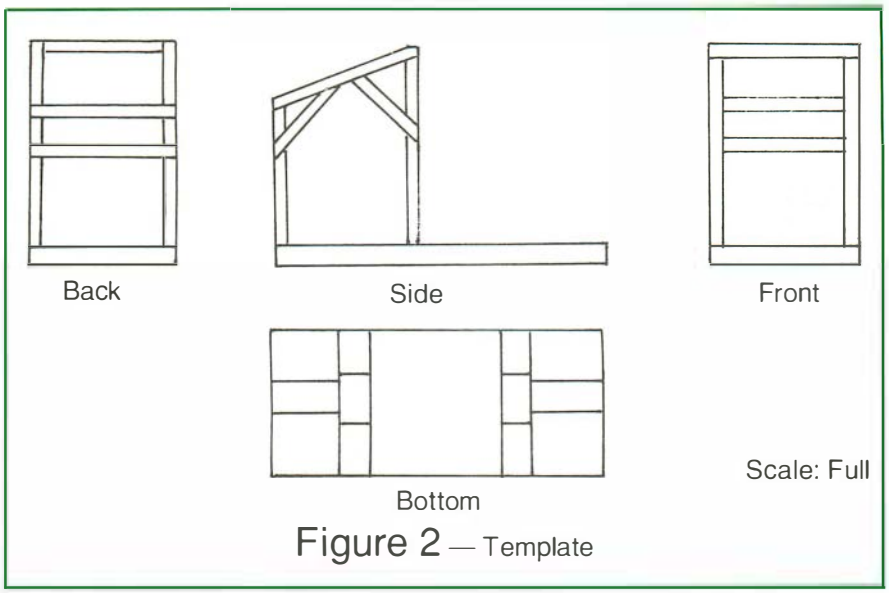


Figure 2 — Template

the underside of the car (Photo 3). Each bolster was made from two pieces of wood; a base piece 3/16" x 3/4" x 3/32", and a mounting piece 3/16" x 1/4" x 3/32". Figure 2 includes a bottom view of the car with the correct locations of the bolsters. Coupler pads were made from 3/16" x 3/8" x 3/32" basswood and epoxy bonded into position.

The next phase of construction required the development of an "open shed" on one end of my car (Photo 4). First, I drew an accurate side view template of the shed (see Figure 2). This allowed me to accurately cut the parts and bracing. The four posts were made from 1/16" x 1/16" wood, and all of the braces were constructed from 1/16"x 1/32" wood. Although the placement of the shed onto the frame is not critical, the use of the front, side and back views of the car will aid you in your construction of the model.

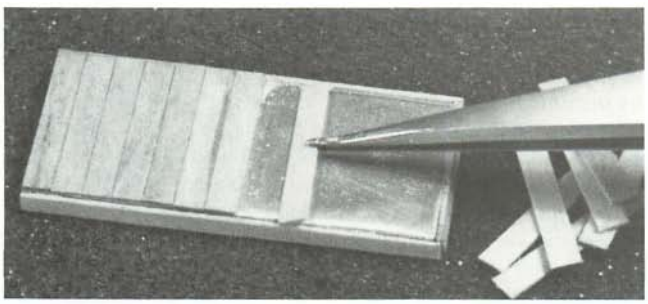
After the model was thoroughly dry, I added Micro-Trains® N gauge trucks and couplers to the car (Photo 5). The trucks were easy to mount; I simply drilled holes into each bolster, then pushed the truck's mounting pin through the truck and into the hole. The drawings in Figure 2 may be used as an accurate template for components' sizes and positioning.

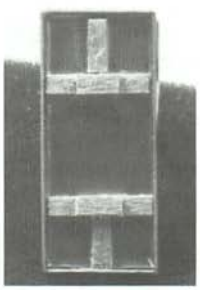
Micro-Trains® N gauge couplers were then added to the frame by mounting them onto the previously made coupler pads. Pilot holes were drilled into each pad, then the couplers were secured with small wood screws.

The model was now ready for detailing (Photo 6). I used Campbell Scale Model Corrugated Aluminum for the shed's roof. Cutting out a small section of the roof gave a weathered look to the model. Next, I painted both sides of the roof flat black and dusted it with white chalk dust to give an interesting color to the car. The roof was carefully epoxy bonded onto the bracing.

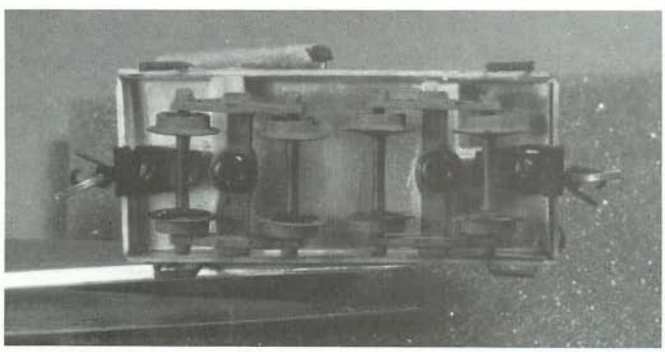
The final phase of detailing included the addition of a brake wheel, stirrup steps (Grandt Line), an anvil, stove, wood pile, and of course a little saw blade. I also placed a little water tank made from an oil drum set on a "freelanced" frame. Each of the castings was carefully painted then added to the model.

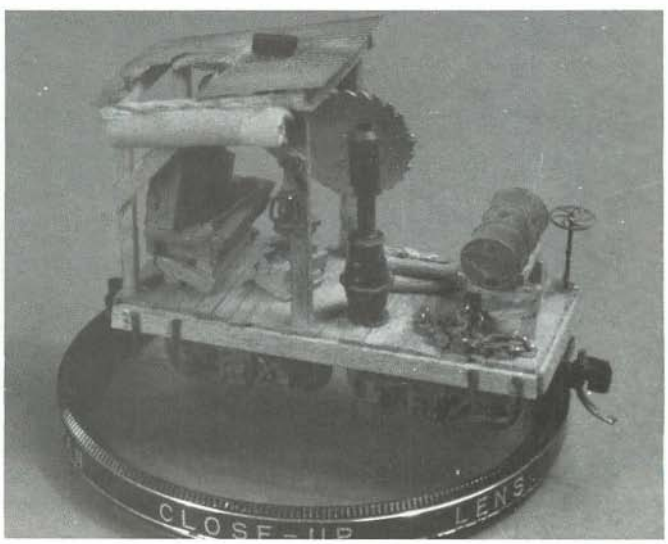
Since I didn't want the "saw filer" to get wet when it rained, I rolled up a little swatch of leather, and glued it to the shed's side — a nice little rain flap. I hope you will have an enjoyable time building this diminutive model.


2 – Pieces of basswood are fitted to the frame's top.


3 – Underside.


4 – Open-braced shed is added.


5 – Micro-Trains® N gauge trucks are easy to mount — just push their pins into the wood bolsters. Micro-Trains® N gauge couplers were added using their small wood screws.



6 – The author's completed model. ➤

# BEHIND THE SCENES

# Of Cliffs and Tunnel Portals

by Margaret Mansfield

*Photos by Jim Mansfield*

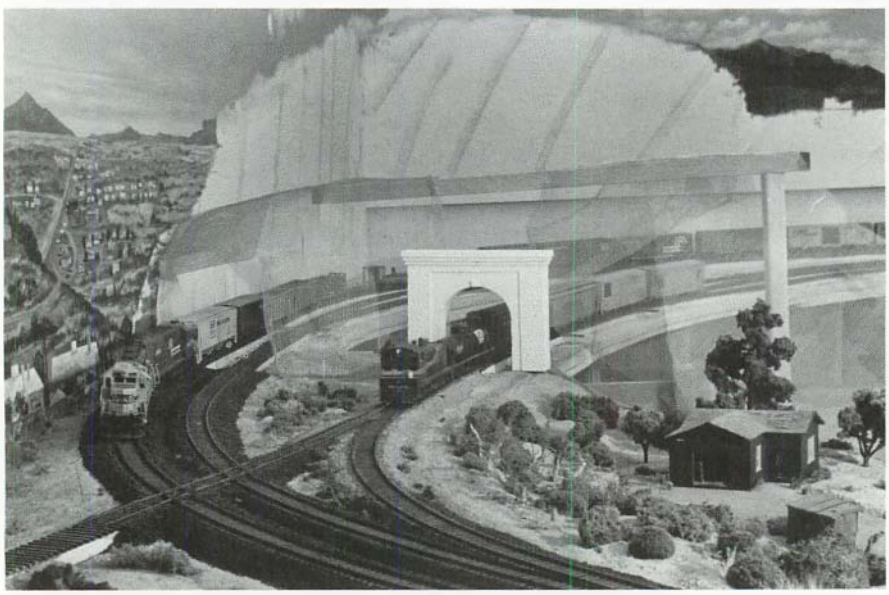
Few scenes in railroading — prototype or model — evoke the level of drama attained by the nose of a locomotive suddenly entering daylight from the darkness of a rocky tunnel. Perhaps it's the surprise of discovery when hidden cars emerge into view, culminating in the sudden finality of the last one. Or perhaps it's the contrast between the darkness inside and the lightness outside. At any rate, when skillfully modeled on the model railroad layout, a rocky cliff pierced by the portal of a tunnel creates a focal point of interest.

Such a scene was modeled on the Jersey Western layout just west of Corn Junction. Here, two railroads bore through one side of the Chupadera mountain range — the SP with its double-track mainline, and the JWRR with its single-track line from Carrizozo to Mountainair.

The rock cliff and portals were formed after the backdrop, trackwork and adjacent scenery had already been completed. Although extra care was required to protect the finished surroundings from plaster debris, this sequence of steps led to a more realistic blending of backdrop, scenery and yet-to-be-modeled mountains. The SP track nearest the backdrop was installed with sufficient clearance between the backdrop and any locomotive running on the track to allow ¾″ of plywood and plaster rockwork between the backdrop and the track. Such track design criteria must be followed when designing a trackplan; otherwise, effective scenery blending between the backdrop and three-dimensional landscaping becomes impossible.

The screen wire, paper towel and plaster-of-paris method was chosen for modeling this rock cliff, primarily because of the flexibility and creativity possible when using these materials, along with their availability and affordability. To begin, a general shape and support for the mountain cliff was formed using aluminum screen wire fastened to 1x2s that had been screwed and glued to the existing benchwork.

The 1x2s projected vertically as high as the anticipated elevation of the cliff face, and extended horizontally from near the aisleway to within 6″ of the backdrop. An old pair of household scissors was used to cut the aluminum screen wire, which was stapled to the 1x2s with a heavy-duty staple gun. Further molding of the screen wire took place once it was installed; it was folded and bent around each side of the tunnel openings to the rough dimensions of the tunnel itself, and the bottom edge of the wire was allowed to rest lightly on the finished scenery.



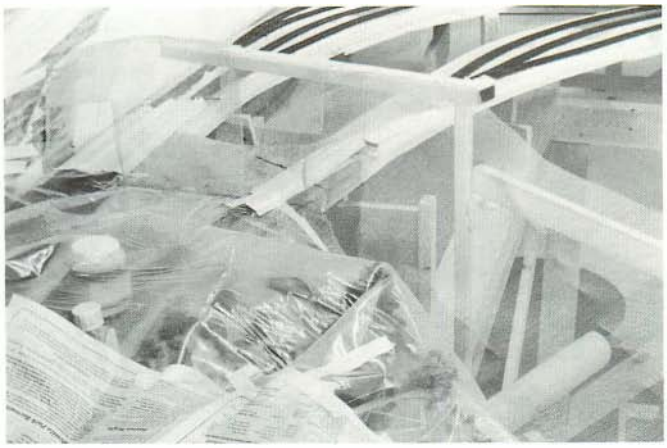
**1 – The first step in modeling a cliff face and tunnel portal(s) with plaster involves creating a screen-wire structure, as seen here west of Corn Junction on the JWRR.**

It had been previously decided that a purchased tunnel portal would be used for the JWRR single-track mainline, while the SP double-track main tunnel would consist simply of bored rock. The screen-wire structure, along with the plaster portal in its unfinished state, can be seen in Photo 1.

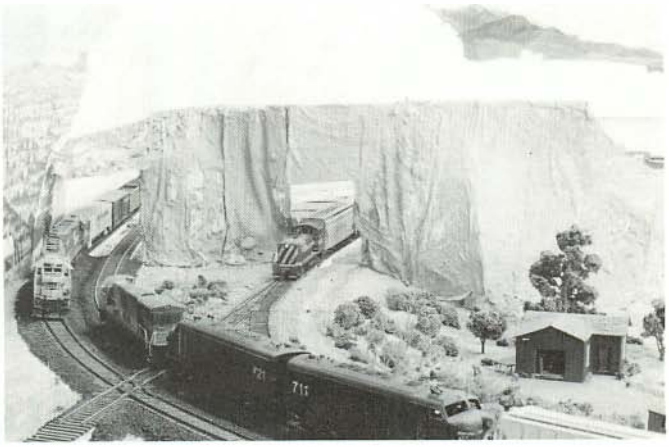
Following the installation of the screen wire, it was time for paper towels and plaster — a messy job! Here a very important step must be taken — cover EVERYTHING (particularly trackwork) with plastic and/or masking tape. We used a 3-mil plastic drop cloth, cut to size and affixed lightly to the scenery with masking tape. We also used jars to hold the plastic up and away from scenic details (see Photo 2).

Preparation for plastering involved cutting standard-size paper towels (the thickest brand available) into three pieces lengthwise. These pieces were placed beside the screen-wire foundation. Then, plaster of paris and dry powdered tempera in a brown color were mixed together using a 10:1 ratio. The tempera color was added for ease of scenic coloration; often, when only white plaster of paris is used, bright white specks will show through no matter how thoroughly the plaster is painted or covered with other scenery materials.

In addition, the color provided by the addition of tempera helps to hide imperfections if the plaster should become chipped. The tempera powder also tends to thicken the plaster/water mixture. Once the dry ingredients were thoroughly blended, water was added to form a viscous liquid mixture. The mixture was stirred to smooth out any lumps. In general, we have found that approximately three cups of the plaster and powder blend, mixed with about ⅔ cup of water, will yield an amount of mixture that can be used before it begins to harden (about 20 minutes).



**2 – Prior to the messy job of plastering, EVERYTHING must be covered with plastic and/or newspaper — especially trackwork and completed scenery.**



**3 – The plaster-soaked paper towels can be seen here, draped over the screen wire prior to final finishing with a thicker coat of plaster/tempera/water mixture.**

The paper towel strips were then dipped, one at a time, into the plaster mixture, coated thoroughly on both sides, and draped over the screen wire. The area nearest the backdrop was covered first, then work progressed towards the front (aisleway) of the layout. The paper towels were allowed to overlap slightly or abut each other. When all was done, the protective plastic was pulled gently away from the bottom of the paper towels. See Photo 3 for the structure at this point.

The completed paper-towel structure was then allowed to dry for 24 hours. During this time, an oil color/turpentine wash was used to color the plaster AIM tunnel portal that was earmarked for the JWRR tunnel. AIM provides adequate instructions for coloration on the back of their package; their color guidelines are very useful and their proportions appear to be accurate. However, a few words of caution are in order. The plaster molding itself is very soft and porous, and as painting progressed it became apparent that areas of slightly harder plaster were present where the oil wash would not soak into the plaster. Also, tube oil colors must be mixed in a jar of turpentine and applied with a soft watercolor brush for the best effect.

Since the portal consisted of two varieties of stone — one a fine, regularly-cut block directly above and beside the tunnel opening, and the other a rough-cut stone, two different colors of oil wash were used to color the portal. A grey wash made of equal parts of Ultramarine Blue and Burnt Umber, with just a dash of Titanium White, was used for the cut stone, while a mixture of equal parts of Ultramarine Blue, Burnt Umber, and Yellow Ochre was used for the rough-cut material. In addition, further mottling of color was achieved on the rough-cut stone after the initial wash by coloring individual stones in a brown or gray tint.

This style of portal (Random Stone, #112) is going to be the standard portal for the JWRR trackage on the layout. To help complete the standardization, the cut stone will be the same color on each portal, while the random stone will be colored to match rock excavated in the general area of the portal.

Once the portal was completely painted, it was time to complete the rock face itself. For the sake of continuity and realism, it is best to complete the entire cliff face during

*(Continued on page 29.)*

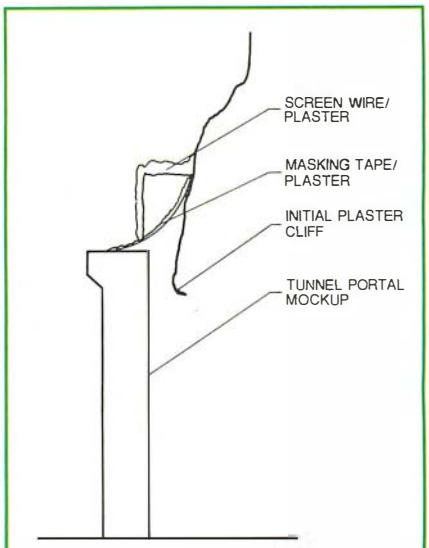
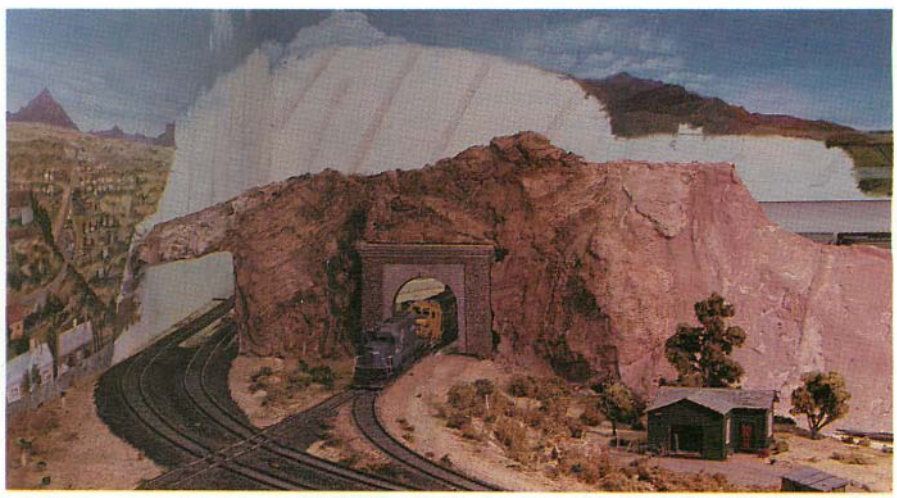



Figure 1 — Blending of the portal into the cliff face required the use of masking tape and screen wire.

**4 – In order to insert the purchased tunnel portal smoothly into its allotted space, a wood-block mock-up was made. Now, the cliff face can be built up around the mock-up.**



**5 – The finished cliff face and tunnel portal can be seen here. Next time, we'll finish the double-track tunnel using a different technique. Stay tuned!**

# Modeling a CSX Sand Storage Tower

by Tom Smiley

*Photos and illustrations by the author*

Montgomery, AL, was quite the railroad town when railroads were at their peak. Rail lines radiated from Montgomery's hub to all eight compass points. Four railroads terminated in Montgomery — Atlantic Coast Line; Central of Georgia; Gulf, Mobile & Ohio; and Seaboard Air Line. Two others, Louisville & Nashville and Western Railway of Alabama, ran through the city.

With all of the components of the Family Lines going into Montgomery, it's no wonder that CSX is now the prime railroad serving Montgomery. (Though Norfolk Southern has abandoned the Central of Georgia line coming in from the southeast, it has taken over the ICG line from the northwest. Montgomery is still served by two railroads, if only one day a week.)

The big mergers have made viable the consolidation of the yards and service facilities that were once spread across north Montgomery. In 1979, the Family Lines began consolidating operations into one location at the L&N yard. This included the construction of a car shop and an engine-service facility.

One of the first structures completed at this new engine terminal was a bulk sand storage tower made from an old two-bay covered hopper. Concrete piers were erected by a local contractor, then the railroad used its wrecking crane to hoist the hopper body into place. An air-compression system (and piping to distribute the sand to service areas) was installed. The crews at the terminal believe that this hopper was from the Seaboard Air Line and was retired from "dry-concrete" service. They aren't *certain* about the hopper's heritage, though they do know of the modifications made to turn it into a sand-service bunker. (The Montgomery shops have prepared several other hoppers in a similar fashion for other engine-service facilities on the CSX system.)

The internal bulkheads were removed to open the car for the flow of sand. Sections of the underframe and all of the brake rigging were removed to make clearance for mounting atop the piers. The entire end structure of the "B" end was removed as well. A gravity feed from the hopper to the compressed air distribution system sends it to several stations in the engine shops building and along the platform. This same compressed-air system has return piping which enables it to recycle excess sand back into the bulk-storage tower. Also, a loading pipe leads from the roof down to a nozzle at one end of the tower, where sand can be loaded into the hopper. The Montgomery Terminal uses a truckload of sand each week.

This is an interesting structure, and an easy project. I used a Model Die Casting two-bay hopper for the main structure with the details being either commercial parts, or cut from styrene or brass.

## Detailing the MDC Hopper

Figure 1 shows the modifications made to the MDC hopper. The first and simplest modification is to cut away all the framework at the "B" end of the car. You may want to remove the stirrups, grabs, and ladders at the other end as well, for replacement with more correctly scaled brass wire or commercial parts. I chose to skip this step. My sand hopper is intended solely for the layout, not a contest.

A close look at Figure 1 will show that there are three major construction details to be made to the MDC hopper. One detail is to extend the slope sheets to the roof (MDC has them squared off). A second is to cut away the center sections of the car's sides and replace the sidesills and add center ribs. The most involved of the three is to construct a centersill and bolsters from styrene.

Extending the ends is much simpler than it appears. I found that triangles of .010


The CSX sand storage tower in Montgomery, AL. October 1987.

styrene laid atop the end sections of the sides will extend the sides without making those two sections appear thicker than the rest of the sides. Then it is a simple matter to cut a new slope sheet for each end from .010 styrene to extend the slope sheets to the roof.

This overlaying of styrene applies to the roof sill as well. Sections of styrene strip were cut to fit between each of the ribs (including the center one we're about to add). I used .010 x .040 atop each of the new triangles and between each rib.

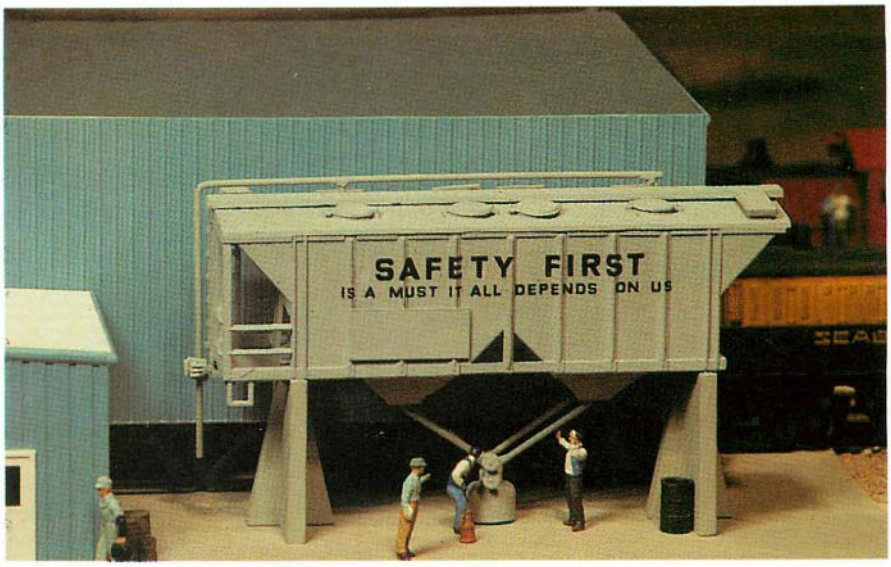
As the prototype photos show, the center of the car side is cut away flush with the slope sheets. Eastern Car Works makes an ACF 70-ton hopper with the center open (and the slope sheets already extended to the roof). I chose not to use this kit as it has a shell made from five pieces and I preferred the MDC kit with its one-piece body (not including roofs). Also, MDC's kit is a couple of bucks cheaper; however, if you prefer to "build up" rather an "cut away," then the Eastern Car Works kit is a good alternative.

If you use the MDC kit, cut away the center of the car sides flush with the slope sheets. Next, file away the remnants of the lower sill, back to the molded-on vertical ribs. Now you must cut a 3/32"-wide replacement for the lower sill from .010 sheet styrene. This matches the width of the frame that is molded on the MDC shell. There should be enough surface to secure the new styrene sill to the shell between the ribs. I added a second strip of styrene with its ends mitered to match the slope sheets inboard of the first sill piece.

For the vertical center rib, cut .010 styrene to a width of 3/32" to match the size of the base of the molded-on ribs. Use .030 x .030 square stock to form the rounded rib. You can shape the ends of the piece with hobby files before mounting; the top end is rounded, the bottom is pointed. However, cement the center rib to the side before trying to round the long edges. Once the styrene is secure, scrape a hobby knife sideways along the square stock; this will round the rib much more easily.

I decided not to use the metal center frame that comes with the MDC kit. Instead, I saved it for use on some future kitbash and made a new one from styrene.

The construction of the center frame is a case of modeling where you use a little bit of this and a little bit of that. For example, the center frame between the bolsters is made from two pieces of .080 x .156 stock cemented back to back. However, each bolster is two pieces of .040 sheet stock cut to rough shape (with the bolster angles and indentations for the piers cut in), cemented together then filed to closely fit the piers. These pieces are then capped with strips of .015 sheet stock, cut a little wider than the .080 combined width to allow for a little




**The author's completed model.**

overhang. These pieces, with the center frame, were then glued into the MDC shell. The extension of the frame from the bolster to the "A" end is a hollow box of .020 x .080 styrene making a coupler pocket. I don't know why the prototype's coupler was retained when the car was converted, but it's a nice touch to include. A Precision Scale dummy coupler with the shank trimmed a bit to fit the pocket was secured in place with a drop of ACC.

Rising from each bolster is a pair of angle-iron slope-sheet supports. I took an almost full length of .010 x .010 square and .010 x .020 strip styrene and glued them together to form the angle iron. I cut what I needed from the "angle-iron stock." The angle iron stands vertically, perpendicular to the bolsters. Where the angle iron meets the slope sheets, I simply bent the styrene, then touched on some cement with a brush. The "B" end is easy to do, though the "A" end can be frustrating, necessitating work around all of the end structure.

One last detail I added was the metal placard mounted on the car's side. This is a 3/8" x 1" piece of styrene. I've never seen this placard used as a sign for the Montgomery Terminal. It may have been applied to the car while in service. It's another nice detail though. Don't forget to add those stirrups, grabs and ladders if you went to the extra effort. If you wish to replace the roof walk with a metal one from Detail Associates, it would look great. (I couldn't bring myself to spend money for a roof walk when my rolling stock doesn't have them.)

## Constructing the Piers

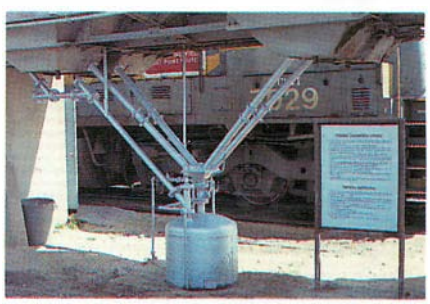
The dimensions of the piers are shown in Figure 2. As can be seen in the photographs, the height of the piers is roughly equivalent to the height of the hopper. The width is somewhat larger than the span of the bolsters which rest on the piers. The thickness looks to be not much more than 12" to 15". Certainly, you are free to adjust these proportions to that which is more suitable for your service facility.

In building the piers, I did what was simplest for me; I built them from styrene. I used two pieces of .040 sheet styrene for each pier and buttress. The pieces for the piers are spaced with .080 styrene blocks. The buttress pieces are spaced by .100-sized blocks. My choice is styrene as it glues better and is easier to file, sand or carve. These piers could be made from wood or cardstock if such is your preference.

There is no reason the piers couldn't be cast in plaster, fiberglass resin, Castolite®, Alumilite®, epoxy or any other casting material. All that would be required is to make forms. One could cast two rectangular piers and four triangular buttresses, then glue these parts together. Or, one could make a master and a model, cast four halves with the buttress already in place, then glue the halves back to back. Those with experience would find this a snap; those new to casting might find this project a good one on which to cut their teeth.

I toyed with casting these parts in plaster. (The styrene doesn't adequately capture the texture of concrete.) However, my

*(Continued on page 39.)*



**Pipe and tank detail — originally gray, it is now silver. March 1991.**

# Cotton Belt Caboose 'Bashing

## Part I

by Martin Lofton

*Photos by the author unless otherwise indicated*

Picture, if you will, a day-long ride in a branchline caboose on an August day in the lower Mississippi River Delta. The only breeze is that created by the casual pace of the local. Much of your time is spent stranded in the baking sun while the crew switches the short train. The only relief is frequent trips to a galvanized water jug with a rapidly diminishing chunk of ice. Such were the conditions for a passenger on the Cotton Belt's numerous branchlines in southeast Missouri and northeast Arkansas.

The St. Louis Southwestern, the Cotton Belt, during nearly all of its existence, was a freight road — and still is. Laid down to compete with the Gould empire of Missouri Pacific and Texas & Pacific from St. Louis to Texas, it had a romance all its own. It never owned a Mikado, leaping from Consolidations to home-built Northerns. Single tracked most of its distance, its Blue Streak Fast Freights nevertheless ran on a schedule comparable to the MoP redballs. Its small Northerns — and early acquisition of FTs — assured that schedules were maintained.

On the branchline, things were different. The fertile lowlands of the Mississippi River flood plain provided the Cotton Belt substantial on-line traffic from cotton, rice, soybeans, timber and occasional berry crops. Branchlines were necessary to gather this agricultural wealth. With the freight came the obligation to carry passengers. In the past, some of the branchlines were served by passenger trains and ill-starred gas-electrics, but most territory — especially after the Depression — was served by providing accommodations in the caboose.

The Cotton Belt in its early period had considerable traffic from the south Texas cattle movements. That necessitated drover cabooses to carry the crew tending the cattle. When the cattle movements subsided, the drover cabooses made ideal — at least in management's mind — branchline equipment for passengers, merchandise and the train crew.

The branchline combines were the familiar wood design of their period, that is, double-sheathed exterior, metal-covered

**A bit of Cotton Belt history is preserved on one of the Delta plantations at Victoria, AK. On the head end is a Frisco (former Jonesboro, Lake City and Eastern) Mogul. The combination makes a microcosm of Bootheel railroading in its heyday.**


**Cotton Belt 2000-series mainline caboose that is the subject of the construction project. Newly repainted in the Pine Bluff Shops in 1945.** *Harold Vollrath photo, Martin Lofton collection*

wood roofs and combined truss rod and steel centersill underframes. They came in two dimensions, one 41′ over the end sills and another of 51′. The Cotton Belt numbered the short drover cabooses in their 2325 series and the larger in the 2300 series. In all likelihood these cabooses had bunks for the drovers, but in their branchline service such accommodations were long past.

The cars bore the St. Louis-Southwestern's famous symbol that resembles the shape of a 19th-century cotton-ginning machine. "Cotton Belt Route" within the symbol completed the herald. In a smaller format and with a blue lighting bolt, the same symbol advertised the Blue Streak Fast Freights.

One is not likely to confuse the Cotton Belt symbol with any other road. It replaced a bale of cotton as their symbol in the 1880s, since the road did not want immigrants to think the land it traversed was solely a cotton-growing region.

## A Starting Point

Hallmark Models imported the shorter 41′ version of the Cotton Belt drover caboose in HO a number of years ago. (The brass car is labeled the 2300 series but is actually the 2325 series.) It was an accurate model and of good quality for that era. The brass cabooses are available periodically at swap meets in the $50-$75 range. Properly painted and lettered they can be assigned to the branchlines with little change.

The Cotton Belt had a standard mainline caboose of wood construction with steel underframing in the 2000 and 2200 series. They were of wood-framed, double-sheathed exterior construction. A steel underframe comprised of a 12″ centersill and a pair of crossbearers supported the 36′ body. There were four windows on the left side (when viewed from the cupola end) and three on the other. The cupola was perched two-thirds of the way back on the car.

All the Cotton Belt cabooses bore a family resemblance one to another. The mainline cabooses of these two series were similar to the drover cabins, albeit shorter in length. There is a close similarity in the use of double-sheathed wood sides, comparable window sizes, nearly identical car ends, doors and railings and cupolas with the same appearance.

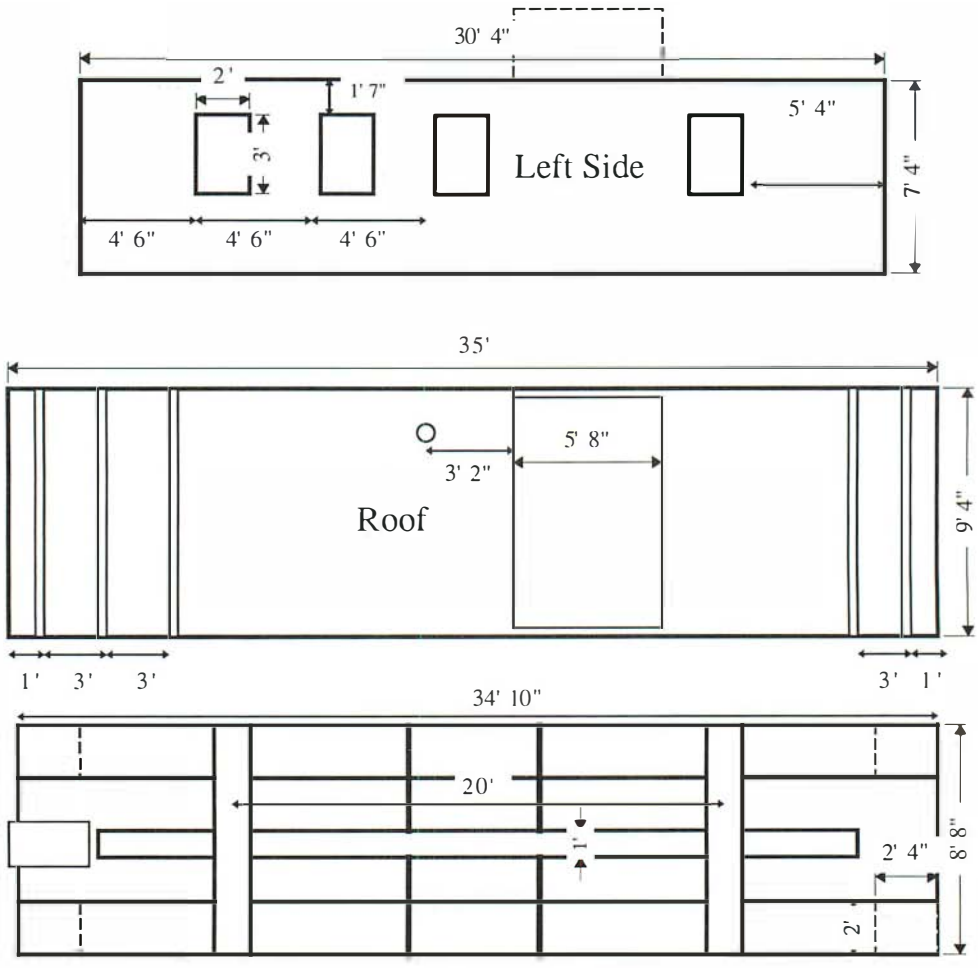
The 2200 and 2000 series differed only slightly in construction detail. The carbody appearances were nearly identical — only the underframes varied. They shared a steel centersill design. The 2200 series had large I beams as crossbearers, while the 2000 series had a more conventional tapered crossbearer.

As passenger traffic faded on the branchlines with the widespread use of automobiles in the `40s and `50s and the purchase of steel cabooses, the mainline cabooses made an appearance on the branches. They would not accommodate the same number of passengers, nor merchandise, but a few hardy souls still could find space behind the branch locals.

The Cotton Belt cabooses, especially the branchline combines, have the eye appeal that modelers seek. The excessive length is a show stopper. For the private line modeler, they make an ideal way to finish a branchline local. They have not escaped attention in the modeling press. In a May 1960 article in *Model Railroader*, Ralph Brown outlined the scratchbuilding of the 2325 series of cars — then lettered it for the Canadian National. That article and another in the July 1948 *MR* contain drawings of the 41′ car by J. Harold Geisel, taken from company blueprints. Jim Boyd's review of Cotton Belt power in the June 1972 *Railroad Model Craftsman* could not pass up the opportunity to display the road's cabooses either.

The tendency of Cotton Belt cabooses to share a common design is a fortunate circumstance for the HO modeler. With some brassbashing he can create the remainder of the Cotton Belt cabooses from the steam era. The 2300-series 51′ car and the 2000 and 2200 mainline cabooses are within reach.

The creation of the remaining Cotton Belt cabooses is made easier by bashing a Hallmark "2300"-series caboose. The shortest route to the mainline caboose and 51′ combine is building around the Hallmark cupola, end platform including




Underframe and Floor

**Full size for HO scale.**

steps, ladder and railing and various hardware such as stove pipes and braces. These, after all, are the most difficult-to-construct parts of a caboose. By re-employing them on new styrene sides, roof and underframe, one can produce a small fleet of Cotton Belt branchline — or mainline — hacks.

The brassbash can be done largely out of a typical kit builder's assortment of materials, and the following cars were done in this relatively inexpensive manner. There are a few parts which, if not necessities, ease the construction process. Grandt Line windows, #5069, are a good shortcut. They will have to be cut down, but replicate the appearance of the car well. Clover House nylon mesh — their 80 mesh, #886, or 100 mesh, #885 — simulates the Cotton Belt's use of window screens on their cabooses. A 6" queen post is needed on the combine and is available from Grandt Line, their #5050. The remainder of the construction is built on Evergreen styrene sheathing and strips. Lettering is available from Champ's St. Louis-Southwestern boxcar set, HB-16. This set is available in some hobby stores, and is back in print as a Super Set, SHS-216.

The accompanying diagrams and photos of the model will greatly assist in completion of the cars. They are not based on drawings of the cars, but measurements. They should be used for guidance. Final adjustments will be required to piece the car together, and the modeler may wish to make modifications to achieve even greater realism.

## Mainline Caboose Construction

An SL-SW mainline caboose from the 2000 or 2200 series is easier to build and a good starting place for the pair of projects. Since the two are nearly identical, either may be produced using the following instructions.

The first step is to dismantle the Hallmark brass car, retaining the desired parts. Remove the floor from the car. A propane torch or large soldering iron will do the job of disassembly. Care must be used to keep the cupola and ends intact.

Using Evergreen .020 thick 3¼" car siding, cut two sides to 30' 4" by 7' 4". Note that the two sides differ in the number of windows. The left side (as viewed from the cupola end) had a 3/1 pattern while the right side had a 2/1 pattern. The missing window is the location of the caboose stove and is indicated by the stovepipe.

Cut the openings for the windows to a space something less than the 2' x 3' required. Once the initial opening is made, it can be enlarged to the size to accept the Grandt Line window parts. A tool called a nibbler, available at Radio Shack and used in circuit board construction, is helpful in enlarging the opening to suit. A small file does the same job, but is slower and less precise.

Cut the height of the Grandt Line windows to match the 3' height of the opening. Insert the windows into the car sides. Use .010 x .040 styrene to create the new lower sill of the window.

Create a floor piece of Evergreen .040 styrene scribed at .060. The boards run perpendicular to the car. The piece should measure 34' 10" x 8' 8". Using available body bolsters, such as those from Walthers, place them 20' apart. Create a 12" deep center sill 12" wide, using 2x12. Lay down stringers of 2x2 the length of the underbody and 2' inboard from the edges. Add 2x2 along the outside edge of the floor.


**SL-SW 2200 series mainline caboose. Here it is on loan to the Missouri Pacific in 1940 to be used as a drover car. Arkansas City, KS.** *Charles Winters photo, Martin Lofton collection*

At the corners of the underbody, cut slots for the platform steps. These measure 2′ 4″ x 2″. Add triangular-shaped crossbearers from centersill to edge of underbody, 12′ high at the centersill, tapered to 2″ at the edge. If building the 2200 series cabooses, substitute paired I beams of 8″ height for the tapered crossbearers.

Cut a roof piece from .020 styrene sheet — 35′ x 9′ 4″. Score down the middle. Add simulations of the Hutchins roof ribs. A piece of .010 x .040 — better yet .005 x .040, if you are willing to cut it — forms a base. Bend the excess strip over the edges of the roof and trim flush. On top, place a 1 x 3 strip. Use excess solvent to blend the two together. Refer to the diagram to get rib placement. A hole for the Hallmark cupola is required, so cut out this portion now.

Construction follows the format of a typical freight-car kit. Add a piece of styrene to the edges of the surviving brass ends from the brass car. These form a post for attachment of the sides. Leave room at the bottom of the post to fit the floor. When satisfied you have a smooth post, attach the new sides with solvent. Solvent allows you time to make adjustments.

Having created a rectangle of sides and ends, fit the floor in place. Some sanding and trimming may be needed. The underbody should support the sides and add strength to the body by tying the brass endpieces with the styrene sides.

Add couplers at this point. Then cap the centersill and couplers with a 14″-wide centersill plate. Drill for your trucks.

To provide a support for the roof and assure straight sides at the top of the car, add trusses across the body and a ridgepole down the center. Match the trusses to the roof slope of the brass ends. If you wish interior detail or weight, add now. Dry-fit and attach the roof, testing for the same slope the entire length of the roof. Add fascia of 1 x 2 styrene around the sides and across the bottom edge of the roof ends. Add the curved grabs on the car side from the brass car. Fashion lamp brackets for the upper ends of the sides.

Insert the brass cupola. Add the stovepipe above the blank window on the right side of the car. Create running boards of styrene or wood. Refer to the photos for placement. As was typical of many cabooses, there are lateral walks surrounding the cupola. Add the surviving cupola braces to the new car and create an additional set from styrene and brass wire.

The 2000- and 2200-series cars used AB brake systems, at least in their late steam-era incarnation. Refer to the accompanying photo for the layout. Note that there are brake staffs to set the brakes by hand on both ends of the car. This requires an additional rod compared to freight car rigging. Add trucks with leaf springs.

Paint the car a boxcar red. If you added an interior, mask the windows, of course. Create a gloss finish for a decal base.

When dry, paint the curved grab, handrail on the carbody end and the outside portion of the end railing yellow in conformity to SL-SW practice.

Add decals. Finish the model by glazing the windows with glass, plastic or Kristal-Kleer from Krasel. One of the nicer details is to add the obligatory window screens. While a delicate job, it adds significantly to the model. Very lightly spray the nylon mesh from Clover House with dilute dark gray. Cut to window size and tack into the window with a spot of ACC. A nice touch is to add a couple of screens that have been torn or pushed loose.

Next month in Part II, we will create the 51′ combine caboose in the 2300 series. The steps are similar, but there is greater time involved. However, the branchline hack offers you the opportunity to model the interior of the merchandise section and replicate the cargo that might be assembled in the doorway for the next stop.


**Underbody of the 2000-series caboose.**

# Track Planning for Operation

## Part Two: Where Are We Going?

by Jim Mansfield

*Illustrations by the author*

Last time we discussed the design of the first three stages of the Jersey Western layout. First, we established one of the main themes for the layout — train watching at a major junction, and then we designed Corn Junction to support this premise. The junction has three routes through it and is the center that governs train-direction changes at one end of the JWRR mainline between Carrizozo, NM, and Mountainair, NM.

This time we are going to look at another theme of the layout, a heavily traveled single-track mountain mainline with minimal on-line switching. There will be helper locomotives and lots of curving, twisting track.

### Research

To start planning, I used the 1987 edition of the *Rand McNally Road Atlas*. I also collected railroad time tables (available from dealers), information from the Chamber of Commerce, and photos from books and magazines showing both the area and the railroads. I also read all the encyclopedias I could find on the subject. Some encyclopedias have simple topographical maps which contain enough general information to start planning. I also researched back issues of *Trains* and *Railfan & Railroad* magazines for detailed information. I even used the playing board from the game *Boxcars* as a reference. When you do your own research, use any information you can find.

Carrizozo and Mountainair were chosen as terminals for the layout primarily because they are both on big systems, thereby making a bridge route between them justifiable and easy to model. Other criteria were the elevations of the two towns; Margaret and I wanted to go from high desert to a mountain region for both the operational and scenic possibilities.

Other ideas we bounced around were the way the names sounded, the variety of railcars that could run on the layout due to the transcontinental nature of the major railroads to be represented, natural resources for boxcargo (or, as they say in Gay Paree — es*bo.x*cargo), etc. With the terminals found, I started thinking about the path that the mainline was to follow.

### Corn Junction

However, before we look at the mainline, let's go back to the junction at Carrizozo and apply the junction's design to a map of the state and the area's existing railroad routes. The map that I chose was a copy of the New Mexico Division map from Timetable No. 1 of the Western Region of the Atchison, Topeka and Santa Fe Railroad, dated May 15, 1988. Using information from this source, I drew a map for the Northern Division of the Jersey Western Railroad (see Figure 1).

I also utilized a November 24, 1946, Missouri Pacific Lines timetable to develop additional rail lines for the routes through Corn. In Figure 1, the existing rail lines are shown in black and the lines that were developed for the layout are shown in green. A short and simple history was developed for each new line. Please see the sidebar for the highlights.

Corn Junction is on the northern town limits of Carrizozo where the JWRR crosses the Southern Pacific's Tucumcari route. The JWRR trackage is actually the old Socorro & Gulf that today connects with a branch of the Missouri Pacific (Texas & Pacific) from Monahans, TX. This connection is made at Lovington, NM. The SP also has a line that crosses itself at Corn. This is the old Arabela Eastern (AE) that starts at its namesake and runs to a connection with the Santa Fe at Doud, TX.

The final rail line at Corn is the JWRR's line to Mountainair. The southern terminus of this line is located at Tortilla Flats Yard. This yard, now co-owned by SP and JWRR, once belonged to the Carrizozo & Clayton, a line connecting the Southern Pacific at Carrizozo and the Burlington Northern (Ft. Worth & Denver) at Clayton, NM.

This takes care of all the lines through Corn Junction. Two route/destinations remain — those for the nested loop. Although they are not part of Corn Junction, the routes are controlled by the Corn Interlocking. It was decided early on during planning that these routes would be considered only branches off the AE. One of them goes to North Roswell to switch industries and the other one to Maljama, NM, in the southeast corner of the state, for access to potash and other area mining products.

The final design of Corn Junction yields the possibility of interchange of the overhead traffic from BN, SP, MP and ATSF for operation on the JWRR. Overhead traffic on the JWRR can include grain, minerals, TOFC/COFC, double stacks, autos and parts, chemicals and general freight. El Paso also adds freight and rolling stock from the Mexican railroads. The "twin plant" (Maquilador) operations in El Paso

and Ciudad Juarez place a lot of shipments on the local railroads. It has been concluded that the Jersey Western will benefit from this for a long time to come.

## Corn Interlocking

The actual controls that sense the location of trains and allow turnouts to be aligned for moving trains through a junction function as the interlocking. The interlocking "plant" can be mechanical and/or electrical, and is operated from a control panel which has a track diagram, signal indications and electrical switches for throwing the turnouts.

Figure 2 shows the track diagram for Corn Interlocking. All the destinations and railroad names have been defined so that you can relate the diagram to the text. The information on the control panel is what the tower operator needs to direct traffic during operation.

Note that the Southern Pacific staging tracks (Oscura Camp on the diagram) are included on one end of the interlocking. The tower operator controls this remote location as two passing sidings on the SP and considers trains waiting to run simply as lower-class trains to be held for other trains. When it is time for such a train to become actively engaged in operation, the train receives its train number, and the track-occupancy light on the tower control panel then becomes a new variable in the game.

The other limits for the interlocking are the SP Arabela cutoff ([S]witch-100), West Topham (S-105), Cactusford (S-104), South Corn on the Socorro & Gulf and the Southern Pacific (AE) Wye (S-110).

Even though the visible portion of the junction takes up a space of only about nine square feet on the layout, the interlocking controls nearly half of the track on the layout. Having all 14 switches of this part of the trackplan on the operator's panel leaves the mainline dispatcher with only the JWRR main from the north yard limits of Tortilla Flats to Shining Time Station just north of Mountainair. The Corn operator handles all the staging on the bottom level (construction stages 1, 2 and 3). That is the prime function of this interlocking.

## Tortilla Flats Yard

This small yard was designed as an interchange yard for setouts and pickups associated with interchange between the Southern Pacific and the other rail lines in the vicinity. Neither the Southern Pacific nor the Carrizozo & Clayton ever planned to sort cars here. To help their cause as a bridge route between the SP and ATSF, however, the JWRR does perform car sorting and blocking here.

The yard also contains an old house-track spur that is being used as a pocket for helper engines waiting until they are needed to lift trains to Mountainair. Sometimes the marshaling of cars by the JWRR can get in the way of running trains through the yard; however, the service it provides to both the SP and ATSF helps everyone live with the delays.

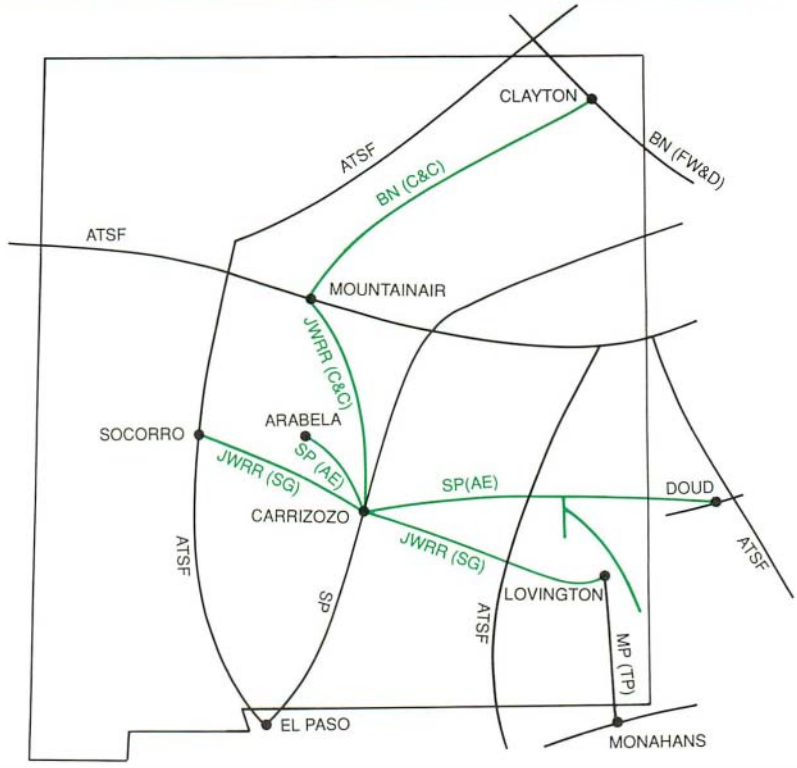



Figure 1 — This stylized corporate map of the Jersey Western Railroad System will give you some idea of the operation scheme of the JWRR layout. All lines on the map send interchange traffic through Corn Junction in Carrizozo. The JWRR line from Carrizozo to Mountainair is the object of the layout. All the lines through Corn, with the exception of the JWRR (C&C) line, are represented by the staging area of construction stages one, two and three. The ATSF and BN lines in Mountainair are represented by the Mountainair Reverse of stage five.

Yard activity rates a yardmaster the first and second tricks, seven days a week. Between the action at both Corn Junction and this yard, there is always good train watching in the area.

The yard is double-ended with a 23′ passing track. All turnouts are manually thrown; the only one that is part of a control system is the one on the north end of the yard's passing track. This turnout, while electrically controlled, can be manually thrown, and is electrically connected to the Northern Division's dispatcher circuit. The dispatcher can also throw the turnout, and has control of an electronic lock that he can open at the request of a train or yard crewman. The lock can be left off during switching operations and can be placed on by the dispatcher at any time.

There is also an Amtrak station (small portable building) to serve the tri-weekly *Desert Flower* from El Paso to Santa Fe. The trains (Nos. 610-611) run on Mondays, Wednesdays and Fridays and are scheduled to meet each other at Mountainair in late afternoon.

## Jersey Western Mainline

The JWRR mainline being modeled is the portion of the C&C that runs from Carrizozo to Mountainair, known as the Northern Division. The rest of the route is owned by the state of New Mexico. Burlington Northern also uses the track as part of a direct route to El Paso, thus transporting the Maquiladora trade to the northwest. This is good for the trade and good for the JWRR and the SP. It also permits watching BN trains a couple of times a day.

A schematic of the division's system is shown in Figure 3. The point-to-loop plan has three passing tracks with two of them at Marceau. The short one is a helper pocket to keep the other siding open; a short train can also fit into this siding. The longer siding measures 31′, allowing a little more leeway when making meets between

upgrade and downgrade trains, and permitting a train longer than the standard length of 20′ to run on the mainline.

At Humphreys Tank there is a lap crossover and a short spur track that is not considered a switching location. The length of the passing track from Barren to Humphreys Tank is 18′. In this month's "On TRACK" column I will go into some detail on the design and uses of a lap crossover.

There are two switching locations on the line. To make things interesting, though, they are located some distance away from a passing track and often take awhile to switch, so as not to interfere with the mainline action. This segment of mainline is much simpler than most, but it does fulfill the theme of a heavily traveled single-track mountain mainline.

The dispatcher tries to keep the up trains moving all the way up the 2.1% ruling (steepest) grade. This means that a down train can take about 10 to 12 actual minutes to make the 120′ run from Mountainair to Tortilla Flats while jumping in and out of sidings. Up trains tend to bunch together and this will add to the waiting and siding hopping. Sounds just like the prototype!

The division's dispatcher controls the mainline trackage from the north switch of the Tortilla Flats passing siding to Shining Time Station and to the Tilford Yard limit at Mountainair. The control console being constructed will be operable from a remote location outside the layout room during operating sessions.

Inexpensive headphone sets purchased from Radio Shack are used for communication between the train crews and the dispatcher. Each hand-held mainline throttle has a communication line incorporated into the wiring. In this way, an engineer can plug a headset into his throttle and have contact with the dispatcher while running.

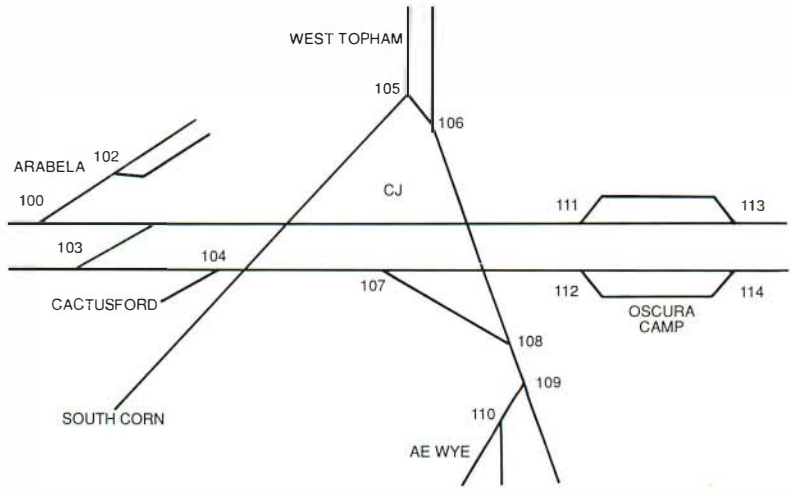



Figure 2 — The Corn Interlocking is the physical plant that controls Corn Junction. From the start of the design, the plant was developed not only for the visible portion of the junction, but also to include all the track of the interchange area. In this way, one operator could track train movements, would have an interesting job to play and would allow the Northern Division dispatcher to have only the division (Tortilla Flats to Shining Time Station) mainline under his control. Turnouts are numbered on the interlocking control panel.

There are also permanent phone boxes around the layout (e.g., the north switch at Tortilla Flats) so that road and yard crews can talk with the dispatcher. For those times that a dispatcher isn't available when running trains, the console can be unplugged and moved into the railroad room. The console is on rollers and plugs into sockets at both the remote location and at the layout.

## Interchange

Interchange between the Southern Pacific Tucumcari route and the JWRR is accomplished directly via the Tortilla Flats Yard. To interchange from the Arabela Eastern, the SP crews use the interchange track in front of the tower. They usually leave the rest of their train on their mainline track at West Topham.

An interesting switching move results when a northbound JWRR train on the S&G makes a setout into Tortilla Flats Yard (like interchanging with yourself). The locomotives will leave most of the train on the S&G mainline, uncoupling just before the SP mainline (see Figure 2). The engines will then take the cars to be delivered up to the sidings at West Topham, back down the AE past the interchange

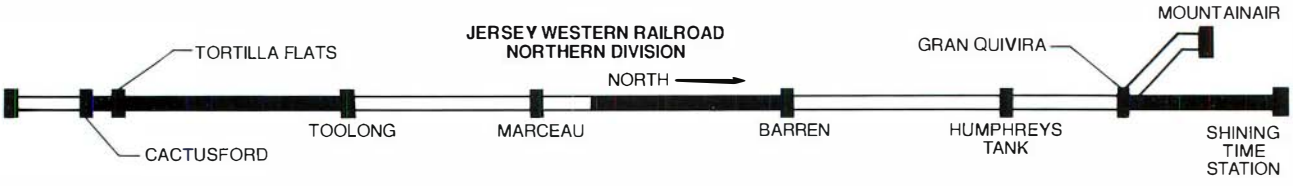



Figure 3 — The Jersey Western Railroad System Schematic for the Northern Division includes the mainline from Tortilla Flats to Shining Time Station, the Corn Sub-division from CJ Tower to Tortilla Flats and the Mountainair Extension. The heavy lines on the figure represent single track while the double line represents two or more tracks. The northbound direction is considered "Up" the division as a train is climbing the escarpment and south range of the Chupadera Mountains until Barren. The line is down grade from Barren to Gran Quivira.

track and then into the yard, pulling the cars. This move is called the "zig-zag" by the JWRR crews.

### Why It Works

This is explained in two ways. The first is the actual design of the staging section. The various route possibilities make the job of Corn operator interesting (truly a game of its own). By defining the level of difficulty, as in a video game, the skill of the operator can be improved by increasing the number of trains through the junction.

A design trick I used during track planning was not including the second, opposite-hand crossover (please see Figure 2, crossover S-103) on the Southern Pacific continuous loop (normally, crossovers come in pairs). If the second crossover were there, a southbound train, once on the northbound track, would not need to use the Arabela cutoff to get back up to Mountainair. It could simply use the nested reverse loop. Without the second crossover, the route associated with the Arabela cutoff becomes the major route through the junction. This strengthens the concept that the SP does not dominate the layout space.

Corn Junction does set the pace for the rest of the layout. A simple timetable can be chosen for a party or training a new dispatcher (cub), or a heavy schedule can be chosen for a full operating session.

The second part of the explanation is the fact that the track the layout represents could have been plausible without stretching things too much. Most of the new lines run east-west while the major players in the area are north-south. If the twin-plant system between the United States and Mexico had started earlier, then traffic could perhaps have supported more rail lines (hey, this is play-like!) in the area.

I could go on, but you get the general idea. As long as it even remotely makes sense, an idea will work for your layout concept. If you can make a junction this busy in the middle of the high desert, you can make one busy anywhere.

### Climbing the Hill

The engineering genius of William Hood's design for getting the Southern Pacific tracks over the Tehachapi Mountains in Southern California is the starting point for the Chupadera Loop that crosses over itself at Toolong. Next time, I will show you how I started with the design of the Tehachapi Loop and attained the same goal of gaining elevation by modeling the smaller Chupadera Loop at Toolong. The basic shape of the original was kept while compressing it to fit into an area of 10′ by 12′. As a guide for scaling purposes, on the real loop a train of about 80 cars will pass over itself. On the model loop, a train of about 36 cars will cross over itself.

Next time: we'll be making the grade...

## JWRR's Hypothetical Hystery

The new rail lines developed for the Jersey Western layout are "what could of been" lines that fit the map. The destinations are realistic and do add to the operating scheme of the layout.

### Arabela Eastern

This line was chartered in 1903 and completed in the fall of 1909. The 319-mile mainline ran directly east from Carrizozo, across the Pecos River Valley to tap the fertile range and farming lands either side of the river. Two branchlines diverge from the main track about 15 miles north of Roswell, NM. One of the branches goes into North Roswell while the second runs southward down the river valley for 30 miles before heading due east to Maljama, NM. This branch tapped the mineral fields in southeast New Mexico.

### Carrizozo & Clayton

Chartered in 1894, this rail line forged a path from a connection with the Southern Pacific Railway at Carrizozo, NM, through the Chupadera Range north-northwest of Carrizozo; crossed the Atchison, Topeka and Santa Fe Railroad at Mountainair, NM; and then turned northeast towards Clayton, NM, where it connected with the Ft. Worth & Denver Railroad.

The founding fathers had a vision of a trunk line between the SP, ATSF and FW&D. Their dream was not realized until World War II when the Army Corps of Engineers rebuilt the line (due to the White Sands Missile Range) as a public works project. They reconstructed the line to their top standards for use throughout WWII and the Korean conflict for shipping military goods.

In 1980, the line was divided at Mountainair. The Carrizozo to Mountainair portion was sold to the Jersey Eastern Railroad in 1981. The remaining segment, which is owned by the state of New Mexico, was leased to the Burlington Northern Railroad Company in 1983.

### Socorro & Gulf

This line was a latecomer to the area, receiving its charter in 1935. Delays due to the war slowed construction. Starting at Socorro, NM, the line went east to Carrizozo, NM and then turned southeast, reaching the Rhoman Terminus at Lovington, NM, for a connection with the Missouri Pacific Railroad in early 1944.

The tracks never reached the Gulf of Mexico, and since the line did not capitalize on traffic exchange between the major lines it touched, on-line business never amounted to much. The line failed in 1957 and then, in 1977, began operations as an SP branch for a short time. In 1981, the S&G was leased (for 99 years) to the Jersey Western Railroad.

# BEHIND THE SCENES

*(Continued from page 19.)*

one scenery session — coming back to touch up an area may lead to cracking later on or a mismatch of rock-work styles.

First, a wood-block mock-up of the plaster portal was built to dimensions 1/16″ greater than the actual portal. This mock-up was covered in plastic wrap and placed in the JWRR tunnel opening so that the rock face could be modeled around it before the actual portal was installed (see Photo 4). Then, the SP tunnel nearest the backdrop was tackled. A method of modeling the interior of the bored rock tunnel while blending in the backdrop and rock face was used and will be discussed in next month's "Behind the Scenes."

To complete the rock face surrounding the portals, the paper towel structure was first sprayed with a fine mist of water. Then, a thick mixture of plaster, tempera powder and water (10:1:3 ratio) was dabbed on with a plastic spoon, allowed to harden for a couple of minutes, and scored with a plastic comb (from a McDonald's Happy Meal) to simulate rock strata on the upper surface of the cliff. Larger rocks were modeled below the strata, using the straight edge of a plastic hand spatula. The top of the cliff face was built up in places with the plaster mixture so that it did not appear to be an artificially level surface.

Masking tape was placed above the top edge of the portal mock-up to fill the crack between the tunnel opening and the portal top, and a small (6″ x 2″) piece of screen wire was folded at a right angle and placed above the portal mock-up top in order to build up the cliff face above the tunnel opening. On top of this screen wire spoonfuls of the thick plaster mixture were deposited and molded to a natural rock shape (see Figure 1).

Once the entire structure had hardened, the mock-up was removed and painting with oil washes began. The same tints used for painting the rough-cut stone in the AIM portal were used, with the addition of a bit more of the Burnt Umber for a natural and slightly varied look. Very thin washes of oil paints thinned with turpentine work very well on plaster, as they soak into the cracks and crevices and make for natural shadows.

When the paints were dry, it was time to slide the AIM portal into place — carefully. The bottoms of the portal sides were affixed to the layout scenery with Elmer's Glue-All® and allowed to harden overnight. The result can be seen in Photo 5.

There's still more to do on this scene — another tunnel portal, vegetation around the cliff face and some more tips on tunnel interiors are upcoming in next month's "Behind the Scenes." (Larry, are you listening?) Stay tuned for two dark secrets.

# Computer Applications in Model Railroading

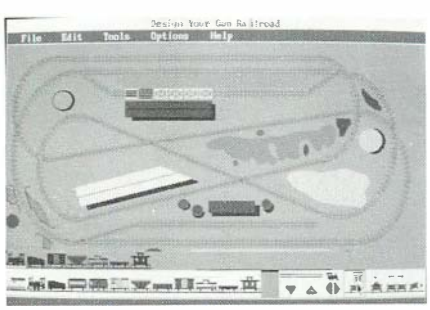
by Larry Puckett

# Design Your Own Railroad

Imagine for a moment, a program that combines the technical sophistication of CADRAIL, the color and animation of RRSWITCH CHALLENGE, the artistic tools of PC PAINT, all bundled into a "Windows-like" system with mouse control, pull-down menus, popup help boxes and a manual that covers all the angles. Now you can stop imagining...**Design Your Own Railroad** is here!

**Design Your Own Railroad** is the newest release (September, 1991) from Abracadata, the developers of **Design Your Own Train** and **Run Your Own Train**. However, it's a very different program compared to these earlier releases. First, it's a sophisticated CAD program that allows you to develop layout diagrams in much the same manner as CADRAIL, only it's a lot more user friendly. Second, it's a game that allows you to run trains on the layouts you create much like **RRSWITCH CHALLENGE**. You can couple and uncouple cars, examine waybills, make up consists and throw switches just as if you were running a real model railroad.

This is one of the most user-friendly programs I've tried this year. The advanced graphic users interface (GUI) is very similar to Microsoft Windows, and has the same look and feel. Although keyboard input is possible, a mouse is probably the only way to get maximum utility and enjoyment from the program. Using the mouse you can pull down menus and select options with the click of the button.




The heart of the CAD part of **Design Your Own Railroad** is the Track and Scale Options menu. Here you select the scale, gauge, minimum radius, minimum switch angle, layout dimensions, tie length and spacing, and car length and width. When you change the scale from HO to O all the internal dimensions stay the same whereas the overall layout dimensions are doubled. Gauge controls the distance between tracks shown on the screen. Yes, the track looks just like the real thing, with little ties and two rails, but for serious track planning this can be set to a single line without ties. The minimum radius is the smallest radius that the program will draw, unless you override it, and the minimum angle controls the angle of the switches in degrees.

When it comes to designing a layout, you can do just about everything with **Design Your Own Railroad** that you can with ModelCAD and CADRAIL. Sure, you won't be able to automatically calculate grade and elevations or use spiral easements like CADRAIL, and all the advanced CAD features of ModelCAD aren't there, but for the average modeler, do you really need them? The program gives you a zoom box so that you can add small details to any area of the layout you want to isolate. And when it comes time to estimate the amount of track you'll need, you can run a car over the layout and the program will tally up the distance in tabletop or scale units, depending on which you set the track counter for!

Track is laid by choosing straight or curved track tools, clicking on a start point with the mouse, and then dragging a line to the endpoint. When you click the mouse at the endpoint, the track position is finalized and the two rails and ties appear. Adding curves and more track is easy; when the mouse cursor gets near the end of another piece of track a little connecting point appears and the drag line will start at that point. This makes connecting track sections almost automatic. This was the hardest part when it came to using CADRAIL and ModelCAD.

After you've designed the basic trackplan you can use the scenery tools to add buildings, rivers, trees and other scenic features to the layout. Then go ahead and select locomotives and cars from the train tools menu and you're ready to operate.

When you're ready to operate, you control the speed and direction of the train, using the Operation Controls. Your train chugs along the track and it's up to you to throw switches and prevent collisions. When you pull into a siding, cars can be uncoupled and unloaded at the industry, and then you're off and running again. Three sample layouts are provided with the program so you can begin operating right away.

There are so many options available in the design and operation menus that I couldn't even begin to describe them all. Suffice it to say, you'll find this a very complete program! To make it easy for you to learn how this all works a useful tutorial is provided, that leads you through the steps for designing a basic layout. The manual is equally user friendly; computer jargon is avoided and there is a lot of information provided on how to design model railroads, prototype operations and different types of rolling stock. This makes the program equally useful for beginners as well as experienced model railroaders. Nearly half of the 188-page manual consists of photos and old engravings of railroad structures, rolling stock, locomotives, trolleys, etc.

The program is easy to install; all you have to do is run the install program and answer the questions. And if you run into any problems there is a section on troubleshooting in the manual. A minimum of

512K of system RAM is required along with about 576K of disk space. Seven graphics drivers are provided (including Hercules) and another nine untested drivers are available. The four basic printer drivers provided support about 200 different printers from nine-pin Epsons to LaserJets. And Microsoft, Logitech, PS/2 and Microsoft-compatible mouse drivers are included.

It's bottom-line time again; **Design Your Own Railroad** is available in Apple II/Laser (128K, 64K) versions for $49.95 and in IBM/PC version for $59.95. Add $7 shipping and handling. Payment can be by MasterCard, check or money order to: Abracadata, P.O. Box 2440, Eugene, OR 97402, (503) 342-3030.

## Rating System

Much of what I say in my software reviews is pretty subjective and reflects my opinion of how good, or useful, or easy to use the program is. To make things a little more objective I've come up with a rating system that hopefully will give you a better feel for a program. But remember, it's still my opinion only. The rating system has six components:

1) *Documentation* — is the manual clearly written and useful? Does it help you understand how the program works and how to run it? Does it provide troubleshooting information? A rating of 1 indicates poor documentation and 5 is exceptionally good.

2) *User friendly* — how easy is the program to use? Is there a tutorial that leads you through complex procedures? If a program can be used without referring to the manual I consider it very friendly and would rate it a 5. If I have to keep the manual open all the time just to figure out how the program works I would give it a 1.

3) *Technical sophistication* — by this I mean support of more than one printer type, effective use of color, pull-down or pop-up windows, on-line help, and implementation of mouse input and/or control. A simple program like SWITCHER would only rate a 1 here, whereas ModelCAD would get a 5.

4) *Application* — does the program do what it is supposed to do and does it do it effectively? Is it a useful application for model railroaders? A 1 is of little use or application and a 5 is very useful.

5) *Value* — do you get what you pay for? A very sophisticated program that sells for a very reasonable price might receive the same rating here as a technically unsophisticated program that is downright cheap! A 1 is low value and a 5 is high value.

6) *User level* — what level of computer experience is needed to use the program or what audience is the program designed for? Games are usually easy even for a novice and rate a 1, but a CAD program may challenge an advanced user and get a 5.

Using the new rating system, this is how **Design Your Own Railroad** stacks up:

| | |
|---|---|
| Documentation | 5 |
| User friendly | 4 |
| Technical | 5 |
| Application | 4 |
| Value | 5 |
| User level | 1-4 |

## SWITCHER

One thing is certain — as soon as you make a statement in a magazine somebody will pop up with a way to prove you wrong! In September I said there is no way to read the DATA statements that contain the car orders in early versions of SWITCHER. Russ Kress immediately sat down and wrote an ingenious little program that will do just that. So now any of you who have an early version of SWITCHER with a few hundred car orders can easily create the ORDER.DAT file without having to reenter them using the SETUP utility. Also, it should be possible to modify Russ' program and have it create the SIDING.DAT file from the capacity and siding DATA statements. I'll try to have that modification ready for the January session.

To make the conversion, simply copy ORDERMAK.BAS to the same directory as the early version of SWITCHER along with GWBASIC.EXE. Then list SWITCHER while in GWBASIC and note the line numbers that contain the car orders. Save SWITCHER as an ASCII file using the SAVE "<FILENAME>", A command. Next load and run ORDERMAK.BAS and enter the data requested; it will create the ORDER.DAT file automatically. Russ has offered to make the program available to anyone; just send $4 to cover his costs to: Russ Kress, 1122 Inwood Place, Plainfield, NJ 07062. Don't forget to tell him the type of floppy drive you have. Because the program arrived before I sent out copies of SWITCHER version 5.0, I have been able to include it on the distribution disk. Thanks, Russ, for going to the trouble to write the program and make it available to all of us. I also want to remind everyone that beginning in January I'll be turning over the distribution of SWITCHER to a software distributor in Texas. More on them next month. If you plan to request a copy of SWITCHER from me this is your last chance! Remember, send $5 and tell me the type of disk drive your computer has. One final note: Brian Kachadurian, please contact me.

That's all for this session. Until next time, stay on the right track and don't run out of steam. Send your comments, questions and programs to: Larry Puckett, 9618 Dublin Dr., Manassas, VA 22110. If you submit a public domain or shareware program for review in this column please indicate whether or not you are willing to provide copies for interested readers and the conditions for that exchange.

**Software Producers:** If you would like *Model Railroading* to review your software in this column please send the software and any promotional material to Larry Puckett, 9618 Dublin Dr., Manassas, VA 22110. Any materials received will be considered as gratis, unless otherwise specified. Thank you.

```
100 REM PROGRAM TO READ DATA STATEMENTS FROM SWITCHER Version 1 AND
110 REM CREATE ORDER.DAT FILE FOR SWITCHER VERSION 5
120 REM BY RUSS KRESS 9/91
130 SP$=SPACE$(1)
140 CLS:LOCATE 12,20:PRINT"YOU MUST HAVE SAVED THE SWITCHER PROGRAM AS AN ASCII
FILE FIRST (A OPTION)"
150 LOCATE 14,20:PRINT"PRESS -Esc- TO QUIT OR ANY KEY TO CONTINUE"
160 K$="":WHILE K$="":K$=INKEY$:WEND
170 IF ASC(K$)=27 THEN 9999
180 CLS:LOCATE 12,1:PRINT"ENTER THE FULL SWITCHER PROGRAM NAME, INCLUDING THE DR
IVE AND"
185 INPUT"PATH IF NOT THE CURRENT DRIVE AND/OR DIRECTORY(SWITCHER.BAS)";PROG.NAM
E$
190 IF LEN(PROG.NAME$)=0 THEN PROG.NAME$="SWITCHER.BAS"  'DEFAULT TO STANDARD
200 LOCATE 16,1:PRINT"ENTER THE STARTING AND ENDING LINE NUMBERS OF THE ORDER
210 INPUT"DATA STATEMENTS IN THE SWITCHER PROGRAM (e.g. 220,570)";ST.DATA,END.DA
TA
220 IF END.DATA < ST.DATA THEN BEEP:GOTO 200
225 PRINT"ENTER THE DRIVE\DIRECTORY FOR ORDERS or Enter FOR CURRENT DIRECTORY"
226 INPUT OPATH$
230 CLS:LOCATE 12,15:PRINT"READING ";PROG.NAME$;" FROM";ST.DATA;" TO";END.DATA
235 LOCATE 13,15:PRINT"WRITING TO FILE ";OPATH$;"ORDERS.DAT"
240 LOCATE 16,20:INPUT"IS THIS OK[Y/N]";K$
250 IF K$="Y" OR K$="y" THEN GOTO 260 ELSE GOTO 180
260 OPEN "I",#1,PROG.NAME$              'THIS IS THE SWITCHER PROGRAM
270 OPEN "R",#2,OPATH$+"ORDERS.DAT",10  'THIS IS THE Version 5 ORDER FILE
280 FIELD #2, 10 AS ORDER$
290 REM NOW SKIP TO THE START OF THE ORDERS
300 WHILE CURR.LINE%<ST.DATA
310     LINE INPUT #1, STMT$       ' READ A BASIC STATEMENT FROM THE FILE
320     S=INSTR(STMT$,SP$)         ' LOOK FOR THE FIRST SPACE
330     IF S=0 THEN BEEP:PRINT"INVALID STATEMENT IN FILE":STOP
340     CURR.LINE%=VAL(LEFT$(STMT$,S-1)) ' EXTRACT THE STATEMENT LINE NUMBER
350 WEND
360 REM THE CURRENT LINE SHOULD BE THE FIRST ORDER DATA STATEMENT
370 GOSUB 1000                      ' EXTRACT THE ORDERS IN THIS LINE
380 WHILE CURR.LINE%<END.DATA       ' LOOP THROUGH ALL THE ORDERS
390     LINE INPUT #1, STMT$        ' READ THE NEXT STATEMENT
400     S=INSTR(STMT$,SP$)          ' LOOK FOR THE FIRST SPACE
410     IF S=0 THEN BEEP:PRINT"INVALID STATEMENT IN FILE":STOP
420     CURR.LINE%=VAL(LEFT$(STMT$,S-1))
430     GOSUB 1000                  ' EXTRACT THESE ORDERS
440 WEND
450 REM EVERYTHING PAST THIS POINT IS NOT AN ORDER, SO QUIT
460 CLOSE
470 LOCATE ,10:PRINT"ALL ORDERS READ AND WRITTEN TO ";OPATH$;"ORDERS.DAT"
480 GOTO 9999
490 REM
1000 REM SUBROUTINE TO EXTRACT ORDERS AND WRITE TO DISK
1010 REM S IS POINTING TO THE SPACE AFTER THE LINE NUMBER
1020 END.OF.LINE=LEN(STMT$)         ' THIS IS THE LAST CHARACTER TO LOOK AT
1030 CHAR$=MID$(STMT$,S+1,5)        ' IT MUST BE A DATA STATEMENT
1040 IF CHAR$<>"DATA " THEN BEEP:PRINT"STATEMENT ";CURR.LINE%;" IS NOT A DATA ST
ATEMENT":STOP
1050 D=S+6                          ' POINT TO THE BEGINNING OF DATA
1060 WHILE D<=END.OF.LINE
1070     CHAR$=MID$(STMT$,D,1)      ' LOOK FOR BLANKS OR COMMAS
1080     IF CHAR$=SP$ OR CHAR$="," THEN D=D+1:GOTO 1120
1090     LSET ORDER$=MID$(STMT$,D,10)  'MOVE THE ORDER INTO THE FILE
1100     PUT #2                        ' AND WRITE TO ORDERS.DAT
1105     LOCATE ,20:PRINT MID$(STMT$,D,10)
1110     D=D+10                        ' POINT TO THE CHARACTER AFTER THE ORDER
1120 WEND
1130 REM THIS LINE IS COMPLETE
1140 RETURN
9999 SYSTEM
```

## Model Photography Series #12

# Books & Other Holiday Gift Ideas

**By Bruce Nall**

*Photos by the author*

This month we will make a change from the usual technical discussion. A new book on model railroad photography is in the hobby shops. Another book with a section on model photography is still available. Both books would make good additions to the model railroad photographer's gift list.

There are also several inexpensive camera accessories which will help anyone with a SLR camera improve their model photography. The accessories would also be good gifts.

### Close-Up Photography

The first book is from the Kodak workshop series. The book title is *Close-Up Photography*. This 96-page book was published in 1984 by the Eastman Kodak Company. The book should be available in camera shops.

The book covers many types of close-up photography situations with examples and descriptions. The book starts with the basics of close-up photography.

A section on theory and formulae covers the technical side of close-up photography. Magnification, depth-of-field and exposure-compensation formulae and diagrams are presented for photographers who want to know the origins of close-up photography "rules."

There are sections discussing the use of equipment and accessories specifically for close-up photography. Of greatest interest to model railroad photographers is the section of the book on photographing miniatures written by Malcolm Furlow.

Malcolm describes the production of a number of photographs of his Denver and Rio Chama Western Railroad and several dioramas. Many of the photographs have appeared in model railroad magazines.

Malcolm discusses, in general terms, his method of model railroad photography. Equipment, lighting and film choices are briefly covered. The techniques behind many of the special effects which became Malcolm's trademark are described.

Adding exhaust smoke to a locomotive in a scene is discussed. The photography of scenes with locomotive headlights and miniature lights in buildings and cars is covered. Malcolm also describes the use of dry ice to create mist and fog for photographs.

The section on photographing miniatures is a nice addition to the book. The real reason to add this book to your reference library is the presentation of the basics of close-up photography. *Close-Up Photography* is a good single-reference book which will answer many close-up photography questions.

### A Treasury of Model Railroad Photos

This 104-page model railroad photography book from Kalmbach Publishing Company was published this year. The book presents "four creative approaches to model railroad photography." The book features the work of photographers Dave Frary, Malcolm Furlow, John Olson and Paul Scoles. Each photographer is featured in a chapter in the book.

The book is not intended to be a technical guide to photography. The photographers describe their approach to a number of their favorite model photographs. Diagrams showing the types of lighting and light locations in relation to the camera and model are shown for a number of the photographs.

The book describes the equipment used by each photographer to produce a number of model railroad photographs. It is interesting to note that two of the photographers use fairly expensive equipment. The other two photographers use a limited amount of relatively inexpensive equipment which in some cases was modified to produce the desired results.

The chapter written by Dave Frary is titled "A land of make-believe." A number of photographs of the Carrabasset and Dead River Railway are presented in this chapter. There is also a number of scenes from other layouts and dioramas.

Dave uses a range of film formats from 35mm to 4" x 5". The discussion of the techniques used for the photographs is useful even if a 4x5 view camera is not available.

A number of snowy winter night scenes are presented in Dave's chapter. The techniques used will provide ideas for any photographer wanting to produce model railroad night photos.

Malcolm Furlow's chapter is titled "Performing the art of illusion." The chapter contains a collection of photographs from a number of layouts including Malcolm's Denver & Rio Chama Western.

Malcolm uses larger format film and cameras. The diagrams in Malcolm's chapter are for fairly involved and complicated photographs. The setups for several


**Books on model railroad or close-up photography make good gifts.**

**A typical extension tube (left) and a set of supplementary close-up lenses (right) surrounded by a mechanical cable release.**

of the photographs show the difficulty encountered when combining special effects to make the photograph. The descriptions provide a greater appreciation of steps required to produce the finished photograph.

John Olson's chapter is titled "The realities of fantasy." Many of the photographs of dioramas and layouts have appeared in magazine articles. There are photographs from the Mescal Lines Railroad, Cielo Lumber Company and the Jerome and Southwestern Railroad.

John uses 35mm and medium-format film and cameras. The equipment is not fancy and some has been modified for better model photographs. John describes the method he used to create photographs. Rather than a lot of setup diagrams, John explains the effect he was looking for and how it was accomplished.

One of the photos shows a diorama supported by scrap lumber, a roll of masking tape and chunks of foam. The method of creating the photograph was certainly not evident from looking at the finished photograph. Many of John's photographs were created without complicated setups.

This chapter shows how beautiful scenery combined with realistic-looking models can tell stories. A subtitle for this chapter could be "a picture is worth a thousand words." John has the ability to tell a story with a photograph.

The last chapter was written by Paul Scoles and is titled "The viewfinder of imagination." Many of the photographs have been published in the *Narrow Gauge and Short Line Gazette*.

Paul uses medium-format film in addition to 35mm. His medium-format camera was modified with a pinhole aperture. The fabrication and installation of the pinhole aperture is described in Paul's chapter.

Many of the photographs in this chapter are accompanied by setup diagrams. The lighting diagrams show that a lot of equipment and complicated setups are not necessary to produce good model railroad photography.

*A Treasury of Model Railroad Photos* would be a good addition to any model railroad photographer's library. The photographic techniques range from simple to very complicated. Ideas useful for simple setups can even come from the complicated techniques and lighting examples.

## Supplementary Close-up Lenses

One of the best camera accessories for the photographer who wants to try model photography without spending a lot of money for equipment would probably be a set of supplementary close-up lenses. Supplementary close-up lenses are normally threaded onto the filter ring threads on the front of the SLR lens.

Close-up lenses are frequently sold in sets of three. The lenses may be marked with Numbers 1, 2 and 4. The number 4 is the strongest lens and will allow the closest focusing.

My article on lens selection in the March 1991 issue of *MRG* described the use of supplementary close-up lenses. The Kodak *Close-Up Photography* book also describes the use of the supplementary lenses.

The supplementary lenses will allow the model railroad photographer to focus closer to the subject than a standard lens will allow. Many times a photograph can be improved by simply getting closer to the subject.

The supplementary lenses will not produce photographs as sharp as a specialized lens designed for close-up photography, but it will produce acceptable photographs. They are much less expensive than a specialized lens.

## Extension Tubes

Extension tubes are another accessory which should improve model photography. Extension tubes are usually a little more expensive than supplementary close-up lenses, but usually produce a higher quality photograph.

An extension tube increases the distance from the lens to the film plane. Extension tubes are installed between the back of the lens and the front of an SLR camera. The use of extension tubes was discussed in the March 1991 *MRG* article and in the Kodak book.

Like supplementary close-up lenses, extension tubes will allow the model railroad photographer to focus closer to the subject than a standard lens will allow.

## Cable Release

A cable release is a good, inexpensive accessory. A cable release allows the shutter to be operated remotely without the photographer directly touching the camera.

Many model railroad scenes require long exposures. During long exposures, camera movement will cause the photograph to be blurred. When the shutter-release button on a camera is pushed, the camera may be moved slightly. A cable release minimizes this movement.

There are many different types of cable releases. Some of the new electronic, automatic cameras require a special electrical cable release. Check the owner's manual for your camera to determine the type of release required.

A mechanical cable release has a button on one end which pushes a pin at the other end. The pin releases the shutter. Cable releases are made in different lengths and with different outer coverings. I prefer a 12" to 24" long cable release with a cloth outer covering.

This article marks the end of the first year in this series. I hope that many readers have been encouraged to try model photography. If there are any topics you would like to see discussed in this series, please write me in care of *MRG*.

# A Return Visit to Chris Komloski's Crystal Valley & Central Railroad

**by Chuck Stevens**

*Photos by Bruce Nall*
*Trackplan by Scott Anderson*

When *Model Railroading* first visited Chris Komloski's HO and HOn3 layout for the September 1988 cover story, the layout was only a 9′ x 20′ partially finished layout in one end of Chris and Marcia's living room. At that time, Chris was just preparing to relocate the layout to its new home in a building in his backyard built especially for the layout.

The magazine promised readers it would be back for a followup visit after the layout's relocation to its new home. So, three years later, we have returned for a more complete look at Chris Komloski's model railroad. Today the layout measures 24′ x 14′ and is housed in the building Chris built just for the railroad.

## A Nitpicker's Delight

According to Chris, the CV&CRR is a nitpicker's delight. Here, much like the *Twilight Zone*, time ceases to exist in normal terms. His railroad encompasses a broad span of Colorado railroad history...with equipment and structures dating from 1900 to about 1978. After several attempts on previous layouts to confine himself to a specific time period or specific railroad, Chris came to the conclusion that he enjoyed too many different facets of Colorado railroading.

To solve this he has built a railroad made up of many small scenes, each possessing its own place in time. He calls it the "Disneyland effect." Although many of today's modelers have gotten completely wrapped up in prototype modeling and strive to recreate a specific place, time and railroad in miniature, Chris's layout reminds us of the very important fact that a model railroad should be what the modeler wants it to be...not what someone else thinks it should be.

His CV&C bi-level railroad is patterned after several Colorado railroads. You will find locomotives and rolling stock from such Colorado railroads as the C&S, UP, D&RGW, and CB&Q. You'll also find diesels and steam running side by side.

Chris's benchwork is made of 1″ x 4″ pine on the lower level and 1″ x 2″ on the upper level. Construction is typical open grid.

The main portion of the layout is 8½′ x 24′, not including the staging yard. If you include the staging yard, the layout measures 14′ wide.

Chris, with several friends, Cliff Korlaske, Bob Uhr, Tony Pankaskie and Steve Spear, handlaid most of the 1½ scale miles of narrow-gauge track and switches. Some of the handlaid switches are dual gauge.

Chris's standard-gauge mainline is 2½ scale miles long, and he has another 1½ scale miles of track in his yards. There is a lot of track packed into a small space.

## Equipment and Scenery

Chris's roster includes ten HO locomotives and ten HOn3 locos on the CV&C Railroad plus dozens of freight cars from many eras.

Many of the structures are modeled after actual buildings which existed in Colorado at one time or another, and most are scratchbuilt.

The background for the railroad was painted a light blue. Then, using only the top portion of paper cloud stencils, the clouds were painted using a can of spray paint.

## Operations

Operations of the layout are centered around the standard-gauge yard in the fictitious foothills town of Crystal. Here, trains from the Rio Grande; Chicago, Burlington & Quincy; and the Union Pacific interchange with standard-gauge equipment of the CV&C Railroad. Trains are then routed into the Rocky Mountains above Crystal.

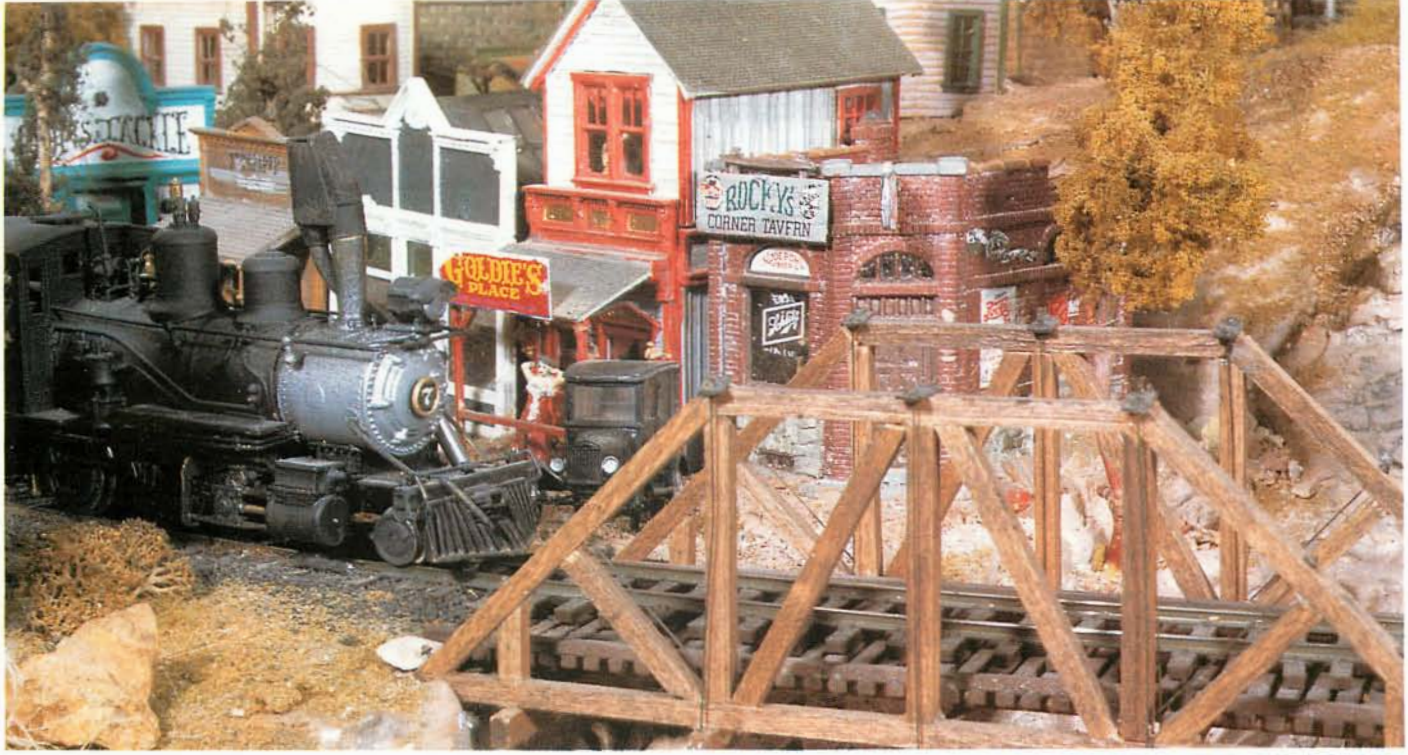
After a steady 3½% climb into the mountains, the standard gauge meets the narrow gauge in the mythical town of Central. In Central's dual-gauge yard passengers and freight are transferred from one to the other.

The little narrow-gauge line then climbs a 4% grade through Phantom Canyon, across Grande Valley and into the rough, mountain mining district of Red Mountain.

Chris and his friends can operate two standard-gauge trains on the mainline, one switcher in the yard, and one narrow-gauge local train, for a total of four trains at a time.

To accomplish this they use five power packs (one with PFM sound) and block control. Trains are operated from from any of the four walk-around cabs.

The original Crystal Valley layout was




1 – No. 7 with its beartrap stack crosses over Avalanche Creek after leaving Central on the CV&C's narrow-gauge line.

2 – A double header passes the Red Mountain Mine on the upper part of the bi-level on the CV&C Railroad.

3 – In the big city of Crystal, Bob Uhr's trolley cars transport folks around the city.

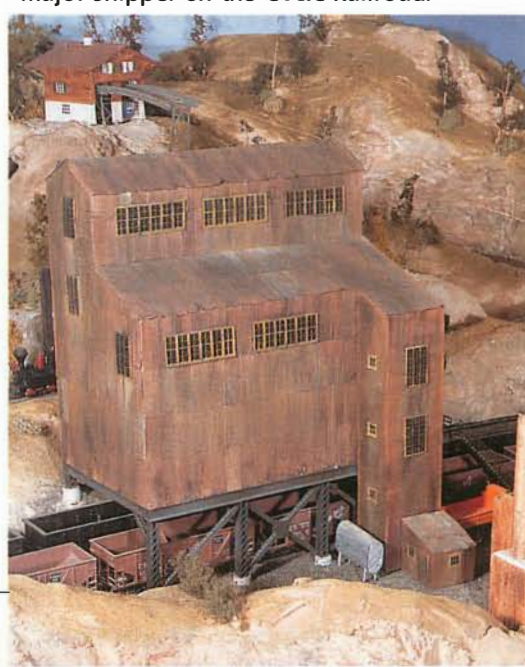
built in 1972. It made its home at several different sites until it was dismantled in 1985.Chris began this version of the CV&C Railroad in January of 1986 and moved it into its present home in its own building in May of 1988.

The track on Chris's bi-level layout rises 29" in height. According to Chris, the layout is now approximately 80% finished.

## Meet CV&C's President

When Chris was a child, his grandfather took him to Estes Park, Colorado, where a friend of his grandfather owned a ride-along diesel engine. They also visited the last of the C&S and CB&Q steam engines in the Longmont, Colorado, area. With this on-going support from his grandfather, it didn't take much to get Chris hooked on trains.

4 – The Carbondale Coal Mill is a major shipper on the CV&C Railroad.



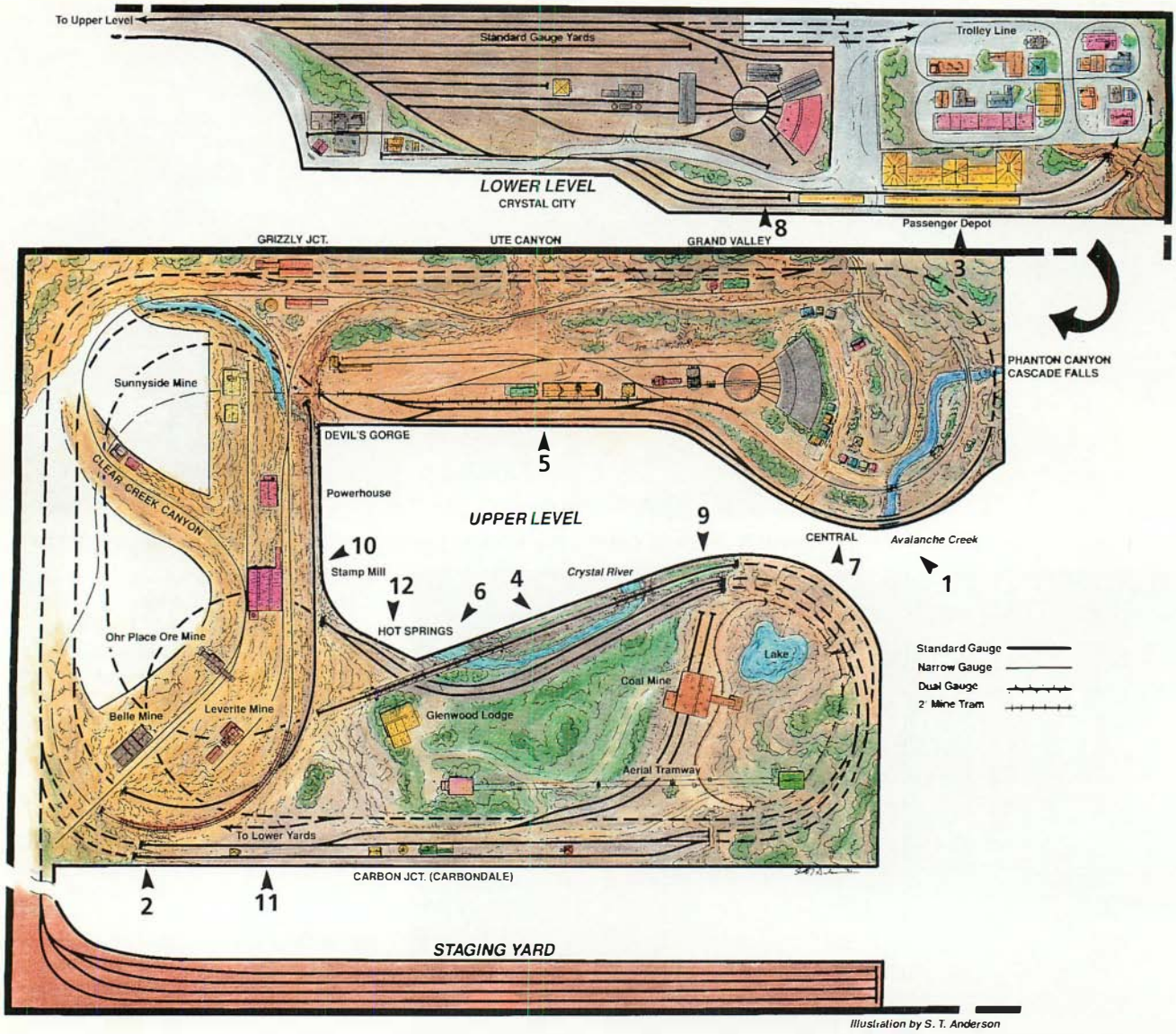
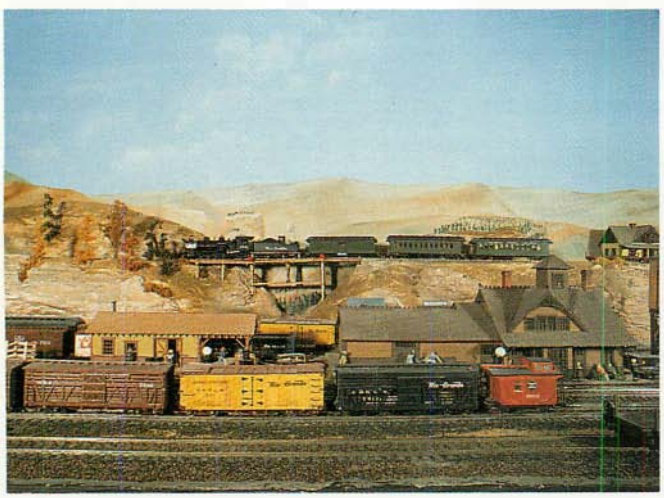
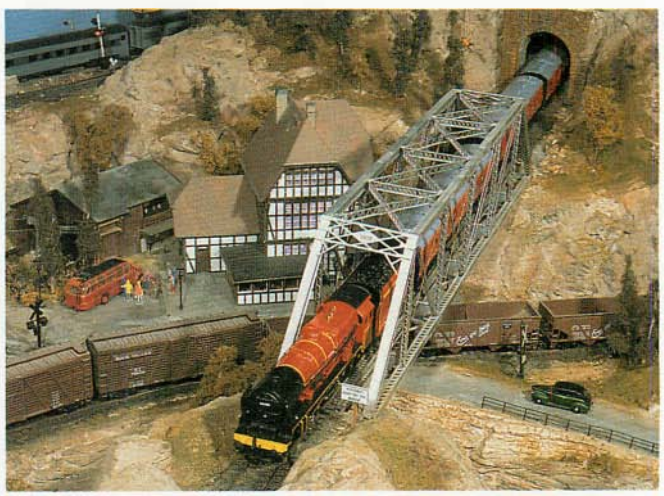


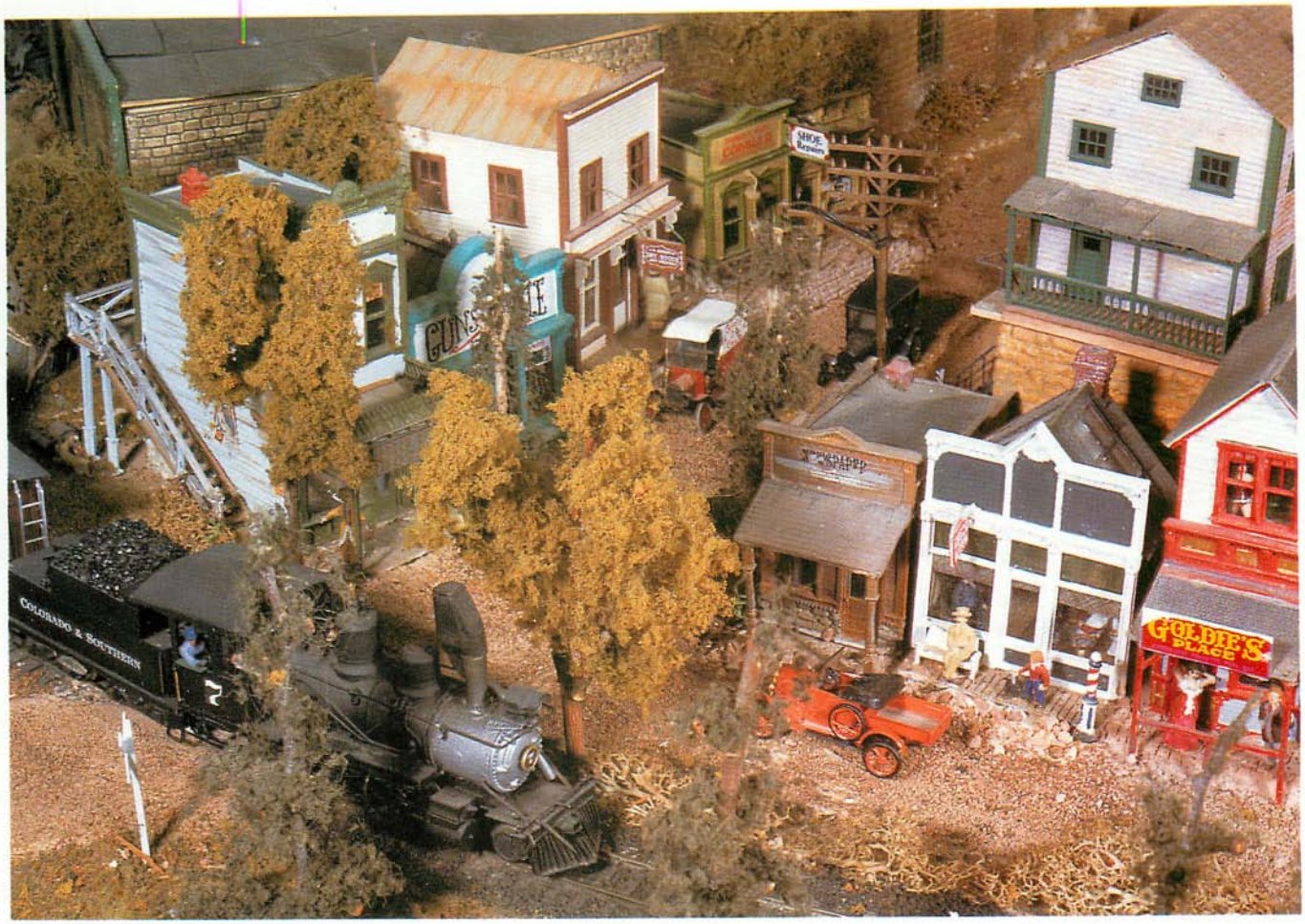

Illustration by S. T. Anderson



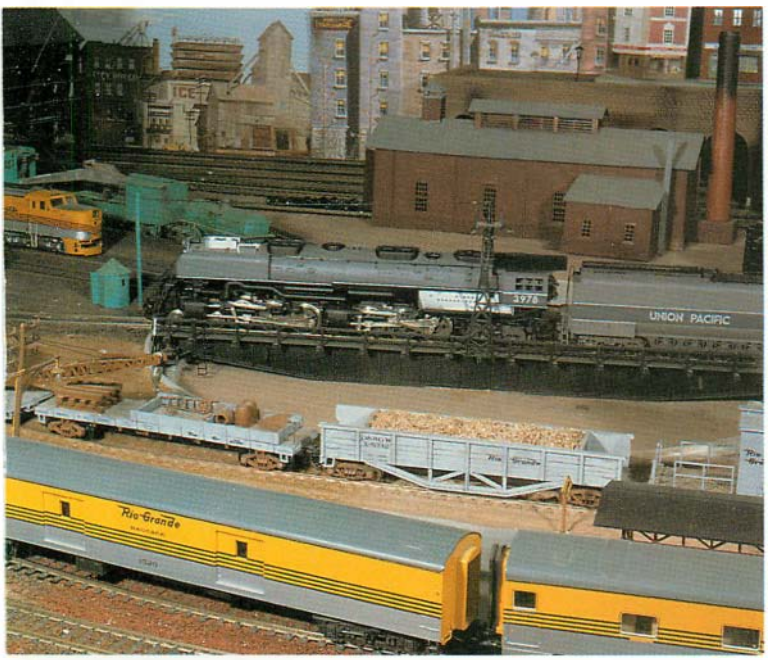
5 – A freight train of mixed cars with its bobber caboose waits at the Central depot, while Rio Grande No. 484 pulls a local passenger train over the narrow-gauge high line.



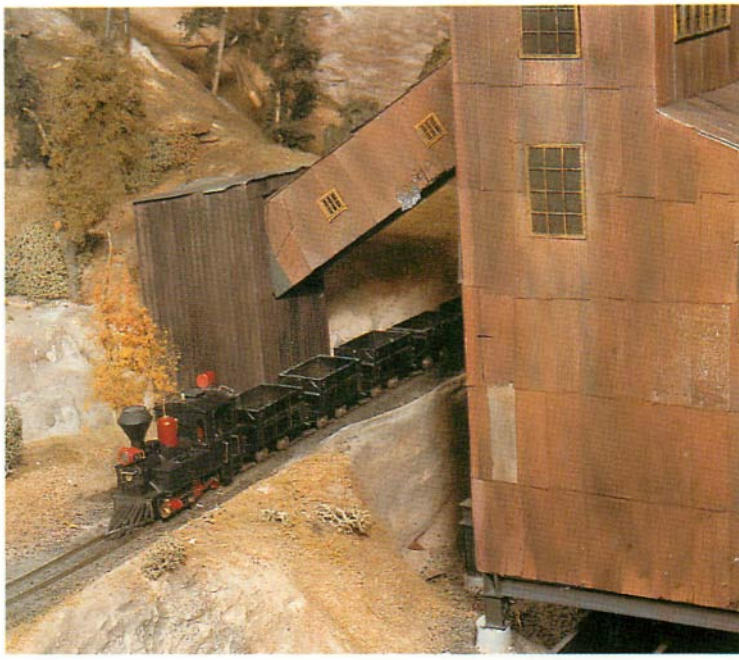
6 – Tourists debark from a 1940 bus toward their vacation hotel as the bright red 4-6-2 Royal Scot...naw, it couldn't be...passes over the bridge and a mixed freight that is heading for Carbondale.



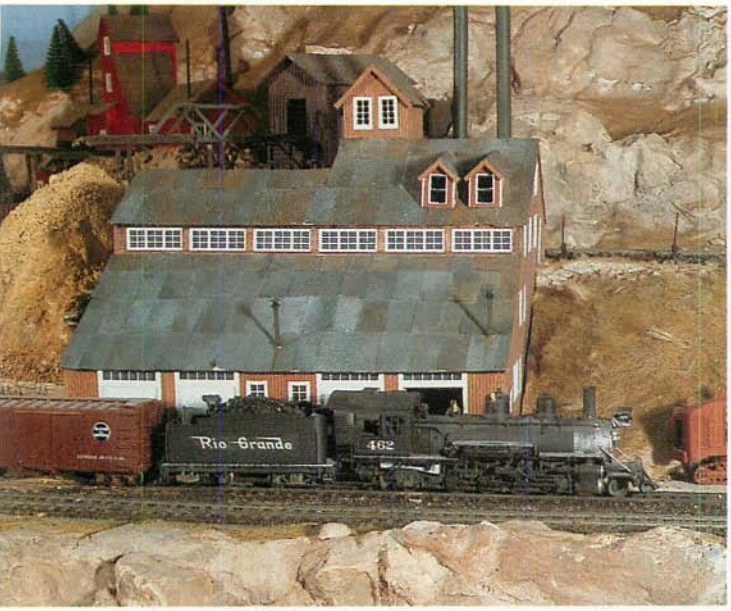

7 – C&S No. 7 leaves Central where the streets are lined with quaint buildings of the 19th century.




8 – In the Crystal yard one sees modern (1968) equipment as well as early 20th-century rolling stock. Because Chris's interests span several eras of Colorado railroading, his layout has what he refers to as a "Disneyland effect."



9 – Diamond stack CV&C mining locomotive (HOn2½) passes the Carbondale Mill on its way to the mine head.




**10 – Rio Grande No. 462 brakes on the downhill run past the Leadville Mill with a load of empty boxcars and a couple of ore cars.**


**11 – The local passenger train headed up by Rio Grande No. 484, a 2-8-2 K36, crosses the scratchbuilt 80′-high trestle in the Red Mountain mining district.**

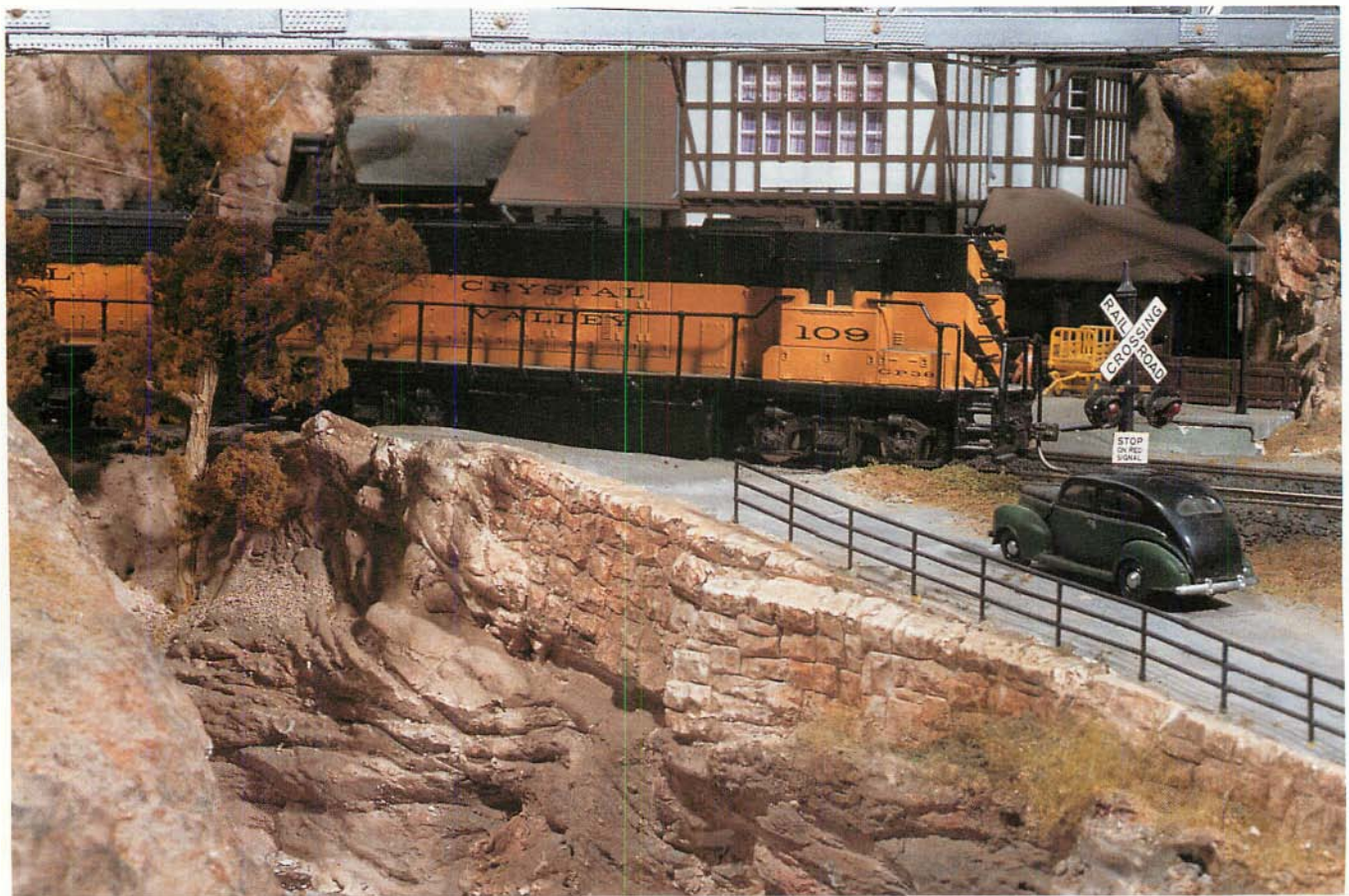
As a youngster, Chris started with HO. When it came time for him to attend college, he chose Fort Lewis College because it was in Durango...and everyone knows what railroad is in Durango. Although his trains were packed away, he was definitely hooked.

To this day if he isn't working on his model railroad or someone else's, he is helping straighten track or putting in a new switch on the 3′ narrow-gauge Georgetown Loop Railroad in the Colorado Rockies.

He is a member of the very active Boulder Model Railroad Club and has his layout open for club and NMRA functions regularly. He also gives clinics at the club and helps with the mall shows.

If this still wasn't enough, Chris decided to make a business out of his hobby. Today, Chris custom builds small N, HO and HOn3 train layouts. He designs them to the owner's specifications, completes them down to detail and makes them ready-to-run for their owners. His layouts have gone to customers all over the western United States.

**12 – The President of the CV&C sits in his 1940 Ford waiting for the Crystal Valley No. 109 local freight to clear the crossing.**



# Modeling a CSX Sa d Storage Tower

*(Continued from page 21.)*

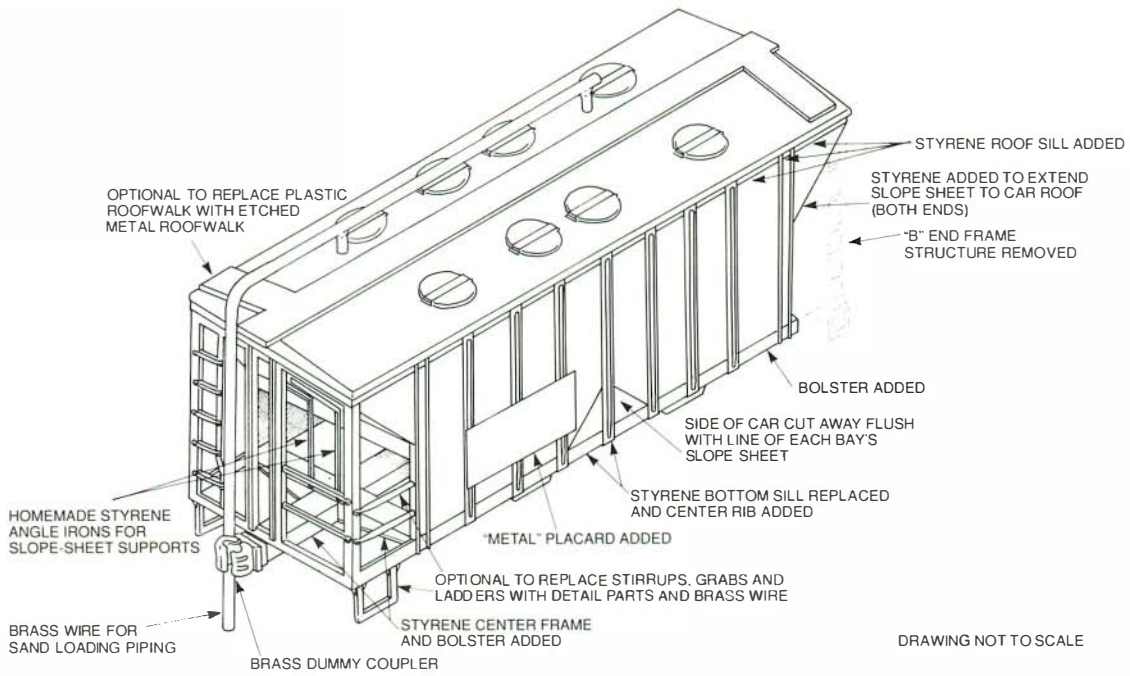
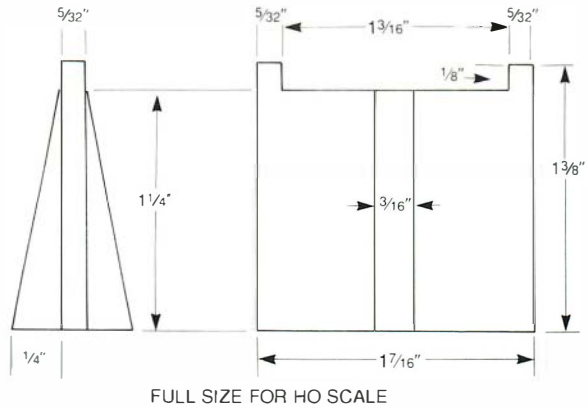



Figure 1 — Modifications to MDC 2-Bay Covered Hopper

sand-storage bunker was to be one of the first structures at my own engine terminal, and my foresight warned me that with future construction, I might easily damage or destroy the piers if cast in plaster. (As a matter of fact, I have knocked this model to the floor — more than once. I doubt that plaster piers would have survived the impact.) I wasn't familiar with other casting products and wasn't inclined to experiment with them at that time. So, I settled on doing it the way I knew how. For now, my piers are durable and look just fine. I can always redo them in the future. If I get to working with casting materials, I'll already have a practice project.

Whether you cast or construct, Figure 2 should provide the information that you need. Note the projections at either end of the piers. If you build them right, the lower sills of the car's sides will rest on these projections. The center of the bolsters should snug down atop the piers in the middle of the notch.




FULL SIZE FOR HO SCALE

Figure 2 — Dimensions of Concrete Piers

## Piping

The last area of construction is to manufacture the piping for loading and distributing the sand. The piping on the prototype appears to be 4″-diameter tubing. Detail Associates .046 brass wire would be correct for this. The prototype used flanged connectors, T's and other fittings, as shown in Figure 3; however, I simplified these fittings for my model. I made the piping from one piece of wire and made no attempt to model in the flanges. *(Ed. Note — Williams Bros. now makes plastic 4″ pipe and fittings in HO scale. Part #620 retails for $5.25.)*

On the prototype, a pipe leaves each of the four outlets on the hopper to feed sand into the compressor. The prototype's outlet doors and mechanisms have been removed and the outlets sealed over. For the model, toss these pieces into your spare parts box, and seal over each outlet with a piece of styrene.

The pipe from the outlets meet at a four-way valve. This is the most involved part of rigging the piping. In trying to solder the four feeder pipes leading to the single feed into the compressor, I would either misalign the pipes or break the joint when filing it to shape. Frustrated, I took a second-best approach; soldering the feeder pipes in pairs, each pair with its own pipe

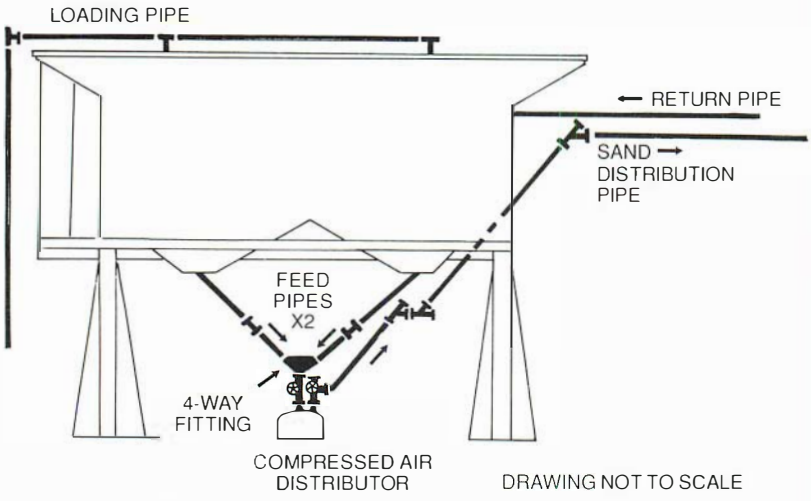
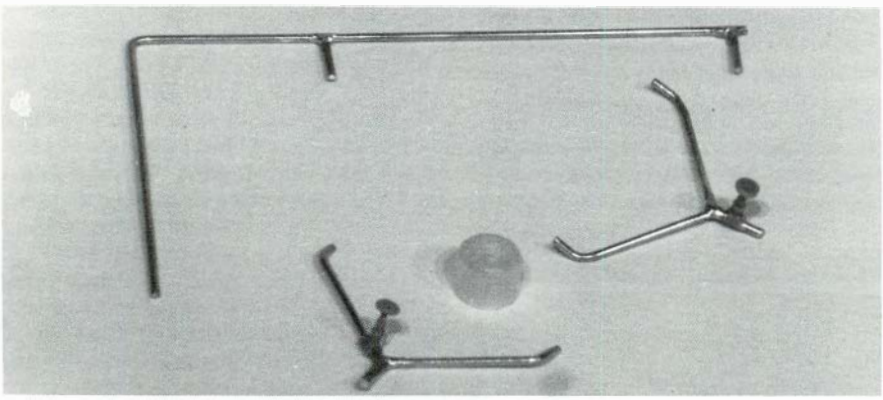
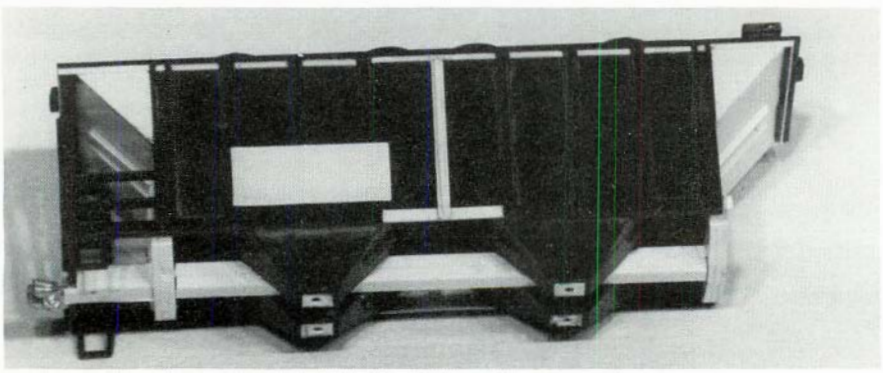



Figure 3 — Piping Schematic



**Pipe detail.**



**Modified hopper shell.**

into the compressor. Though the prototype *isn't* built this way, I'm satisfied. (The photo shows these final creations.) The prototype has a control valve on its piping, and I scrounged a couple of DMK Enterprises valve fittings from my spare parts box, and glued these to each set of feeder pipes.

The air compressor is half buried in the concrete platform beneath the tower. The compressor is about 30" in diameter, with about 30" of the tank protruding from the platform. I used a very unusual found object for the visible portion of the compressor. It is a closed, rounded-end piece of plastic snipped from a magazine for a nail setter. (The kind which uses .22-caliber blanks to shoot nails into concrete.) It was the right size and shape. However, as it's unlikely that you will easily find such an object, I suggest using a small section of Plastruct or Evergreen Scale Models plastic tubing, or K & B brass tubing. Seal the end with body putty and round to shape.

Drill holes in the hopper's outlet bays and the top of the compressor to accept the feeder pipes. Connect the feeder pipes and this part of the model will be done. I made all the ends of these feeder pipes a little long, so that I could adjust the fit at the hopper and the compressor. I made my tower so that the compressor sits flush on the platform. You might consider making the tank of the compressor a little long, drilling out a hole in your platform, and seating the compressor into this hole when placing your model on your layout.

A distribution pipe carries sand from the compressor into the shops. As shown in Figure 3, this pipe rises off an angle connector, through the hopper, to about the height of the tower. From there it turns and heads into the shops. This pipe serves several sanding stations inside the building and along the platform on the opposite side of the shops. At the end of the system, a return pipe running parallel to the distribution pipe will recycle excess sand back into the hopper. Again, I've used .046 brass wire for this piping. I've located my sand tower beside the shop building, rather than at one end, so I've allowed the piping to rise between the tower and the shops, and go in the side of the building.

There is a separate pipe used to refill the hopper. This pipe has two inlets on the roof and hangs down at the "A" end. Here, trucks attach to a nozzle and load sand into the hopper. Note that the pipe is offset from the car's centerline, with an inlet into each of the car's bays. The same .046 brass wire is used for this pipe.

## Painting and Lettering

The prototype is a dusty gray color, and I used Floquil Primer straight out of a spray can as the finish coat. A few touches

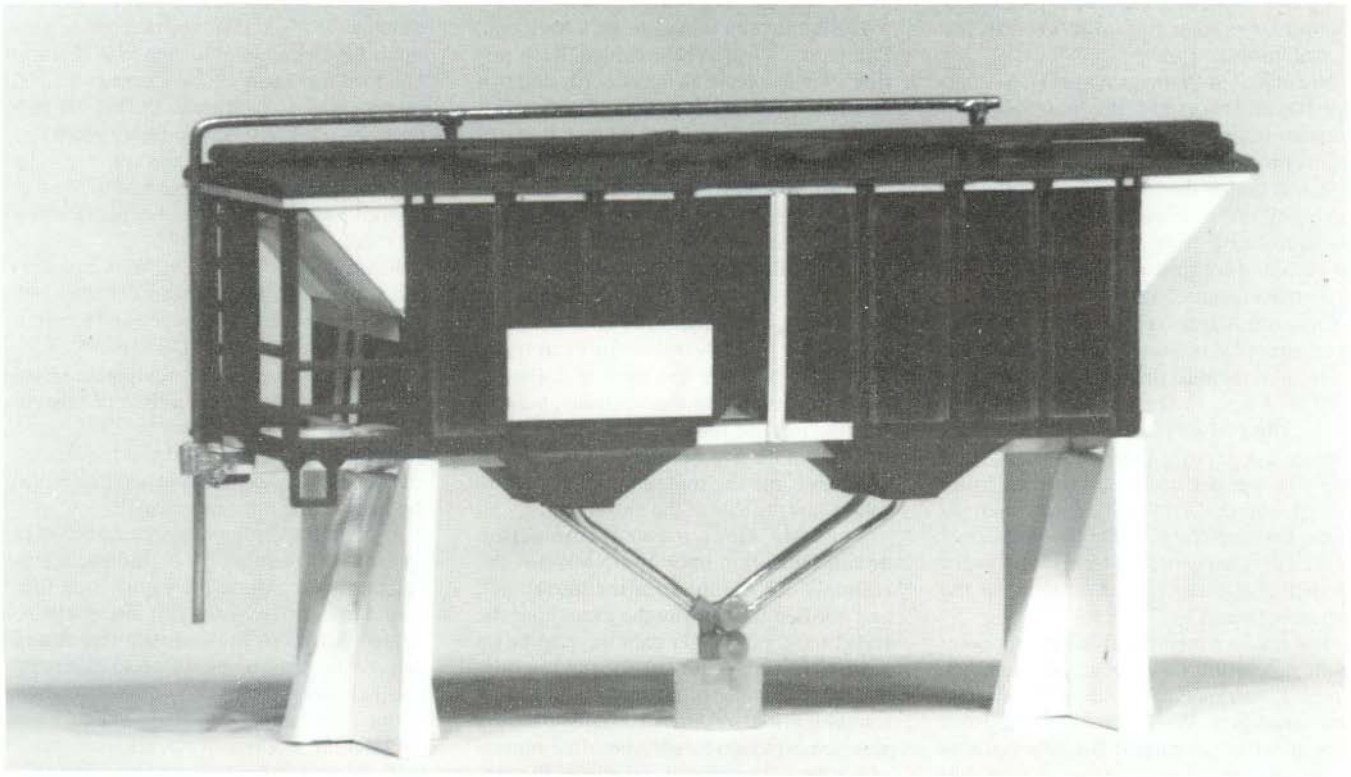

**The CSX sand storage tower.**

of instant weathering gave a little more texture and variety to the color. These colors closely resemble the prototype. The piers should be a different color, so were painted with Floquil Concrete. (I believe in using color straight out of the bottle when I can. Any future repairs or touch-ups will be much easier to match.)

At the time I built and painted my model, the prototype's piping was painted in the same color as the hopper. On a recent visit, I noted that it had been repainted to a silver or aluminum color. My model's color is the gray, but Floquil Bright Silver may be your choice.

The decals are Microscale's Block Gothic alphabet set. I have good success putting Microscale decals onto a matte surface. I lay down a bead of Solvaset — full strength — let it soak in and dry a bit, then lay on the decal. No, you can't touch it once it has been placed, but there will be no decal shine when dry.

This structure is just a bit unusual, and that's its appeal. Perhaps there is some room at your engine terminal for a similar tower for your railroad.



**Assembled sand storage tower, ready for painting.**

# Norfolk and Western Passenger Service

## Part IV

by Vern French

In 1943, the N&W built six engines, Nos. 605 through 610, originally Class J1, without the streamlined cowling and with lightweight rods to save vital war materials. After developing running-gear problems the J1s were shopped in 1944 and refitted with streamlined cowl and lightweight rods. Equally efficient in the mountains or flat terrain, the reclassified Js were rated as one of the best passenger locomotives ever manufactured in the United States.

Norfolk, VA, being a major U. S. staging base, presented the Norfolk and Western Railway with a formidable task in respect to the war effort. Camp Pickett, VA, was one of the largest installations on the N&W line. Perhaps the clearest picture of the railway's role at Camp Pickett can be obtained by following a hypothetical troop movement.

Division A received its orders to move to another post or port, and promptly communicated them to the post transportation officer, Capt. F. G. Browder, Jr. Right away, the railway men were called in. Division A reported the number of men and the weight of impedimenta to be moved, and the army and railway men sat down together to calculate the number of passenger, box and flat cars that were needed. They then planned the makeup and number of trains.

The railway men involved at this point in the proceedings were Frank B. Henretta, Trunk Line representative, and his assistant, Francis T. West. Mr. Henretta was a veteran with 22 years of N&W service as baggage clerk, ticket seller, city ticket agent, dining car steward and finally traveling passenger agent at Memphis after which he came to Camp Pickett in May 1942 as Trunk Line representative. Mr. West, who was formerly manager of the Southern States Cooperative at Pulaski, VA, and Beckley, WV, joined the railway family in November 1943. Assistant Freight Agent Reginald C. G. Witt, another N&W man assigned to Camp Pickett, lent a hand with the freight calculations.

If the movement was to be a long one, Pullman cars had to be provided. Each carried 39 men, one in an upper berth, and two in a lower. On shorter runs, day coaches could carry an average of 60 men to a car, filled to 75 percent of seating capacity.

With information on rolling stock in hand, Capt. Browder notified the Army Transportation Corps headquarters, a branch of the Army Service Forces, and this agency, coordinating the projected movement with others the country over, assigned a Main Number for each train. This Main Number was used to designate the trains in all communications, both to simplify identification and to ensure security. Back from the Transportation Corps headquarters came the route the trains were to follow and the date of the movement.

Then Mr. Henretta went into action again. He called upon the N&W for the rolling stock required for the movement, and notified the railway the exact hour the freight and passenger cars were to be on sidings in Camp Pickett for the loading. This was a matter of no small importance, for the nation's entire rail transportation was geared to save every possible minute of car time. The railway calculated the running time from Camp Pickett to the destination, and the time schedule for the movement was complete.

Kitchen cars were the first to arrive on Camp Pickett's 15 miles of track. Except when troop kitchens were furnished, they were nothing more than baggage cars, and the troops were given several days in which to install the kitchen equipment. Then, 24 hours before the movement was to begin came the flatcars and boxcars, which were loaded with trucks, tanks, guns and all the equipment of the WWII army. The loading was done by specially trained soldiers who worked under the eyes of railroad and army inspectors. Every piece had to be blocked and lashed according to strict standards of safety and checked to see that it would clear tunnels and bridges along the route.

From Ticket Agent W. W. Carson at Blackstone, Mr. Henretta secured the block ticket for the entire movement and turned it over to the Army.

Finally, the passenger equipment rolled in, just an hour before it was scheduled to move out again. Kitchen cars were switched into trains, and the train commander and transportation officers inspected the train for proper equipment.

The waiting troops marched aboard in an amazingly short time, and the trains began to roll. Along the route, each railroad was notified by the last just when and where it was to pick up the trains and deliver them to the next line so that none but the final railroad knew the destination of the movement.

Outgoing troop movements were, naturally, a major portion of the railway's work. The N&W also gave continual aid in

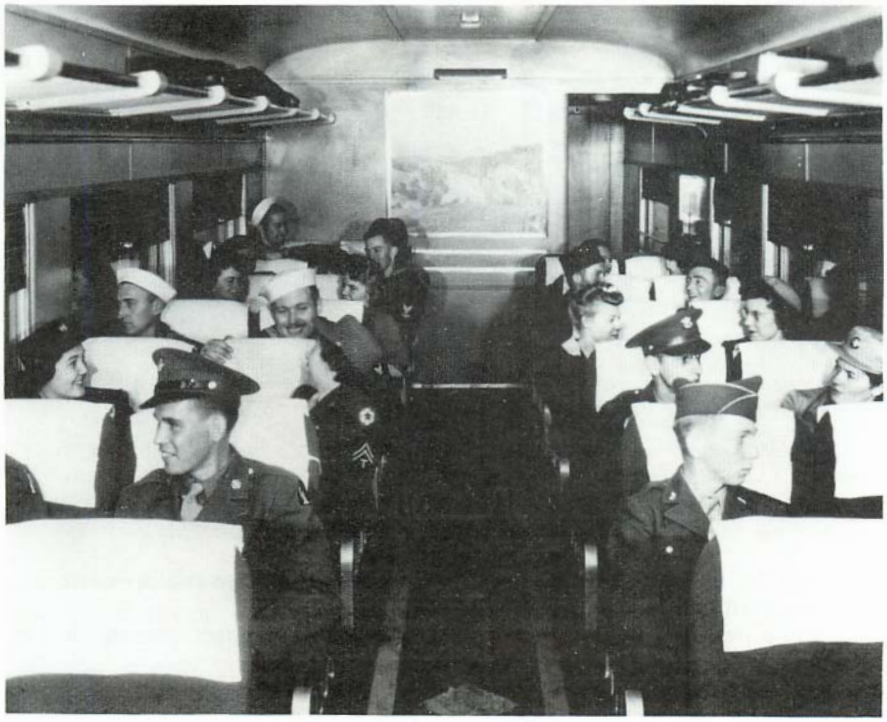
transporting "casual" individuals or groups of 39 or less moving under Army orders. The trunk line representatives laid out the routes in collaboration with personnel of the rail transportation office of the Army, made arrangements for the meals and supplied the block tickets.

The handling of these casuals and the stream of men going to and from Camp Pickett on pass or furlough, as well as the greatly increased civilian travel that came to Blackstone with establishment of the camp, caused substantial enlargement of the passenger station including addition of new baggage and express facilities.

The railroad's personnel in Blackstone skyrocketed. Instead of three telegraph operators and a freight and baggage helper who handled everything before the war, the terminal was manned by a ticket agent, a cashier, three operators, four ticket sellers and 11 employees to handle mail, baggage and freight.

Automobile owners resisted attempts to ration gasoline, but the Japanese capture of Malaya and the East Indies caused a "rubber famine" when 90 percent of the natural rubber exported to the U. S. was cut off. By rationing gasoline, civilian demand for tires could be cut. General Motors and B. F. Goodrich were later to put this gasoline-rubber alliance to their own purposes.

Between December 1941 and August 1945, the U. S. and its Allies consumed almost seven billion barrels of oil of which six billion came from the United States.



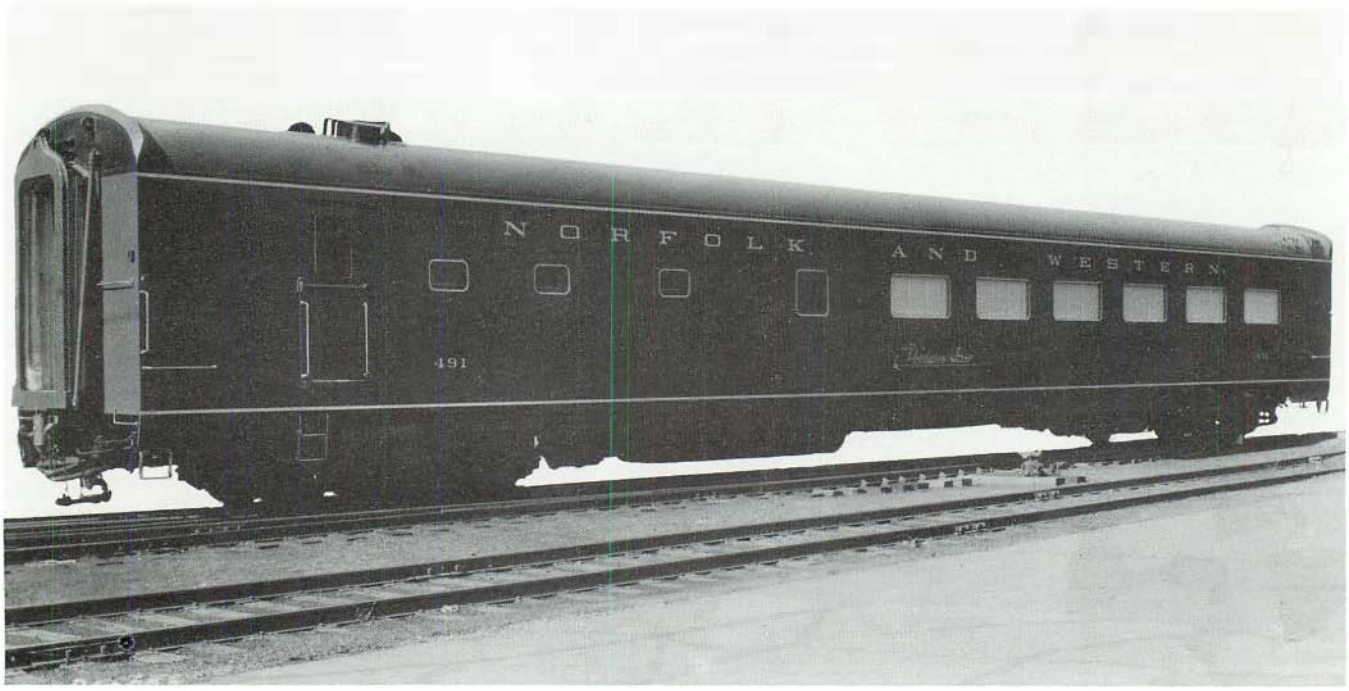
**"Casual" individuals or groups of 39 or less moving under military orders during World War II in a class PM coach.** *Norfolk & Western Ry. Archival Collection, Virginia Polytechnic Institute and State University Libraries*

## Powhatan Arrow

On March 22, 1946, the N&W announced plans for a name streamliner to run between Norfolk and Cincinnati. A contest was sponsored to name the train and was won by Leonard A. Scott of Dry Branch, VA, with the name *Powhatan Arrow*. Chief Powhatan was the father of


**Cars 1720, 1721 were converted to tavern cars for the 1946 *Powhatan Arrow*. June 19, 1946 (Car 1722 was converted later).** *Norfolk & Western Ry. Archival Collection, Virginia Polytechnic Institute and State University Libraries*

**Norfolk & Western's 1947 calendar depicted the *Powhatan Arrow* all-coach streamliner between Norfolk and Cincinnati.**




**Class D1 dining cars Nos. 491-494 weighed 143,400 lbs. and cost $144,279 each. Although ordered as replacement cars for the Powhatan Arrow in 1947, delivery didn't occur until late 1949.**

*Norfolk & Western Ry. Archival Collection, Virginia Polytechnic Institute and State University Libraries*

Pocahontas. Extensive changes of Norfolk and Western passenger schedules accompanied the inauguration of the railway's new, all-coach streamlined luxury trains Nos. 25 and 26, which made the run in just under 16 hours. Westbound, the new train left Norfolk at 7:00 a.m. and arrived in Cincinnati at 10:50 p.m. Eastbound, it left Cincinnati at 8:10 a.m. and arrived in Norfolk at 11:55 p.m.

Other changes included the reduction of the running time of the *Pocahontas* (Trains 3 and 4) between Norfolk and Cincinnati by an hour and 40 minutes, and additional passenger-train service over the Atlantic Coast line between Petersburg, VA, and Richmond, resulting in better connections for through passengers between N&W points and Richmond. The sleeping-car line between Bluefield, WV, and New York had its southern terminal at Roanoke, VA, and new sleeping-car service was provided between Williamson and New York.

After considerable preliminary study, a program was launched at Roanoke Shops on March 14 and completed on April 25, 1946. It included the reconditioning of 13 Class PM passenger coaches — complete from rail to roof, inside and out; the reconstruction and refitting of two PM cars, Nos. 1720 and 1721, into unique coach-tavern-lounge cars, and shortly after to tavern-lounge cars, and the complete remodeling and refinishing of two dining cars, Nos. 1023 and 1024. These diners were gold-striped to match the PM cars.

Class J locomotives also underwent reconditioning and painting in keeping with the handsome outfitted cars they would pull. Later class PM coach car no. 1722 was also converted to a tavern-lounge car.

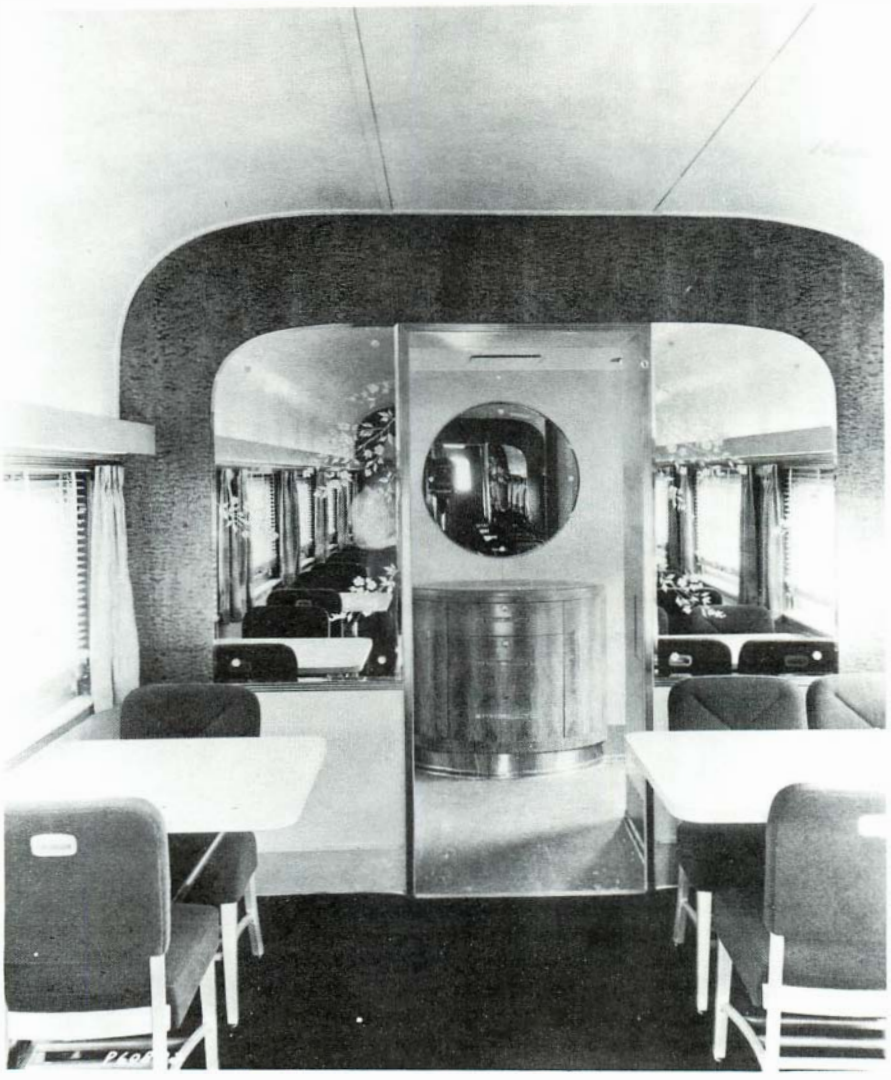
The tavern-lounge cars — an outstanding innovation of the new train — included a shining stainless-steel serving counter where sandwiches, soft drinks, coffee and ice cream were served. The tavern-lounge section was furnished with 20 comfortable, mahogany lounge chairs, built at Roanoke Shops and upholstered in attractive blue and rust mohair by employees of the Upholstering Department, and nine straight chairs — four at each of two tables and one at a modern, mahogany desk. Eight small tables, made of mahogany and stainless steel by workers at the Cabinet Shop and finished at the Paint Shop, were placed between the lounge chairs for the convenience of the passengers. Lamps and ash-trays — cast at the Roanoke Shops Foundry, finished at the Machine Shop, and plated with an antique-bronze finish at the Electro-plating Shop — completed the furnishings of the tavern-lounge section of the two tavern cars, Nos. 1720 and 1721.

Separating the tavern-lounge end of the car from the regular seat section were two stainless-steel grilles, made in the shops from 1¼" square bars. Flooring throughout the train was of heavy-duty rubber tile with a red Paisley pattern and an ivory-colored aisle strip and design. Window shades made in the Upholstering Department were faced with Delft Blue silk brightened with horizontal designs.

The walls of the tavern cars and of some of the coaches were finished in a deep Delft Blue from the floor to the windowsill cap, then in a lighter Williamsburg Blue from the windowsill to ceiling. Ceilings were a very light azure blue to provide maximum light reflection. Other coaches were finished in a color scheme of green, varying from dark to light green and with harmonizing window shades and portieres to the men's lounges.

With the exception of the table lamps in the tavern-lounge and the ceiling lights in the diners, lighting throughout the train was of the fluorescent type with individual lights and switches over each pair of seats in the coaches. All windows were the extremely wide, full-vision type, glazed with dual panes of plate glass to prevent fogging. Interiors of the cars were further decorated with large, full-color photo-murals, which were produced in the railway's photographic laboratory. The entire train was air-conditioned and equipped with the latest type of thermostatic control to provide a healthful, pleasant, even temperature in summer and winter.

The reclining and revolving coach seats in the passenger cars were of the most modern design with satin chrome bases and frames, upholstered in luxurious sponge rubber and covered (in the N&W Upholstering Department) with handsome, henna-colored, needlepoint mohair. The men's lounges were fitted with trim, stainless-steel chairs covered with deep reddish-brown leather. On the wall over each



**Class D1 dining cars had seat coverings with a special red needlepoint material and deep two-tone red hookset-type carpets. The ceilings were light yellow and the walls were gray with wainscoting. The bulkhead walls featured flesh-tinted mirrors with etched gold designs on the back to compliment the gray quilted Flexwood on the upper portions.** *Norfolk & Western Ry. Archival Collection, Virginia Polytechnic Institute and State University Libraries*

pair of coach seats, a small numberplate was placed, identifying each seat by number and position, whether an aisle or window seat. These numberplates were etched by Signal Department workers at Huff Mill and finished at Roanoke Shops.

Receptacles were placed on the outside of each car to hold removable letter plates for the purpose of identifying each car in order as it stood in the train, starting from the locomotive tender. Thus, a passenger buying a ticket for Seat 11 in Car "B" would know that he was entitled to a seat in the second car behind the locomotive.

Workers at the Paint Shop refinished the exteriors of the cars in a gleaming Tuscan red, accented with gold stripes and sparkling stainless-steel window frames.

The car went first to a stripping track, where it was completely "untrimmed," and just about everything removable — seats, trim, radiator covers, electrical equipment, window shades and the like — were taken out and sent to the appropriate departments for overhauling, reconditioning and refinishing. Then the car went to a scrub room where it was thoroughly washed, inside and out.

Next, at the Passenger Car Shop, the trucks were removed, torn down, inspected and parts renewed wherever necessary. Wheels which needed turning were sent to the Wheel Shop. Air-brake equipment went to the Air Brake Repair Shop. Air-conditioning units and other electrical equipment went to the Electrical Department. Use of a magnaflux inspection device to reveal possible hidden flaws in axles, equalizers and other load-bearing parts was evidence of the length to which the N&W would go to insure the safety of its passengers.

Roller bearings, pins and the like were carefully inspected for closeness of fit to insure smooth, quiet riding qualities in every car. Meanwhile, necessary reconstruction in the cars, as in the tavern-lounge cars, was done at the Passenger Car Shop. Following replacement of the trucks, the car went to the Paint Shop to be repainted, inside and out, striped and lettered.

Near the end of the assembly-line process, the car went to the test and finishing track where all of the equipment, converging from each department, was installed. The car was thoroughly cleaned and given a rigid service test. When the car rolled out on the line, the N&W knew it was "right."

## Scheduling

Scheduling the new train so that it would make prompt, convenient connections with other railroads at principal terminals, as well as with N&W trains to and from Durham, Hagerstown, Winston-Salem, Bristol and Norton was a major task for the Passenger Traffic and Transportation Departments, involving a multiplicity of arrangements with other railroads in order to provide the best possible service.

The train sped over the N&W rails, affording passengers colorful, daylight views of the scenic wonders along the railway from the great seaport of Norfolk, through the fertile farmland of the Old Dominion, over the Majestic Blue Ridge and Allegheny Mountains, past the vast coal fields of West Virginia and along the winding Ohio River to the teeming industrial centers of Ohio.

## Powhatan Arrow's Inaugural Run

April 28, 1946, may have been just Sunday in most parts of the United States, but it was "Norfolk and Western Day" along the railway's 676 miles of line between Norfolk and Cincinnati. That history-making day marked the maiden trips of the *Powhatan Arrow*. The journey of a train had not caused such widespread interest, excitement and pride for quite a long time. From Norfolk to Cincinnati and back again, crowds swarmed deep along the tracks in cities, towns and villages. Even at tiny crossroad hamlets, the number of spectators waving the new train bon voyage and whistling their admiration obviously far exceeded the total population of the communities — indicating that folks had traveled in from distant farms and mountain hollows just to see the new trains go by.

Engineer J. P. Fisher and Fireman J. W. Cumby, Jr., son of a veteran N&W section foreman, made sure Engine No. 604 maintained split-second timing on the westbound voyage. General Passenger Agent C. B. Perkins welcomed the very first passenger aboard at Norfolk, Miss Georgia

**A rail pierces the nose of Class J No. 607 after it left the rails at nearly 80 mph. The spoked wheel to the left is one of the engine's pony-truck wheels which normally guided a steam engine into curves. Photo is believed to be of the February 20, 1948, wreck at Franklin Furnace.** *Tom Dressler collection*

Riley. Conductor C. L. Harper proudly shouted "All aboard!" Steward M. N. Weidner, Chef Floyd Williams and the rest of the dining-car crew served excellent meals.

As the train neared Roanoke, crowds of people and lines of cars thronged the edge of the railway's right-of-way the entire distance from Vinton to the Roanoke Station. There were thousands of people — some guessers said 3,000; others said 10,000.

Gliding into Roanoke right on the dot the train was promptly taken over by Relief Stationmaster H. O. Akers and Coach Yard Foreman R. R. Keesee and their helpers who gave it the necessary servicing and inspection. During the ten minute stop, a number of passengers boarded the train while thousands of other folks just looked it over.

During that scant ten-minute interval, passengers and hand baggage were unloaded and embarked. J Class No. 604 locomotive was uncoupled and moved quickly towards the engine terminal. A few seconds later, an identical engine No. 605 coupled easily to the train. Four men washed 120 windows. The Norfolk Division crew — engineer, fireman, conductor and trainmen — were relieved. Three men stocked the five coaches with 150 gallons of fresh water per car. Six workers swarmed over the diner, loaded it with 300 gallons of water, 1,200 pounds of ice, 400 pounds of coal and four bushels of kindling. Two men from the Dining Car Department loaded the car with enough food to last to Cincinnati — chicken, steaks, ice cream, fresh vegetables and all the other edibles needed for two meals. The tavern car was stocked with sandwich materials and beverages.

A completely new staff climbed on the diner — steward, four chefs, five waiters — the men were in uniform, ready to go and the luncheon was not interrupted. The tavern's crew of two was changed, also without interruption to service. Air conditioning, lights and other electrical equipment was inspected on every car. Soiled linen was removed; clean laundry was placed on the train. The car inspectors completed their check-up of journals, wheels and underframes. Then the brake test was made and the conductor highballed Number 25 on her run to Cincinnati.

The *Powhatan Arrow* stopped in Roanoke for ten minutes, but these numerous jobs were usually completed in eight. It took daily planning and cooperation. The yard brakeman, the window washers, the new crew — everybody who had doings with the *Arrow* knew his exact place and knew exactly what to do.

They lined both sides of the track as No. 25 quietly moved in. A gloved man on the diner's roof deflected 20-lb. chunks of ice that were being tossed to him from the ground, sending them neatly down a chute. Squeegee mops slid across coach windows. The red-bandannaed yard brakeman uncoupled the locomotive. So it went, an assembly line of efficiency.

The *Powhatan Arrow* breezed out on the open rails once more, speeding by throngs

of people, while Leonard A. Scott, the N&W retired section foreman who won the $500 first prize for his name for the new train, stood on the rear platform waving merrily to his many friends on the Radford division, particularly when he passed his own station, Dry Branch.

Another large crowd was on hand at Bluefield, seven hours and forty minutes and 353 miles away form Norfolk. The *Arrow* had crossed the entire State of Virginia, climbed more than 2,500 feet and was standing at the threshold of the great state of West Virginia. Now began "the Roller Coaster."

Lofty mountains and twisting valleys made this part of the trip no race track, but the skill of the engine crew and the power of the Class J kept the *Powhatan Arrow* speeding towards its mark while passengers waited on the rear platform for that momentous event — the passing of the two *Powhatan Arrows*. The eastbound and westbound trains were expected to pass near Bluestone, and sure enough, at Cooper between Bluestone and Ruth, around the bend raced the other *Arrow*.

The *Arrow* rolled through the rich coal fields of West Virginia, up and down mountains, along the Tug Fork of the big Sandy River to the town of Powhatan which seemed to have a double turnout. Williamson also had huge throngs of well-wishers. Folks lined both sides of the tracks and looked down from windows of buildings. On highways between Williamson and Bluefield, there were long caravans of cars.

## Replacement Equipment Ordered

The Norfolk and Western management realized that the rebuilt equipment would not last for many years and immediately ordered new equipment from Pullman-Standard. The original order included: three ten-roomette/six double-bed cars; ten coaches seating 58; two coach-locker cars, seating 50; two coach-compartment cars, seating 68; two dining, seating 48, and two tavern-lounge-observation cars, seating 54.

The original two-dining-car order was increased to four cars. All equipment was to be delivered by the second quarter of 1947. Because of the huge amount of orders, Pullman-Standard was not able to deliver the cars until late 1949 and ironically the first two cars delivered were the two additional diners. The cost of the order was over two million dollars.

## Powhatan Arrow Derailments

On June 12, 1946, the train derailed in its namesake town of Powhatan, WV. The engine, traveling at excessive speed, left the track and turned over on its side, killing Engineer G. C. Roberts and Fireman Beecher Lawson, both of Bluefield, WV. Two of the seven cars were severely damaged.

Then on February 20, 1948, the eastbound *Arrow* missed yellow block signal 5940 at Franklin Furnace, OH, and hit an open switch east of block signal 5920 which displayed a stop and stay order. The train was traveling 77 mph when it derailed. The engine overturned and the drawbar and safety bar between the engine and the tender were twisted about 20° to the left on the engine end. The tender was dragged from the track by the engine. Luckily the train uncoupled between the tender and the first car. Five of the six cars derailed but remained upright. This saved many lives, but 36 people were injured, five of whom were hospitalized.

The engineer said he missed the yellow signal about a mile west of the switch. It was too late when he applied the brakes in emergency after he saw the red light. Extra 2028 East had stopped to release a stuck air brake and the switch was lined for the middle track to allow the *Arrow* to run around the stalled freight...but not at nearly 80 mph! The fireman, Robert Maiden of Portsmouth, OH, was killed. He had jumped from the cab and the 378,000-pound tender turned over on him. Also injured were engineer George Raines, also of Portsmouth; the brakeman; five dining car employees and one tavern-lounge attendant.

In December of 1948 the N&W took delivery of the three class S2 Pullman sleepers named: *Buchanan County* (not to be confused with the Pullman heavyweight *Buchanan*), *McDowell County*, and *Sussex County*. The N&W Archives Collection at Virginia Tech had only one picture of these cars. No information on the interiors has been found, though Rev. Jim Nichols states they were almost identical to the Pennsy "rapids" cars. He assumes the interiors were the same.


**Pullman Standard delivered three class S2 sleepers in December 1948. Each had a ten-roomette/six-bedroom arrangement and rode on T-96 trucks. Cost was $119,290 each.** *Norfolk & Western Ry. Archival Collection, Virginia Polytechnic Institute and State University Libraries*

# Modeling a Modern Circus Train

## Part Twelve – Finishing Up the Train

**by Bill Hill, CMB 4425**

*Photos by the author*

I met many of you that have been following this series at the 1991 NMRA National Convention that was held here in Denver in July. I want to thank you for your kind comments.

This article will give you some of the tricks I used to finish the wagons, the decals I used and how I made them, and what I have done since.

In previous articles I told you how I built the wagons and did the primary finish on them. What I didn't cover was how I did the trim on the wagons. After several attempts to try painting the silver on the edges, I came up with the idea of using silver decal stripes from Microscale and Herald King. Both companies make 4″ and 6″ stripes in their series that are very useful. I used the 4″ at the top and bottom of the sides and ends and the 4″ for the door outlines on the sides and back. For the corners of the wagons, I used the 6″ stripes overlapping the corner with 3″ on either side. This system is a lot easier than trying to paint them on by hand.

For the red stripes on the sides of the wagons, I used Microscale 1″ red. For the red lettering, I used a combination of both Champ and Walthers decals. Check the Bill of Materials for the numbers.

### Bannerlines and Globes

The most difficult decals to come up with will be the ones for the red bannerlines and the globes which go on the sides of the passenger and animal cars. We attempted to get permission from Ringling to produce artwork of these items for this article which you could then reproduce to make your own decals. Unfortunately, they would not give their permission. Due to copyright laws, we cannot provide artwork of registered trademarks without permission. You will have to use the photos for reference when making your own decals.

The distinctive lettering used on the banners is not an ordinary type style which can be duplicated from any known source (including Letraset, Chartpak and Formatt) of dry-transfer lettering. The white letters are outlined in black and have a unique angled leg that makes the C, G, E and L difficult to accurately reproduce.

For my banners I am grateful to a friend of mine in Texas who is in graphic arts. I was talking to him about the problem I was having with the bannerlines. I had first tried to paint them by masking off and airbrushing, but the results were far from satisfactory especially when I tried to apply individual decals of "Barnum"-like letters to do the lettering. This friend of mine took my photos and information and in about a week, he had prepared a master of a banner for me. All I had to do then was to make photocopies.

You can replicate what my friend did, but it will still only give you an approximation of the Ringling Bros. banner. Original artwork for the banner can be made using Letraset® City Bold type. You will need a sheet of 60-point (234-60-CN) and 30-point (234-30-CLN) type for the lettering. These should be available at, or can be ordered from, an art-supply store. Since these are only available in black, you will have to make your original artwork a "negative" image and have it reduced down to size and made into a positive image by a local quick printer. Refer to the drawings in the March 1991 issue of *MRG* for scaling the banner.

Some years ago, Walthers had a decal of the globe as used on the sides of the cars. Again, I made a photocopy and reduced it down to the size I needed. You might try the same with a photo of the globe. After this was all said and done, I then made up a


**RBX33 was just added to the Red Unit this year. Denver, CO, October 1991.**


**Close-up view of RBBB's globe trademark.**

## BILL OF MATERIALS

**Champ Decals**

| | |
|---|---|
| No number | Blank decal stock sheet 6 ½" x 9¾" |
| K-7 | RBBB Red lettering for wagons |

**Letraset Dry Transfers**

| | |
|---|---|
| 234-60-CN | City Bold letters for banner master |
| 234-30-CLN | City Bold letters for banner master |

**Microscale Decals**

| | |
|---|---|
| 460-871246 | 1" and 2" Red stripes for wagons |
| 460-872144 | 4" and 6" Silver stripes for wagons |

**Walthers Decals**

| | |
|---|---|
| 934-701640 | RBBB Red lettering for wagons |
| 934-706760 | RBBB Red lettering for wagons |
| 934-701630 | RBBB White lettering for motive power |

**Virnex Decals**

| | |
|---|---|
| 762-9002 | White solid color decals for bannerline backgrounds |

master paste-up using the globes and bannerlines so that I could get the maximum on a piece of plain decal paper. Once the master was made, it was simple to make the decals. *(Refer to Rick Sutton's article on making decals in the October 1991* MRG *— Editor)*

Another friend of mine here in Denver had access to a copy machine that can make red copies. He made several sets on blank decal paper. I now had my decals, but the lettering was clear while the real bannerlines have white letters. I overcame this problem by using Virnex white decal paper. I cut the paper into strips that were the width of the bannerlines and just short of the points on each end. The white strip was then applied to the side of the car below the red stripe and centered. Decal setting solution was applied and the strip was allowed to dry thoroughly. The red bannerline was then applied over the white strip and presto, I had a neat red bannerline with white lettering.

A word of caution on preparing the blank decal paper. Prior to running it through the copy machine, overcoat it with Testors Dullcote or Lusterless spray. Allow this to dry, preferably overnight or several days. This gives the powder used in the printing process something to adhere to. If this step is not used, the powder will smear. A second coating of Dullcote seals the powder to the paper so that it can be applied like any other decal. (I have also used this spray overcoat method to save older decals that have dried out on me.)

So there you have it on the modeling of the modern circus train. Since I started this series of articles, I must admit that I have changed scales from HO to N. I am building the train now in N scale. Even with five cars not built yet, the train is over 25' long, but it will take an 11" radius curve, and I can pull it with two engines.

At this time, I wish to thank my editor, Randy Lee; without his help and guidance this series could not have been as detailed as it was. He and his staff were of valuable assistance in the preparation of the drawings of the specialty cars. I also with to thank my good friend, Rhett Coats (he is listed in the programs as Everett Coats), whose information and guidance enabled me to do my modeling of the train with accuracy that could not have otherwise been accomplished. I also wish to thank those of you that have written, and I thank you for your compliments. I hope that I have been of assistance in the modeling of this complex but very interesting bit of railroading that is a part of today's railroads. I picked the circus train as it is "neutral" and can run on any railroad with that road's power or caboose (or "FRED").

Again thank you and may all your days be circus days.

*Editor's Note: The January 1992 issue of* MRG *will contain some photos of the new equipment not covered in Bill's articles. Color photos will also be included.*

## LOADING ORDER

**October 15, 1989 Denver, Colorado**

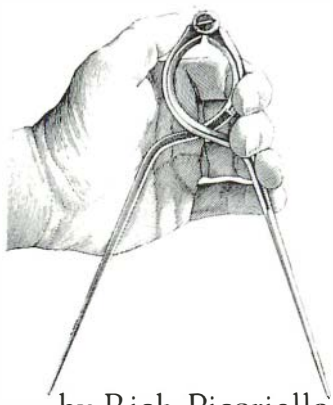
**NORTH CUT**

| Car # | Type | Load |
|---|---|---|
| 27 | Bi-Level | 4 Adm. vehicles – Upper, 24 Cat cages – Lower |
| 17 | Flat | Bus – 26 – 21 – 18 |
| 19 | Flat | Jeep – 46 – 22 – 17 – 15 |
| 15 | Flat | Jeep – Pie Jr. – 135 (Shop Truck) – 49 – Bull stands |
| 22 | Flat | 134 (Meat Truck) – 45 – 136 (Gen. Truck) – 27 |
| 21 | Flat | 35 – 39 – Jeep – 24 – 32 |
| 20 | Flat (Runs) | Loadall – 25 – Jeep – 11 – 36 |

**SOUTH CUT**

| | | |
|---|---|---|
| 23 | Flat (Runs) | 47 – 50 – 48 – 38 |
| 18 | Flat | Ford Bronco – 52 –53 – 54 |
| 26 | Flat | 57 – 28 – 58 – 30 – 10 |
| 16 | Flat | 56 – 14 – 23 – 20 – GMC Jimmy |
| 24 | Flat | 137 (Water Truck) – 51 – 42 – 55 |
| 25 | Flat | 16 – Flat W/Compressor – 43 – 44 |

NOTE: Equipment is not loaded the same at all times. Wagon length and space available is what is important.



## DIESEL DETAIL CLOSE-UP:

# American Locomotive Co. (ALCO) RS1

As Tidewater Southern (TS) #747
HO and N Scale Models by Atlas

*Photos from the author's collection*

by Rich Picariello

**The Prototype RS1:** Alco introduced the RS1 in 1943 as a road switcher version of their S1/S4 yard switcher units. The RS1 featured a short hood and type B road trucks and had 1,000 hp. Production ended in 1960 with over 350 units built. Tidewater Southern, a subsidiary of the Western Pacific, had two RS1s which were originally owned by the Spokane International. They were numbered 746 and 747.

**The Scale Model RS1:** Atlas makes an RS1 in both HO scale and N scale. The HO model is available with either roller bearing or friction-bearing trucks. For this project, the friction-bearing truck version will be needed. The strange MU hose collection on the front (long nose) end of the unit will have to be fabricated from the listed related parts.

**Painting and Decaling Notes:** The photos show number 747 in two different paint schemes. The Union Pacific acquired the Spokane International in 1958 and when the Tidewater Southern bought RS1 747, it was painted in UP yellow and gray and was relettered for TS. The unit was later painted in Western Pacific Perlman Green with orange lettering and trim. No decals are known to exist for the early UP-painted unit but all decal companies have alphabet sets in red that could be used for the road name. For the green scheme, Southern Green is close; fuel tanks and trucks are black. Scalecoat C&NW Green can be used as is.

**Decals:**
HO Scale:
Microscale 87-187
(green and orange scheme)

N Scale:
Microscale 60-187
(green and orange scheme)

**Paints:**
Accupaint:
Yellow/Gray Scheme
67 UP/Milw Armour Yellow
69 UP/Milw Harbor Mist Gray
Green Scheme
75 Southern Green (add Black)

Floquil:
66 UP Armour Yellow
67 UP Harbor Mist Gray
174 SR Green (add Black)

Scalecoat:
32 UP Harbor Mist Gray
22 UP Armour Yellow
36 G&NW Green (add Black)

## Tidewater Southern RS1 #747

**Details (For HO scale):**

| | | |
|---|---|---|
| **1 – DW186** | Air horn | 2.50/ea. |
| **2 – DW157** | Antenna | 1.50/5 |
| **CF113** | Antenna | 3.09/2 |
| **3 – DA2303** | Armrest | 1.00/4 |
| **4 – DW128** | Bell, air ringer | 1.25/2 |
| **5 – PSC48348** | Chain | 2.75/10" |
| **6 – MV22** | Classification lights | 1.15/4 |
| **7 – DA2205** | Coupler lift bar (modify) | 2.75/10 |
| **8 – DW166** | Fuel filler | 1.00/4 |
| **9 – DA2202** | Grabirons | 2.50/48 |
| **10 – SV44** | Handrail set (optional) | 13.95/set |
| **11 – DA1012** | Headlight, insert | 1.00/2 |
| **12 – MV25** | Headlight lenses | 1.30/4 |
| **13 – DA6206** | Hose, air | 1.25/12 |
| **14 – DA1508** | Hoses, MU | 2.00/16 |
| **15 – DA1107** | Lift rings, ALCO | 1.25/12 |
| **16 – DA1507** | MU receptacle | 1.00/12 |
| **17 – DA1301** | Sunshade, cab | 1.25/6 |
| **18 – CS382** | Sunshade, cab | 2.45/2 |
| **19 – DA2304** | Wind deflector | 2.50/set |
| **20 – AL29200** | Windshield wipers (delrin) | 1.75/8 |
| **CS190-419** | Windshield wipers (brass) | 3.50/4 |
| **PSC3968** | Windshield wipers (plastic) | 1.50/4 |
| **UP94** | Windshield wipers (brass) | 2.00/2 |

The following parts must be fabricated by the modeler:
A – Cab roof light and mounting bracket
scratchbuild
B – Stack extension
make from brass tubing
C – Double grabiron
make from .015 wire"

AL/PPW: ***A-Line/Proto Power West***
3432 Lucero Avenue
La Verne, CA 91750

CS: ***Cal-Scale***
21 Howard Street
Montoursville, PA 17754

CF: ***Custom Finishing***
379 Tully Road
Orange, MA 01364

DA: ***Detail Associates***
Box 5357
San Luis Obispo, CA 93403

DW: ***Details West***
P.O. Box 5132
Hacienda Heights, CA 91745

MV: ***MV Products***
P.O. Box 6622
Orange, CA 92667

PSC: ***Precision Scale Company***
3961 Hwy. 93 North
Stevensville, MT 59870

SV: ***Smokey Valley Railroad & Machine Co.***
6120 NE 203rd Street
Seattle, WA 98155

UP: ***Utah Pacific***
Div. of Tomar Industries
9520 E. Napier Ave.
Benton Harbor, MI 49022

**Note:** These detail parts may be available from your local hobby dealer, so try him first. If you must order direct from a manufacturer, include at least $1.50 for postage and handling. You must purchase the full quantities as shown in the detail parts list.


18
1
19
A
3
TIDEWATER SOUTHERN
747
5

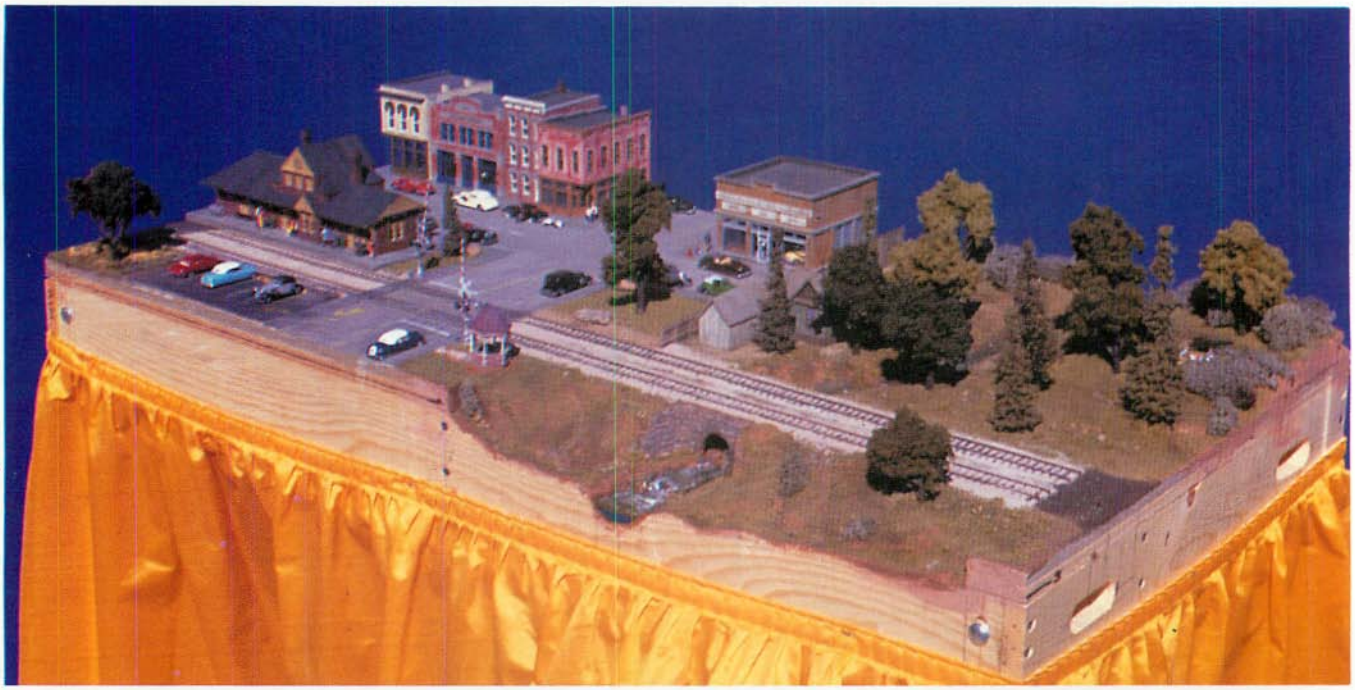

2
4
C
9
11
17
A
1
B
12
20
15
10
15
3
19
19
6
TIDEWATER
SOUTHERN
747
16
8
7
14
13

# Blake: A Project Module

*Is your space **really** limited but your desire to model high?*
*If so, building a module may be a satisfying solution to your dilemma.*
*From concept to completion, join us as we watch Blake grow.*

**by Randy Lee**

*Photos by the author*
*Module Construction and Illustration by Scott Anderson*



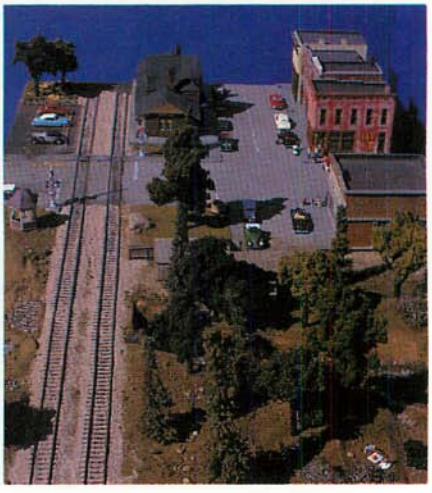
The reality to date.

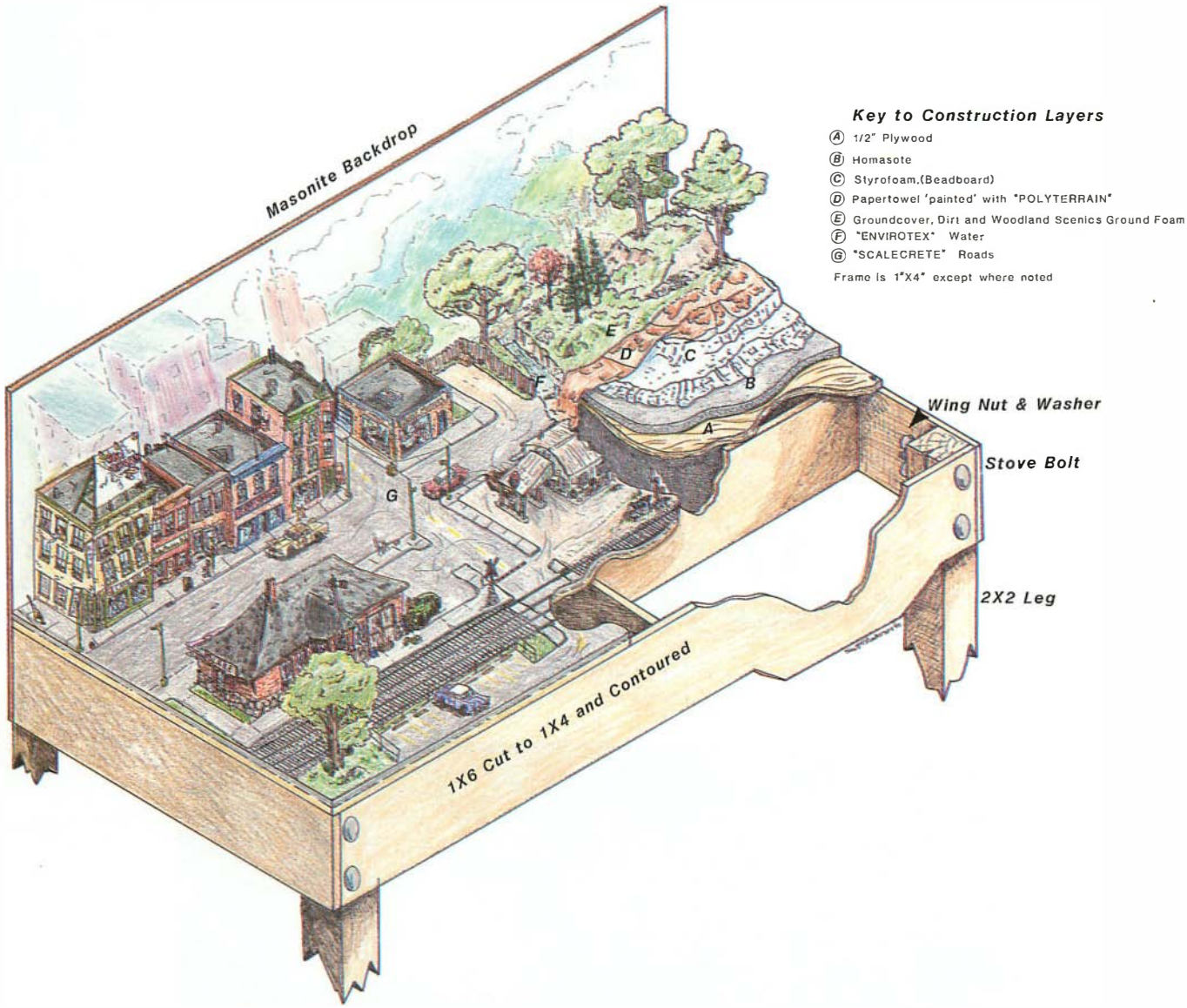
Many model railroaders find themselves in the very frustrating position of wanting to model, but not being able to do so because of one single, seemingly insurmountable limitation...space. Some overcome this limitation by joining a club and fulfilling their desire to build by helping to build a communally-owned layout. While this may provide a complete or partial answer for many, it still doesn't offer the pride of ownership that many modelers desire.

The advent of NTrak in the '70s brought the concept of modular railroading to the attention of modelers in all scales. Today, because of the modular concept, model railroaders are able to take their layouts to the public, rather than having to bring the public to their layout.

But for many, the most important benefit of a module is that it is the personal possession of its builder. Unlike communally-owned layouts whose overall design is frequently governed by group consensus, each module is, or at least can be, the personal creation of its owner.

You can build a module anyway you want if it is going to be a stand-alone module or will only interconnect with other modules you build. If you want






**The concept.**

yours to be able to join with a group's modules, you will have to build it to the standards of that group.

Building a module can be a simple solution for many situations. In addition to the space limitation problems already mentioned, a module might be the answer if you want to: 1) practice various modeling techniques before beginning on the real layout, 2) create a scene that might not fit into the scope of your layout, 3) have a transportable display for shows, or 4) make a diorama that can be taken outdoors for daylight photography.

The Blake module was created for all of these reasons plus a few more. It provides a setting for testing and photographing new products and permits me to recreate some memories from my childhood days during the '50s in the suburbs west of Chicago along the CB&Q.

As we follow the development of Blake, I hope you will find ideas on how to develop a concept and discover some useful tips on fleshing out those ideas with products that are currently available on the market. In the months ahead (as time and space permit), we will look at specific products (some new, some old) and techniques that have been or will be included on the module.

## Step 1

The first step in the construction of Blake (named after the street our offices are on) was to develop a mental image of what I wanted it to be. Since I was thinking of a module which would loosely recreate

the area where I grew up, I initially envisioned a module with a three-track mainline, depot, town area, forest preserve, creek and a few homes.

### Step 2

The next step was to sit down with Scott Anderson (who did the actual construction of the module) and sketch on paper, roughly to scale, the actual layout of what would be included. This step immediately changed much of the "mental-image" layout of Step I because of that age-old restriction...space. To have included all I had envisioned in the 2′ x 4′′ size of the module, I would have had to build it in N scale rather than HO. This is why it is so important to make scale drawings of any layout (or module in this case) you plan. Everything always requires more space than you think. (Three additional adjoining modules to make Blake 4′ x 8′ are already being visualized.)

An important part of this second step is to determine the actual structures and scenery components that will be included. Without an idea of the actual items to be used, it is virtually impossible to accurately determine necessary space or budgetary requirements.

Scott's illustration, based on "Step 2" planning, shows a far more realistic representation of what Blake would end up looking like than my original mental image.

Although the module is now in a "presentable" form, much of the detailing that really brings a scene like Blake to life still needs to be done. Over the next year Scott and I will share some of the techniques and products used to create Blake.

Join with us as we watch Blake grow.


### Special Thanks

We wish to thank the following manufacturers and distributors for their contributions for the Blake module:

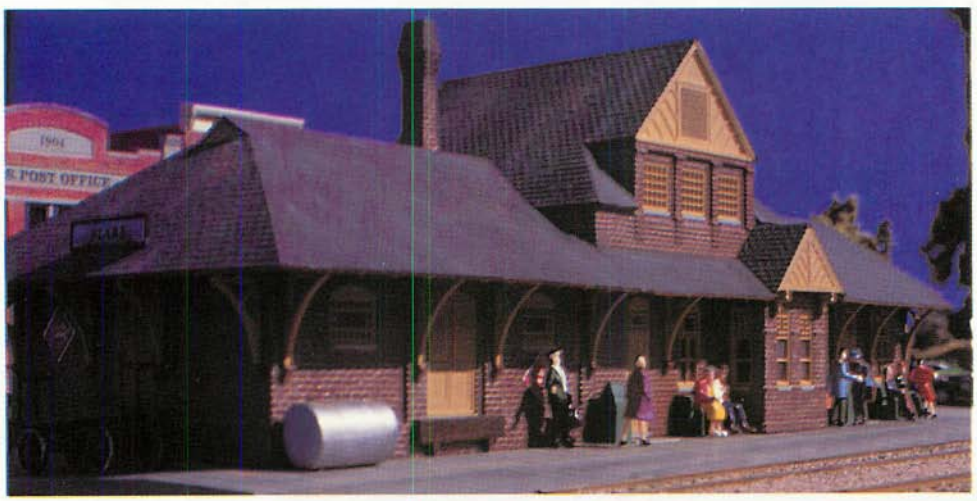
CS Designs (ScaleCrete)
Design Preservation Models (structures)
Life-Like (depot)
Polyterrain (scenery products)
Railroad Avenue (structures)
Smalltown, USA (structures)
Timberline Designs (pine trees)
Tomar Industries (grade crossing signals)
Walthers (structures, vehicles, figures)
Woodland Scenics (trees, ground foam, gazebo)

Other manufacturers will be recognized when their products are incorporated in the module.


# A Depot for Blake
# Life-Like's Sykesville Station

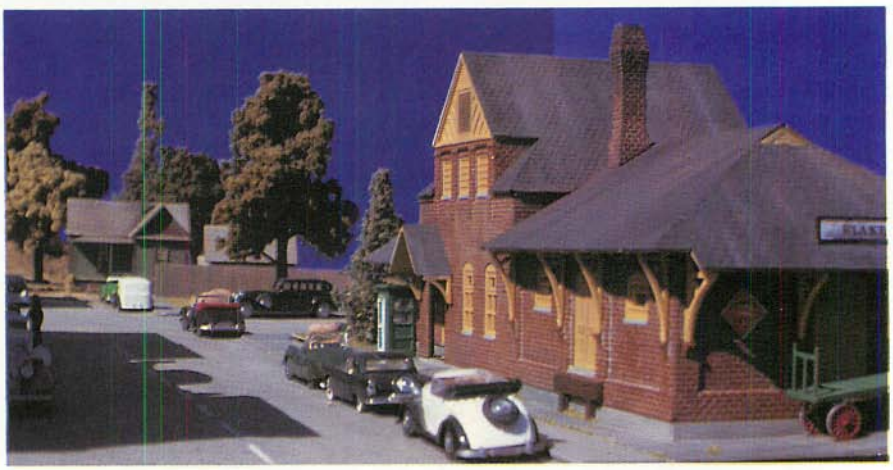
**by Randy Lee**

*Photos by the author*



One of the key elements of the concept behind the Blake module was to recreate a childhood memory of suburban Chicago. This meant a town with brick structures, a forest preserve, and most important...a medium-sized brick depot. My search for an appropriate depot in the hobby shop and Walthers catalog proved fruitless.

Because I couldn't find a suitable model, it appeared that I would either have to scratchbuild a brick depot or start with a model of a wooden depot and replace (or cover) the sides with brick. When the module "premiered" at the Denver NMRA convention in July, a stand-in wooden depot built by Scott Anderson was used to fill the



void. A beautiful model, but not anything like I had envisioned for the Blake module.

### Life-Like to the Rescue

While touring the exhibits, I discovered what appeared to be the perfect answer in Life-Like's booth...a pre-production sample of their new Sykesville, MD, station. The sample was borrowed for a few minutes to see how it would work in the module. It proved to be a near-perfect fit and closely replicated the type of depot I had in mind. Now all I had to do was wait until the model became available.

As you can see, the depot is now available. With a retail price of only $20.00, this model is a welcome addition. The kit comes with clear written instructions and exploded views to assist the modeler. It is molded in colored styrene. My only two complaints about the model are the size of the mortar detail and the thickness of the window frame castings. Both of these "problems" were easily resolved with a few modeling tricks.

Before removing any pieces from the sprues, everything was spraypainted. All brickwork was painted Floquil Boxcar Red, the windows, doors and woodwork were painted Floquil Depot Buff, the roof was painted Floquil Grimy Black, and the base was painted with Floquil Concrete.

### Brick Preparation

The next step for the brick was application of diluted Floquil Concrete with a brush, allowing the capillary action to carry it through the mortar lines. This step emphasized the larger-than-scale appearance of the mortar lines and necessitated a third remedial step. Stretching a rag (actually an old handkerchief) over my fingertip, I gently dipped it in some Floquil Rust. After blotting out any excessive amounts of the Rust on the edge of the bottle, I lightly rubbed the rag over the brickwork. It was occasionally necessary to rub the brick with a dry rag to remove excess Rust.

This third step did two things: 1) it gave the brick a lighter, orangier color, and 2) it tended to "wrap around" the bricks, making the mortar lines appear less pronounced. Testors Dullcote was then applied to the brick to eliminate some of the sheen that developed from the rubbing process of step three. The final step was painting the window and door sills with Floquil Concrete.

### Windows

Kristal Kleer was applied to the back side of all the window frame castings. An X-Acto® #11 blade was reversed in its handle and used as an applicator; it was just the right width. This step puts the window material in the window frame rather than behind it and helps to conceal the thickness of the castings. Although applying the Kristal Kleer to the front of the castings would have foreshortened the thickness even more, it leaves a glossy film over any surfaces it touches in the application process. I found this to be more distracting than the benefit gained.

### Detailing the Base

A #11 blade and a HO scale rule was used to scribe seams into the concrete base. The #11 blade was also used to scribe cracks and separation lines between the pavement, steps and building foundation. A yellow stripe to keep passengers back from the tracks was made with Woodland Scenics dry transfers. This was given a protective coating of Rust-All's Flat Finish. Weeds growing in the cracks and seams was modeled by applying a small amount of diluted white glue to some of them with a #10/0 brush and sprinkling on Woodland Scenics Blended Turf (Green).

### Assembly and Detailing

Before starting the final assembly, the roof pieces were removed from their sprues and the eves and outer edges were brush painted with Floquil Depot Buff to match the trim. The depot was assembled per the kit instructions. Testors liquid plastic cement was used for most of the construction after the paint was removed from surfaces being glued. ACC was used to attach the roof eave supports. The parts fit together beautifully.

The Blake signs were created on our computer and printed on a laser printer. The paper signs were applied to .020 strip styrene by first applying liquid solvent to the styrene. The REA signs are Woodland Scenics dry transfers applied to .005 sheet styrene.

Weathering of the chimneys, roof, attic vents, doors and gables was done with chalks applied with a brush. Gray, black and rust were the primary colors used. The chalk that fell to the base was rubbed into the concrete, emphasizing the cracks and seams and giving it a well-used appearance.

The addition of figures, a couple of trash cans and a Grandt baggage wagon "finished" the depot...at least for now.

Life-Like's Sykesville station is a reasonably priced kit that makes a beautiful depot with a little work by the modeler. Don't let the photo of the out-of-the-box model on the box mislead you. Although that photo nicely portrays the box's contents, it doesn't do justice to what the depot can be made to look like.

The castings are virtually free of flash and fit precisely together. With its varied roof lines, it adds real charm to a model scene. It was a pleasure to build and is a perfect addition for Blake.

About the Prototype

## SYKESVILLE STATION

*by Jim Rogers*

In the "good old days" every small town along the line had a station. While most were of wood construction, the larger, more prosperous towns often rated a brick building. This practice was especially prevalent in the East and Midwest. Until now modelers have had very few alternatives to scratchbuilding a brick station. Life-Like Products has finally filled this void for HO scale modelers with the introduction of a new plastic kit of the Sykesville, MD, station. Whether you build it straight out of the box, or add your own details and modifications, this Victorian-era beauty will be a great addition to many model railroads.

Sykesville is in central Maryland along the CSX (Baltimore & Ohio) "Old Main Line," 26 miles west of Baltimore. When the station was constructed in 1883-1884, the Old Main Line was a busy double-track railroad. Despite the substantial facility erected here, passenger service consisted only of a few locals. All of the B&O intercity trains were routed via Washington after 1875. In addition to the passenger business, the Sykesville agent also took care of the LCL and limited car load freight business.

As the years went on, and local business continued to decline, the Sykesville station adapted and survived. The last local passenger train, operated with a gas-electric car, was discontinued in 1953. In 1959, installation of Centralized Traffic Control allowed single tracking the Old Main Line. The track nearest the station was retained as a spur, normally utilized by the track maintenance department which occupied the building.

The greatest threat to the station's survival occurred in 1972. Hurricane Agnes had veered inland, inundating Maryland and Pennsylvania. The narrow, shallow Patapsco River overflowed its banks and washed out the roadbed at many places, closing the Old Main Line. After a long period of indecision, the Chessie System rebuilt the line, which reopened in 1974. The track maintenance forces continued to occupy the building for a few more years. When Chessie System consolidated their track crews, Sykesville was declared surplus and slated for demolition. Local preservation efforts, after a long struggle, finally succeeded. Today the Skyesville station survives, beautifully restored, as Baldwin's Restaurant.

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BIG BOY HOBBIES
8893 PENDLETON PIKE
46226 317-898-6284

**MT. MORRIS**
STAUFFER'S HOBBIES
9 N. McKENDRIE AVE.
61054 815-734-6627

**INDIANAPOLIS**
BILL'S MODEL RAILROAD
7995 W. 21ST, UNIT 5
46214 317-271-0819

**MUNDELEIN**
RON'S MUNDELEIN HOBBIES
431 N. LAKE ST.
60060 708-949-8680

**INDIANAPOLIS**
MASTER HOBBIES
8501 BASH
46250 317-576-1961

**NORMAL**
JEFFREY ALANS
701 TOWANDA
61761 309-454-7456

**INDIANAPOLIS**
N GAUGETRAIN SHOP
8863 PENDLETON PIKE
46226 317-898-4883

**OAK LAWN**
PAT'S HOBBIES & CRAFTS
5730 W. 95TH ST.
60453 708-424-6131

**LAFAYETTE**
MAIN HOBBY
625 COLUMBIA ST.
47901 317-742-6634

**PALATINE**
PALATINE HOBBY, LTD.
43 E. NORTHWEST HWY.
60067 708-359-7888

**MICHIGAN CITY**
B & A HOBBIES & CRAFTS
408 FRANKLIN
46360 219-874-2382

**PALOS HEIGHTS**
THE RIGHT TRACK
6521 W. 127TH ST.
60463 708-388-3008

**SOUTH BEND**
HOBBY LAND
343 LINCOLN WAY W.
46601 219-287-0180

**PARK RIDGE**
HILL'S HOBBY & COLLECTORS SHOP
10 PRAIRIE
60068 708-823-4464

## IOWA

**PEORIA**
JEFFREY ALANS
4601 N. SHERIDAN ROAD
61614 309-693-7773

**QUINCY**
TOP HAT HOBBIES, INC.
126 NORTH 5TH
62301 217-222-0040

**BURLINGTON**
HOBBYCRAFT SHOP
801-803 JEFFERSON
52601 319-754-4979

**SKOKIE**
NORTH SHORE HOBBY AND COLLECTORS GALLERY
4848 OAKTON ST.
60077 708-673-4849

**CEDAR RAPIDS**
BOX KAR HOBBIES
109 THIRD AVE. SE
52401 319-362-1291

**SOUTH ELGIN**
G & J HOBBIES
395 EAST STATE ST.
60177 708-695-5524

**DES MOINES**
HOBBY HAVEN
7672 HICKMAN RD.
50322 515-276-8785

**SOUTH HOLLAND**
SCALE MODELS LTD.
1048 E. 162ND ST.
60473 708-339-3911

**FORT DODGE**
BOB BAKER HOBBY SHOP
1424 5TH AVE. S
50501 515-955-9894

**SPRINGFIELD**
JEFFREY ALANS
1602 WABASH
62704 217-787-7771

**MASON CITY**
EAST SIDE TRAINS
932 B E. STATE ST.
50401 515-423-1748

**SPRINGFIELD**
WHISTLE POST
2347 W. MONROE PLAZA
62704 217-744-6675

## KANSAS

**GREAT BEND**
TAYLOR'S TOYS
3120 10TH ST.
67350 316-793-9698

**JUNCTION CITY**
R C HOBBIES
115 W. 7TH
66441 913-238-1877

## INDIANA

**BROWN'S COUNTY**
NASHVILLE RAILROAD CO.
ANTIQUE ALLEY
NASHVILLE
47448 812-988-1558

**KANSAS CITY**
J'S HOBBY HAVEN
4601 STATE AVE.
66102 913-287-3030

**OLATHE**
PEACEVILLE TRAIN SHOP
189 S. ROGERS RD., SUITE 1604
66062 913-782-6965

**OVERLAND PARK**
OVERLAND RAILS
7327A W. 97TH ST.
66212 913-341-1144

**TOPEKA**
FUN FOR ALL HOBBIES
2023 SW GAGE BLVD.
66604 913-272-5772

## KENTUCKY

**PARIS**
CABOOSE CORNER
2015 MAIN ST.
40361 606-987-1257

## LOUISIANA

**BATON ROUGE**
LOUISIANA CENTRAL HOBBIES
10230 FLORIDA BLVD.
70815 504-273-0095

**LAFAYETTE**
RON'S MODEL RAILROAD SHOP
1416 S. COLLEGE RD.
70503 318-232-5536

**NEW ORLEANS**
HUB HOBBY SUPPLY
2618 S. BROAD ST.
70125 504-822-3914

**SHREVEPORT**
COOKS COLLECTORS CORNER
4402 YOUREE DR.
71105 318-865-7632

## MAINE

**AUBURN**
FREIGHT STATION
TAYLOR BROOK MALL
MINOT AVE., ROUTE 11
04210 207-784-6556

**BRUNSWICK**
ASK YOUR MOTHER
49 PLEASANT ST.
04011 207-729-1542

**NORTH YARMOUTH**
TRAIN & TROOPER
13 MEMORIAL HWY. (ROUTE 9)
04021 207-829-3211

## MARYLAND

**BALTIMORE**
FAMILY HOBBIES
1348 STEVENS AVE.
OFF 695 SW BLVD.
21227 301-247-3239

**BALTIMORE**
M B KLEIN, INC.
162 N. GAY ST.
(INCLUDES MAIL ORDER)
212-2 301-539-6207

**CATONSVILLE**
PRO CUSTOM HOBBIES, INC.
721 FREDERICK RD.
21228 301-788-8770

**COLLEGE PARK**
BURRETT HOBBIES
4917 NIAGARA RD.
20740 301-982-5032

**GAITHERSBURG**
PASTIMES
531 QUINCE ORCHARD RD.
20878 301-977-7902

**MOUNT AIRY**
DENNISON'S TRACKSIDE HOBBIES
2-4 S. MAIN ST.
21771 301-831-7211

## MASSACHUSETTS

**BEDFORD**
BEDFORD TRAIN SHOP
32 SHAWSHEEN AVE.
01730 617-275-7525

**BOLTON**
SCALE MODEL PRODUCTS
63 HUDSON RD.
PO BOX 72
01740 508-779-5056

**BROCKTON**
CUSTOM TRAIN WORKS
24 TINA AVE
02402 508-580-5644

**CENTERVILLE**
THE ENGINE HOUSE
1682 FALMOUTH RD. ROUTE 28
CENTERVILLE SHOPPING CTR.
02632 508-771-5311

**DANVERS**
NEW ENGLAND MODEL SUPPLY
467 MAPLE ST.
TUES-FRI 12-8 SAT 9-5
01937 508-777-1387

**EAST LONGMEADOW**
THE FAMILY HOBBY SHOP
48 SHAKER RD.
01028 413-525-7345

**EAST WEYMOUTH**
SO. SHORE HOBBY CENTER
777 BROAD ST.
02189 617-331-1234

**METHUEN**
MODELER'S JUNCTION
88 LOWELL ST., ROUTE 113
01844 508-683-0885

**NORTHAMPTON**
H. L. CHILDS & SON
25 STATE ST.
01061

**RAYNHAM**
ED'S BOXCAR
611 CENTER ST
02767 508-822-6563

**WARREN**
TUCKERS HOBBIES
BOX 1090 – 8 BACON ST.
01083 413-436-5318

**WEST BOYLSTON**
HENRY'S HOBBY HOUSE
67 W. BOYLSTON ST. UNIT 1
01583 508-835-6165

**WESTFORD**
HOBBY USA
174 LITTLETON ROAD
01886 508-392-9522

## MICHIGAN

**ANN ARBOR**
RIDER'S HOBBY SHP
115 W. LIBERTY
48104 313-668-8646

**BAY CITY**
CUM CRAFT INC.
1008 ADAMS
48706 517-892-6177

**CANTON**
RIDER'S HOBBY SHOP
42007 FORD RD.
48187 313-981-8700

**CLARE**
THE AARDVARK
4855 BROWNS RD.
48617 517-386-3288

**COLOMA**
J & W MODEL TRAINS, INC.
6450 BECHT RD.
49038 616-468-5586

**DEARBORN**
JOE'S HOBBY CENTER
7845 WYOMING AVE.
48126 313-933-6567

**EAST DETROIT**
JOE'S HOBBY CENTER
17900 E. TEN MILE
48021 313-773-8294

**FARMINGTON**
JOE'S HOBBY CENTER
35203 GRAND RIVER
48024 313-477-6266

**FLINT**
RIDER'S
*THE BETTER HOBBY PEOPLE*
3012 CORUNNA RD.
48503 313-234-4051

**FRASER**
P & D HOBBY SHOP
31902 GROESSBECK HWY.
48026 313-296-6116

**GRAND RAPIDS**
EARL'S TRAIN WORLD
10560 CASCADE ROAD SE
6 MILES FROM END OF 28TH ST.
49331 616-868-7495

**GRAND RAPIDS**
HOBBY WORLD
2851 CLYDE PARK SW
49509 616-538-6130

**GRAND RAPIDS**
RIDER'S HOBBY SHOP
2055 28TH ST. SE
49508 616-247-9933

**KALAMAZOO**
RIDER'S HOBBY SHOP
3417 S. WESTNEOGE AVE.
49008 616-349-2666

**KALAMAZOO**
STAN'S ROUNDHOUSE
5228 S. WESTNEOGE
49008 616-345-0004

**LAPEER**
J & D HOBBIES
288 S. MAIN
48446 313-664-1414

**PETOSKEY**
DOUG'S PHOTO AND HOBBY
303 E. MITCHELL
49770 616-347-4233

**PORT HURON**
BLUE WATER HOBBIES
1414 PINE GROVE AVE.
48060 313-984-8764

**ROGERS CITY**
THE TRAIN DOCTOR
156 S. 3RD ST.
49779 517-734-3372

**ROCHESTER**
JOE'S HOBBY CENTER
CAMPUS CORNERS SHPG. CTR.
105 S. LIVERNOIS
48063 313-651-8842

**SOUTHFIELD**
DEL'S TRAIN CENTER
23123 LAHSER RD.
48034 313-357-5770

**ST. CLAIR SHORES**
WHISTLE STOP HOBBY TRAINS
21714 HARPER AVE.
48080 313-771-6770

**UTICA**
ENGINE HOUSE HOBBIES
46727 VAN DYKE
48317 313-739-6680

**WESTLAND**
DAVE'S HOBBY & TV
29026 WARREN RD.
48185 313-422-4464

**WESTLAND**
NANKIN HARDWARE & HOBBY
35101 FORD RD.
48185 313-722-5700

## MINNESOTA

**BEMIDJI**
HOBBY HUTCH
PAUL BUNYAN MALL
56601 218-751-9734

**LITTLE CANADA**
HUB HOBBY CENTER
82 MINNESOTA AVE.
55117 612-490-1675

**RICHFIELD**
HUB HOBBY CENTER
6416 PENN AVE. S
55423 612-866-9575

**ROBBINSDALE**
HUB HOBBY CENTER
4114 LAKELAND AVE. N
55422 612-535-5628

**SAINT PAUL**
SCALE MODEL SUPPLIES
458 N. LEXINGTON PARKWAY
55104 612-646-7781

**SPRING LAKE PARK**
UNIVERSITY HOBBIES
8185 UNIVERSITY AVE. NE
55432 612-780-4189

**ST. PAUL/MAPLEWOOD**
HOBBYTOWN
3035 WHITE BEAR AVE.
55109 612-770-6530

## MISSISSIPPI

**LAUREL**
HOBBY CORNER
1534 N. FIRST AVE.
39440 601-649-4501

## MISSOURI

**BALLWIN**
CHECKERED FLAG HOBBY CNTRY.
14755 MANCHESTER RD.
63011 314-394-7600

**BLUE SPRINGS**
MAINLINE TRAINS
807 MAIN ST.
64015 816-224-6962

**FARMINGTON**
A&I HOBBY CENTRAL
310 B POTOSI ST.
63640 314-756-7909

**KANSAS CITY**
SPOTLIGHT MODEL RAILROAD
7427 TROOST AVE.
64131 816-444-7331

**NORTH KANSAS CITY**
PRESTON'S TRAINS
1903 SWIFT
64116 816-842-4884

**ROGERS CITY**
THE TRAIN DOCTOR
156 S. 3RD ST.
49779 517-734-3372

**SPRINGFIELD**
HOBBYDASHERY INC.
1312 E. BATTLEFIELD
65804 417-883-4609

**ST. LOUIS**
NORTH CENTRAL HOBBIES
9120 LACKLAND RD.
63114 314-426-0031

## MONTANA

**GREAT FALLS**
HOBBYLAND
820 CENTRAL
59401 406-453-3131

## NEBRASKA

**LINCOLN**
JERRY'S HOBBY CENTER
3231 S. 13TH
68502 402-421-7699

## NEBRASKA

**LINCOLN**
HOBBY TOWN USA
SUTTER PLACE MALL
5221 S. 48TH ST.
68516 402-483-7427

**LINCOLN**
HOBBYTOWN
EAST PARK MALL
220 NORTH 66TH ST.
68505 402-464-2858

**LINCOLN**
ROLLIES MODEL RAILROAD CROSSING
5606 S. 48TH ST.
68516 402-423-9337

**OMAHA**
BEL AIR HOBBYCRAFT CTR.
12100 W. CENTER RD.
68144 402-333-4846

**OMAHA**
HOBBY TOWN USA
ROCK BROOK VILLAGE
11011 ELM ST.
68144 402-391-5669

**OMAHA**
HOUSE OF TRAINS
8106 MAPLE ST.
68134 402-391-2311

**OMAHA**
SCALE RAIL
4205 S. 87TH ST., BOX 27242
68127 402-339-3380

**OMAHA**
TRAINMAN TRADING POST
5215 S. 21ST ST.
68107 402-734-7233

**SCOTTSBLUFF**
HOBBY TOWN
MONUMENT MALL
2302 FRONTAGE RD.
69361 308-635-7001

## NEVADA

**LAS VEGAS**
PRC TRAINS
300W. UTAH
89102 702-383-3325

**LAS VEGAS**
TRAIN EXCHANGE
6008 BOULDER HWY.
89122 702-456-8766

**NORTH LAS VEGAS**
PETERSON HOBBIES/CRAFTS
3262B CIVIC CENTER DR.
89030 702-649-3311

**RENO**
HIGH SIERRA MODELS
3677 KINGS ROW
89503 702-747-7444

**RENO**
HOBBIES EMPORIUM
5380 MEADOWOOD MALL CR.
89502 702-825-9670

**RENO**
HOBBIES OF RENO
535 E. MOANA LANE
89502 702-826-6006

## NEW HAMPSHIRE

**BEDFORD**
VILLAGE DEPOT
101 PLAZA, ROUTE 101 WEST
03102 603-472-8487

**BOSCAWEN**
CONCORD CAR SHOPS
RT. 3 & 4, 115 KING ST.
03303 603-796-2320

**MANCHESTER**
PAUL E. BOURQUE CO. INC.
608 WILLOW ST.
03103 603-625-8919

**NASHUA**
HOBBY EMPORIUM
ROYAL RIDGE MALL
03060 603-888-3366

**NORTH CONWAY**
BRASS CABOOSE
(UNDER CAROLL REED)
NORCROSS CIRCLE
03860 603-356-9922

**NORTH HAMPTON**
FITTS PHOTO & HOBBY SHOP
VILLAGE SHOPPING CENTER
US RT. 1
03862 603-964-9292

**NORTH SWANZEY**
THE LOOSE CABOOSE
ROUTE 12, PETE'S AUTO CENTER
03446 603-357-8821

## NEW JERSEY

**ABERDEEN**
HOBBY SHOP
RT. 34
STRATMORE SHOPPING CENTER
07747 908-583-0505

**ABSECON**
THE ROUNDHOUSE INC.
400 NEW JERSEY AVE.
08201 609-641-8474

**BLOOMFIELD**
DANA'S HOBBY SHOP
392 BROAD ST.
07003 201-743-3951

**CHESTER**
THE HOBBY & GAME ANNEX
ROUTE 24
07930 908-879-4263

**COLTS NECK**
JUST TRAINS
41 HWY. 34
07722 908-409-2772

**FLORENCE**
SPORTS AMERICA & HOBBY CENTER
ROUTE 1305, P O BOX 255
08518 609-499-2992

**MERCERVILLE**
IRON HORSE HOBBIES
116 FLOCK RD.
08629 609-586-2282

**MONMOUTH**
HOBBY & GAME #3
4095 US HWY. 1, SUITE 19
08852 908-329-0030

**PENNSAUKEN**
TED'S ENGINE HOUSE
6307 WESTFIELD AVE.
08110 609-662-0222

**PISCATAWAY**
MODEL RAILROAD SHOP
VAIL AVE. & NEW MARKET RD.
08854 908-968-5696

**RED BANK**
HOBBYMASTERS INC.
62 WHITE ST.
07701 908-842-6020

**RUTHERFORD**
CHOO CHOO EDDIES
38 AMES AVE.
07073 201-438-4588

**SUSSEX**
SUSSEX COUNTY HOBBIES
69 MAIN ST.
07641 201-875-8580

**WESTMONT**
SATTLER'S HOBBY SHOP
14 HADDON AVE.
08108 609-854-7136

## NEW MEXICO

**ALBUQUERQUE**
ABAJO DEPOT
3301 MENAUL NE, SUITE 16
87107 505-881-2322

**LAS CRUCES**
THE HOBBY HUT
126 WYATT DR.
88005 505-524-0991

## NEW YORK

**ABSECON**
THE ROUNDHOUSE INC.
400 NEW JERSEY AVE.
08201 609-641-8474

**AMITYVILLE**
K & P HOBBIES
55 MERRICK RD.
11701 516-598-2405

**BALLSTON SPA**
THE DEPOT
10B MILTON AVE.
12020 51B-B85-87B9

**BILLINGS**
BILLINGS MODEL TRAIN & HOBBY
BILLINGS PLAZA, ROUTE 82
12510 914-223-7570

**BINGHAMPTON**
GEORGE'S CABOOSE
85 ROBINSON ST.
13904 607-771-8358

**BROOKLYN**
HOBBY KING
2720 AVENUE U
11229 718-648-5399

**BROOKLYN**
WALT'S HOBBY SHOP
79095TH AVE.
11209 718-745-4991

**BUFFALO**
K VAL HOBBIES
277 HINMAN AVE.
14216 716-875-2837

**BUFFALO**
NIAGARA HOBBY & CRAFT MART
OPEN EVENINGS & SUNDAY
3366 UNION RD. AT WALDEN
14225 716-681-1666

**CLAY**
SYRACUSE TRAIN & HOBBY
8135 RT. 11
13041 315-422-3328

**CLIFTON PARK**
HOBBY TOWN USA
629 PLANK RD.
12065 518-383-1215

**EAST ROCHESTER**
DESPATCH JUNCTION
100 STATION RD. 1
4445 716-385-5570

**FERNDALE**
SUSIE-Q HOBBY SHOP
RD BOX 220
BUSHVILLE-SWAN LAKE RD.
12734 914-292-0921

**FLORAL PARK**
JERICHO HOBBY & TRAIN CTR.
158 JERICHO TPKE.
11001 516-352-5067

**GENEVA**
LAKE CITY HOBBIES
30 CHERRY ST.
14456 315-781-0807

**GLENMONT**
H O CUSTOM TRAINS
4 BRIGHTON WOOD RD.
12077 518-462-6209

**HICKSVILLE**
HOBBY IMAGES
89 JERUSALEM AVE.
11801 516-822-8259

**HORSEHEADS**
ALTOONA SHOPS
584 WESTINGHOUSE RD.
VILLAGE PLAZA
14845 607-739-8916

**HUNTINGTON**
CABOOSE INC.
208 WALL ST.
11743 516-427-8288

**JOHNSON CITY**
THE TRAIN SHOP
210 GRAND AVE.
13790 607-797-9035

**LAKE LUZERNE**
LAKE LUZERNE TRAIN & HOBBY
1933 LAKE AVE.
BOX 465, ROUTE 9N
12846 518-696-4905

**MINEOLA**
WILLIS HOBBIES
285 WILLIS AVE.
11501 516-746-3944

**NEW YORK**
THE TRAIN SHOP
23W. 45 ST.
10036 212-730-0409

**PATCHOGUE**
HARRY'S DEPOT
128 MEDFORD AVE., RT. 112
11772 516-475-9056

**PITTSFORD**
HOBBY PEDDLER
7 SCHOEN PL.
14534 716-381-4532

**ROCHESTER**
ANDY'S TRAINS
208 SCOTTSVILLE RD.
14611 716-235-1587

**ROCHESTER**
THE WHISTLE STOP
1967 RIDGE RD. E
14622 716-467-7590

**ROCKY POINT**
EASTERN HOBBIES INC.
259 ROUTE 25A
11778 516-821-3175

**SCHENECTADY**
ADIRONDACK HOBBIES
2331 ALTON ST.
12309 518-393-8836

**SMITHTOWN**
THREE GUYS HOBBIES
99E. MAIN ST.
11787 516-265-8303

**STATEN ISLAND**
HABILD'S
60 WINHAM AVE.
10306 718-987-4335

**WAPPINGERS FALLS**
VALLEY MODEL TRAINS
3 FULTON ST.
12590 914-297-7511

**WHITE PLAINS**
WESTCHESTER HOBBIES
102 E. POST RD.
10601 914-949-7943

## NORTH CAROLINA

**ASHEVILLE**
ANTIQUE TRAIN & TOY CO.
523 MERRIMON AVE.
28804 704-253-7648

**ASHEVILLE**
CAROLINA ART, CRAFT & HOBBY
128 SWANNANOA RIVER RD.
28805 704-258-2227

**ASHEVILLE**
SINK'S MODEL WHOP
175 M WEAVERVILLE HIGHWAY
28804 704-658-9476
*11-8 WED-SAT, 1-5 SUN*

**CHARLOTTE**
A READY TO RUN HOBBY STORE
P.O. BOX 560021
2240 ROUTE 49
28256-0021 704-455-2220

**CHARLOTTE**
CHARLOTTE ELECTRIC TRAIN CTR.
114-D FREELAND LANE
28217 704-527-0392

**CHARLOTTE**
THE MODELER'S HOBBY SHOP
4808 C CENTRAL AVE.
28205 704-537-9963

**HENDERSON**
CORNISH & SONS HOBBY
430 S. GARNET
27536 919-438-4470

**SPENCER**
LITTLE CHOO CHOO SHOP, INC.
500 S. SALISBURY AVE.
28159 800-932-2466
704-637-8717

**WENDELL**
TODD'S TRAIN DEPOT
404 W. WILSON AVE.
27591 919-365-5006

## NORTH DAKOTA

**FARGO**
OMNI HOBBY & GAMES
4340 13TH AVE. SW
TJ MAXX PLAZA
58103 701-282-5675

## OHIO

**AVON**
APPLEWOOD MINIATURE
36555 DETROIT RD.
44011 216-934-6366
1-800-359-6366

**CINCINNATI**
GOLF MANOR HOBBIES
2235 LOSANTIVILLE AVE.
45237 513-351-3849

**CINCINNATI**
GEORGE'S HOBBIES
THE CROSSING OF BLUE ASH
9525 KENWOOD RD. #29
45242 513-793-5112

**CLEVELAND**
HOBBY HOUSE INC.
800 HURON RD.
44115 216-781-3210

**CLEVELAND**
WING'S HOBBY SHOP, INC.
17112 DETROIT AVE.
44107 216-221-5383

**COLUMBUS**
STRETE HOBBIES
3655 SULLIVANT AVE.
43228 614-279-6959

**COLUMBUS**
THE TRAIN STATION
4430 INDIANOLA AVE.
43214 614-262-9056

**CUYAHOGA FALLS**
RAIL CROSSING
119 W. PORTAGE TRAIL
44221-3221 216-945-5552

**LORAIN**
THE CORNER STORE
1249 COLORADO AVE.
44052 216-288-2351

**MAUMEE**
J & M HOBBIES
1238 CONANT ST.
43537 419-893-2621

**MIDDLETOWN**
SOUTH PARK HOBBIES
1815 TYTUS AVE.
45042 513-424-5124

**NORTH CANTON**
NICK'S SALES & SERVICE
7251 MIDDLEBRANCH NE
44721 216-494-0125

**NORWALK**
PAUL'S HOBBIES
46 E. MAIN
44857 419-668-3019

**ORRVILLE**
D & J HOBBIES
801 W. MARKET ST.
44667 216-682-4266

**POLAND**
BUCKEYE RAIL & HOBBY
31 W. McKINLEY WAY
44514 216-757-6080

**YOUNGSTOWN**
BOARDMAN HOBBY CENTER
6820 MARKET ST.
44512 216-758-1522

## OKLAHOMA

**OKLAHOMA CITY**
WHISTLESTOP TRAINS
1313 BRITTON RD.
73114 405-842-4846

**OKLAHOMA CITY**
WOODWARDS
2941 W. HEFNER RD.
73120 405-751-4994

**TULSA**
ACTION HOBBIES
4955C SOUTH MEMORIAL
74145 918-663-8998

**TULSA**
WINGS-N-THINGS, INC.
5241 S. PEORIA
74105 918-745-0034

## OREGON

**BEAVERTON**
TAMMIE'S HOBBIES
3545 SW HALL BLVD.
97005 503-644-4535

**COTTAGE GROVE**
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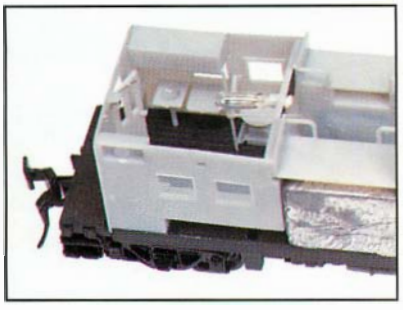

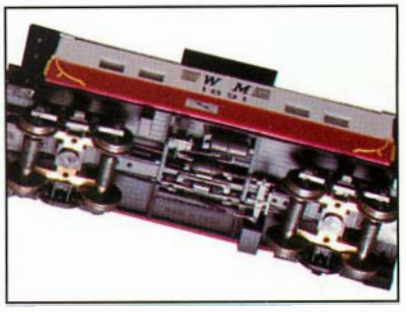

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