



The Keystone Modeler

Pennsylvania Railroad Technical & Historical Society


No. 93

Summer 2015

Inside:

- PRR Baldwin Sharks
- BLI Baldwin Shark Review
- Model the Dennison Oil House
- Annual Meeting Models – 1





The Keystone Modeler

Pennsylvania Railroad Technical & Historical Society

Published Quarterly by
The PENNSYLVANIA RAILROAD
TECHNICAL and HISTORICAL SOCIETY
A non-profit organization

OFFICERS

| | |
|------------------------------------|----------------------|
| President | Steven D. Staffieri |
| Vice President | Bruce F. Smith |
| Corporate Secretary | Ralph M. Weischedel |
| Treasurer | Richard McCarty |
| General Counsel | James G. Trope |
| Publisher | Frederick V. Shaefer |
| Editor | Chuck Blardone |
| Membership Coordinator | Andrew J. Hart |
| Membership Expediter | Brady McGuire |
| Public Relations Manager | Edward Swain |
| Station & Archives Chairman | Rich Ader |
| Director of Wholesale Distribution | Fred Freitas |
| Inventory Coordinator | Donald E. Harper Jr. |
| Donations Administrator | James E. Trunzo |
| Historian | Christopher T. Baer |
| Webmaster (Interim) | Bruce F. Smith |

BOARD OF DIRECTORS

| | |
|--------------------------|--------------------------|
| Term Expires 2016 | Term Expires 2017 |
| Bruce F. Smith | Frank Napoleon |
| Ralph M. Weischedel | Dave Scott |
| Term Expires 2018 | |
| Marino (Joe) Aciri | |
| Rich Ader | |
| Dave Evans | |
| Steven Staffieri | |

THE KEYSTONE MODELER STAFF

EDITOR

Jim Hunter
jhunter6360@comcast.net

ASSOCIATE EDITOR

Jack Consoli
jjconsoli@comcast.net

NEWSWIRE EDITOR

Steve Hoxie
stevehpr@cox.net

EDITOR EMERITUS

Al Buchan
abbuchan1@comcast.net

CHAIRMAN MODELING COMMITTEE

Elden Gatwood
Elden.J.Gatwood@sad01.usace.army.mil

ART DIRECTOR

Tim Garner
t.a.garner@verizon.net

Send comments and corrections to the Editor at:
jhunter6360@comcast.net

MEMBERSHIP INFORMATION

PRRT&HS, PO Box 54, Bryn Mawr, PA 19010-0054

PRRT&HS MONTHLY E-NEWS

Keystone-e-news-request@lists.keystone-pubs.org?Subject=subscribe

NUMBER 93

CONTENTS

SUMMER 2015

FROM THE CAB

Jim Hunter, Editor3

TKM NEWSWIRE

By Steve Hoxie3

PRR BALDWIN FREIGHT SHARKS

By Tim Garner6

PRODUCT REVIEW – BLI PRR BF-16's IN HO SCALE

By Jack Consoli.....18

MODELING THE DENNISON, OHIO OIL HOUSE IN HO SCALE

By Ed Swain.....31

2015 PRRT&HS ANNUAL MEETING MODELS – PART 1

By the TKM Staff33

FRONT COVER, CLOCKWISE FROM LEFT

The long-awaited Broadway Limited Imports PRR BF-16 freight shark. (*Jack Consoli*)

HO-scale scratchbuilt Dennison, Ohio oil house. (*Ed Swain*)

A PRR N5B model by Jim Hunter – one of many exceptional cabin cars on display at the 2015 PRRT&HS Annual Meeting in State College, Pennsylvania. (*Tim Garner*)

The Keystone Modeler

This publication of the PRRT&HS is for the purpose of disseminating PRR modeling information. The copyright is owned by the Pennsylvania Railroad Technical and Historical Society – all rights reserved. It may be reproduced for personal use only. Not for sale other than by the PRRT&HS.

Manuscripts and photographs submitted for publication are welcome. Materials submitted are considered to be gratis and no reimbursement will be made to the author(s) or the photographer(s) or his/her representative(s). The Society reserves the right to reject, for any reason, any material submitted for publication.

Please contact the editor for information and guidelines for submission. Photo files 800x600 pixels or larger in JPG format are preferred. Statements and opinions made are those of the authors and do not necessarily represent those of the Society.

The Keystone Modeler on CD-ROM

| | | |
|--------|----------------------------|------------------|
| Disc 1 | August 2003 to July 2004 | TKM Nos. 1 – 12 |
| Disc 2 | August 2004 to July 2005 | TKM Nos. 13 – 24 |
| Disc 3 | August 2005 to July 2006 | TKM Nos. 25 – 36 |
| Disc 4 | August 2006 to July 2007 | TKM Nos. 37 – 48 |
| Disc 5 | August 2007 to July 2008 | TKM Nos. 49 – 60 |
| Disc 6 | August 2008 to Autumn 2009 | TKM Nos. 61 – 71 |
| Disc 7 | Winter 2010 to Autumn 2010 | TKM Nos. 72 – 75 |
| Disc 8 | Spring 2011 to Winter 2012 | TKM Nos. 76 – 79 |

Each disc is \$15.00. There is also a disc containing all issues from 1 to 48 for \$60. If you are a resident of Pennsylvania, please include PA sales tax. Send a check or money order in US dollars payable to PRRT&HS to:

Jim Hunter
4306 North Victoria Way
Harrisburg, PA 17112-8641

To **subscribe** to **The Keystone Modeler**, click on the link below and send:
<mailto:the-keystone-modeler-request@lists.keystone-pubs.org?Subject=subscribe>

To **unsubscribe**, click on the link below and send:
<mailto:the-keystone-modeler-request@lists.keystone-pubs.org?Subject=unsubscribe>



This past spring's Annual Meeting was a good one. It was held at the Penn State Conference Center in State College, PA. I thought it was a great facility. Even the banquet food was superior to what we have sometimes been served in the past (thanks to the students in the School of Hospitality Management at Penn State). I was disappointed to learn that attendance was down from the last couple of years. Perhaps that was because it was an unfamiliar location, or because it is not near ex-Pennsy trackage. Altoona is not that far from State College, however, and there were several interesting layouts not far from the Conference Center.

Nevertheless, there were some fine models displayed in the model room this year, and photos of some of those models appear in this issue of *TKM*.

There was a beautiful O-scale PRR-themed layout in the July issue of *Railroad Model Craftsman*. Despite the groans I can hear from the HO boys who don't understand how someone can live with three-rail track, the scenery and operation on the Pennsylvania and Western rival much of what I've seen in HO.

In addition to the model room photos, our summer *TKM* includes an article by Ed Swain on modeling the oil house at Dennison, Ohio. We also have much space devoted to coverage of Baldwin sharks. Tim Garner shares an article originally written for *The East Wind* covering some of the history of freight sharks on the PRR. Then Jack Consoli reviews the Broadway Limited model of the BF-16. Many of us have been waiting at least four years for that locomotive to be released!

Jim Hunter, Editor

The Pennsylvania Railroad Technical & Historical Society

The purpose of the Pennsylvania Railroad Technical & Historical Society is to bring together persons interested in the history and modeling of the Pennsylvania Railroad, its subsidiaries and its acquired companies. Our goals are to promote the preservation and recording of all information regarding the organization, operation, facilities, and equipment of the PRR.

The Society's quarterly illustrated journal, *The Keystone*, has been published continuously since 1968. Each issue of 64 or more pages contains illustrated original authoritative articles about locomotives, cars, other equipment, facilities, and operating practices of the PRR. The Society also publishes its own thoroughly researched books and other materials concerning PRR history. *The Keystone Modeler* is also a quarterly special 30-plus page online publication of the Society.

The Society meets annually, usually during a weekend in early May, providing an opportunity for its members to get together and learn more about the PRR. Local chapters around the country also provide members and guests with regular meetings that feature PRR related programs.

Information about our Society may be found on our website – www.prtrhs.com. To join the Society, send \$35.00 to:

PRRT&HS
PO Box 54
Bryn Mawr, PA 19010-0054

All memberships are for a calendar year, back issues of *The Keystone* for the current year are sent upon joining. Overseas membership has added postage fees.

PRRT&HS Interchange

Selected Society Merchandise of Interest to Modelers

PRR EQUIPMENT DRAWINGS ON MICROFILM

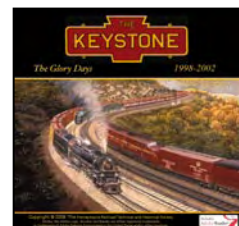
Copies of PRR equipment drawings are available from the Society's microfilm collection. To order drawings, you must know the drawing number and title. Ordering information and lists of arrangement drawings are available on the Society's website. Go to www.prtrhs.com, select National Society, and then The Interchange. If you require a printed copy of this information, please send your address and a check for \$2.00 made out to PRRT&HS to:

Richard C. Price
779 Irvin Hill Road
McVeytown, PA 17051

THE KEYSTONE CD 5

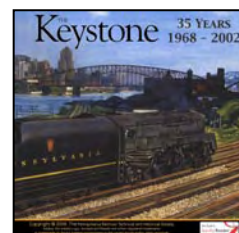
The Keystone CD No. 5, *The Glory Days*, covering 1998 to 2002, is now for sale at the price of \$75 for members. New Jersey residents add \$5.25 sales tax. Order CDs from:

Al Buchan
785 Cornwallis Drive
Mt. Laurel, NJ 08054-3209



THE KEYSTONE DVD 1

The Keystone DVD No. 1 covering 35 years of *The Keystone* from 1968 to 2002 is available. The navigation of this product is being upgraded as are some of the administrative notes and text. The improved edition will be ready for ordering soon. Those few who have already purchased the DVD will be able to trade it in for a new one when it's available. The price of this DVD is \$375. *This DVD requires a computer with a DVD drive. It is NOT a video disk that can be played on a DVD player for viewing on your TV.*



PRR Product News

BOWSER MANUFACTURING

<http://www.bowser-trains.com/>

Cal-Scale Leslie RS3L Horn – HO-scale



(Bowser)

Bowser continues to add to their Cal-Scale line detail parts of interest to the Pennsy modeler. This Leslie RS3L horn is among several recently added.

BROADWAY LIMITED IMPORTS

<http://www.broadway-limited.com/>

PRR L1s Steam Engine – HO Scale



(BLI)

BLI continues with its development of the L1s. Anticipated delivery is now November 2015. Several photos of an engineering model are available on their website.

PRR M1A/B Steam Locomotive – N Scale

BLI is now listing October 2015 for the delivery date for this much anticipated model.

PRR P70 and P70R Coach – HO Scale

BLI will be producing models of the original as-built P70 coach as well as the ice air conditioned P70R. Delivery is expected in January 2016.

EASTERN SEABOARD MODELS

<http://www.esmc.com>

PRR G38 Ore Jennies – N Scale



PRR G38 (ESM)

ESM in their Sovereign Modeler Series has available brass models of G38, G38A, and G38B ore jennies.

RAPIDO TRAINS

<http://www.rapidotrains.com/>

PRR AF16 (FA-2) Diesel Engine – HO Scale

Rapido has announced development of the Alco FA-2 in a variety of paint and lettering schemes. The PRR models will have Pennsy specific details including trainphone antennas. Both DC and DC/DCC/Sound versions will be available. Delivery is expected in the summer of 2016. B units will follow.

SCALECOAT PAINT

<http://minutemanscalemodels.com/>

Paraphrasing a Navy slogan, "It's not a hobby; it's an adventure." On June 9, as I did my daily perusal of the forum posts on Model Railroad Hobbyist <http://model-railroad-hobbyist.com/>, the free e-zine (you do subscribe, right?), I came across a message titled, "Weaver Closing?". Weaver manufactured Scalecoat Paints so, oh oh, my attention was immediately focused. Reading further, I found that Weaver was indeed closing its doors on June 29; the owner was retiring. I have long been a user of Scalecoat I for brass and Scalecoat II for plastic and resin. Although not long ago I had retired from the ranks of custom painters, by no means was I hanging up my trusty Paasche.

The loss of Floquil, which I use for weathering, was a minor irritation. In any event, good old American ingenuity has come to the rescue with equivalents available for many of the Floquil colors, as shown in the chart shown here:

<http://model-railroad-hobbyist.com/node/14152>

This chart is a work in progress with occasional fine tuning of the choices.

However, for me the loss of Scalecoat would be a major crisis. I immediately took an inventory of my Scalecoat I and II Loco Black, Brunswick Green, all the Boxcar Reds, and others that I routinely use. I thought of making an order direct to Weaver, but from past experience I knew that they would not have on hand a complete inventory. My next choice was Walthers, which maintains its inventory online for all to see. Happily, Walthers had all that I needed in stock, at least at the time I looked at the website. I immediately launched my credit card on a raid. A few days later all the paint I will need for a long time arrived at my front door.

The story does not end here. Happily, **MinuteMan Scale Models** has bought Scalecoat Paints. It turns out they had been in negotiations with Weaver's owner for several weeks. The final handshake occurred on June 24. The new owners announced plans to quickly setup production of all the current colors as well as several new ones. Thank you, thank you, thank you to the folks at MinuteMan! Updates can be found on their website.

WALTHERS

http://www.walthers.com/exec/page/npc_fea_ja
PRR P70 and P70R Coach – HO Scale

Walthers has also begun development of P70 coaches. The original hot P70 and ice air conditioned P70R will be offered first, with the promise of other variants to follow. Delivery is currently scheduled for December 28, 2015. Walthers is listing these models as "Limited Run". Complete details of paint schemes and part numbers can be found on the web page above.

In keeping with the sharks theme, here is an A-B-A set of Baldwin BF-16 locomotives leading a westbound freight out of the morning mist on Tim Garner's layout. Tim started with ER-Models units, added PRR specific details, and a Soundtraxx Tsunami decoder. Tim took the photo.

Upcoming Events

August 7-8 – Collinsville, Illinois (Metro St. Louis, MO)
St. Louis RPM Meet

<http://icg.home.mindspring.com/rpm/stlrpm.htm>

August 23-30 – Portland, Oregon

NMRA National Convention and National Train Show

<http://nmra2015.org/>

September 25-26 – Fredericksburg, Virginia

Mid-Atlantic Railroad Prototype Modelers Meet

<http://www.marpm.org/>

October 22-24 – Lisle, Illinois

Naperville RPM Conference

http://www.railroadprototypemodelers.org/naper_meet.htm

September 18-19 – Kennesaw, Georgia

Atlanta RPM Meet

<http://www.srha.net/rpm/default.htm>

Advance Planning

January 7-9 – Cocoa Beach, Florida

Prototype Rails Prototype Modeling Meet

<http://www.prototype Rails.com/>

May 19-21 – Camp Hill, Pennsylvania

PRRT&HS Annual Meeting

<http://pennsyrr.com/index.php/home>

July 3-10 – Indianapolis, Indiana

NMRA National Convention and National Train Show

<http://www.nmra2016.org/>



PRR Baldwin Freight Sharks BF-15 and BF-16

By Tim Garner



BF-16 (RF-16) #2015A and #9711A sit at the East Altoona locomotive servicing areas after being outshopped on June 25, 1958. They gleam from coats of varnish applied at the Juniata Shops. Money for repainting locomotives was unavailable that summer. The varnish didn't hold up and the process wasn't repeated. (William D. Volkmer)

THE ORIGIN OF "SHARKNOSE" STYLING

After ordering the Baldwin Centipede (DR-12-8-1500/2 or DR-12-8-3000) diesels with 6,000 hp over two units, PRR went back to Baldwin with orders for a new model. These diesels, with 6,000 hp over three 2,000 hp units, were called DR-6-4-1000/2 (or DR-6-4-2000) by Baldwin and would first be called BP-3, and later BP-20, by the PRR.

Many sources state PRR commissioned Raymond Loewy, streamlining stylist of the GG1 and T1 4-4-4-4 duplex locomotives, to come up with a new design to replace the "babyface"

cab styling Baldwin used on the Centipedes and freight units it sold to the Jersey Central, New York Central, and Missouri Pacific. According to Ken Douglas and Peter Weiglin in their book *Pennsy Diesels 1924-1968* (referencing *The Diesel Builders* – Vol. 3), the styling was actually created by the design firm Hadley, Ryder and Pederson. A photo listing on *Morsher's Railroad Images Page* indicates Michola S. Pedersen was the technical director of the program that engineered, styled, and arranged the equipment on these units (note the difference in spelling).

Article adapted from "Sharks! – PRR's Baldwin Freight Cab Units" by Tim Garner, *The East Wind*, New England Chapter, PRRT&HS, Autumn 2010.

Even so, the similarity between the sharknose diesel cab and the smokebox streamlining of Loewy's T1 design is obvious. Plus, Baldwin did build the two experimental T1 locomotives and half the fleet order of fifty engines. The design became Baldwin's standard for cab units. The origin of the "sharknose" moniker has not yet come to light.

Interestingly, the 1938 Graham Motors Corp. automobile, introduced as *Sprit of Motion*, has cutting-edge (for the time) Art-Deco sharknose styling that predates the T1 and the sharknose diesels. The car was designed by Amos Northrup of Murray Corporation who died before the work was finished. The car was a failure with the last cars being produced in 1940. Could this design have influenced either design consciously or unconsciously? Years later, car buffs borrowed the "sharknose" label from the railfanning world and now apply it to the 1938 Graham.

PRR ORDERS FREIGHT CAB DIESELS FROM BALDWIN

On July 7, 1947, the Pennsylvania Railroad ordered its first Baldwin road freight diesels. The initial order was for three 6,000 hp three units-sets of the DR-6-4-2000. These were comparable to the passenger locomotives then on order (later known as passenger sharks). These units would have been equipped with three axle A-1-A trucks similar to the Fairbanks-Morse Erie-Built freighters already on the road.

Before delivery, PRR changed the order to three four-unit A-B-B-A sets of the DR-4-4-1500. This offered 6,000 hp with four 1,500 hp units instead of three 2,000 hp units. With B-B trucks, all axles were powered. This put the entire engine weight on powered axles providing a tractive-force advantage over the A-1-A trucks on the Erie-Built. Each four-unit set cost around \$695,000.

In November, PRR placed an additional order for ten more four-unit, 6,000 hp locomotives. A total of 26 cab or "A" units and 26 booster or "B" units were shipped to PRR between February 28 and July 29, 1949. They originally carried PRR class BF-4 (Baldwin, Freight, 4 units). Twelve units were rearranged in three-unit sets with class BF-3. The final PRR class was BF-15 (Baldwin, Freight, 1500 horsepower). The road numbers were 9568A to 9593A for the A-units and 9568B to 9593B for the B-units.

Between April 27, 1950 and June 9, 1950, Baldwin shipped eight more A and eight more B-units. While Baldwin considered them the same catalog model, PRR considered the changes to the model significant enough to give them class BF-15A, the "A" meaning modified. These units had a fabricated frame replacing the cast steel frame on the first units. They also had improved traction motors and main generators giving them higher continuous tractive effort.



BF-16 (Baldwin model RF-16) #9739A and an unidentified B-unit are eastbound passing a crossing guard's tower at the end of the Rochester, Pa. station platform on May 3, 1964. This unit was shipped by Baldwin on May 31, 1951 and was retired July 2, 1966. (William D. Volkmer)



▲ BF-16 #2020A and #9712B are heading off the Bald Eagle Branch onto the Middle Division mainline at Tyrone, Pa. on July 25, 1959. Note the back-up light on the B-unit has been left on. They have BF-15 #9571 dead in tow on its way to the Juniata Shops for repairs. This unit was the part of the second 6,000 hp A-B-B-A set of DR-4-4-1500 locomotives delivered. Baldwin shipped them on March 22, 1949. It was retired December 31, 1963. ▼ An A-B-A set of BF-16 units, led by #2021A, relax in the snow at Enola, Pa. on January 29, 1961. The key spotting feature of the BF-16 was the taller nose door. (Both photos, William D. Volkmer)





"I just had a bath. How am I going to keep clean in this mess?" It's March 5, 1959 and an A-B-A set of sharks is sitting in the filth at East Altoona waiting for the next assignment. Recently shopped and varnished BF-16 #9736A (shipped May 15, 1951) and #2025A (shipped April 21, 1952) bracket an unidentified BF-15 B-unit. In this view are C-Liners, ALCo road switchers, EMD cab units, and an ALCo cab unit. The massive Juniata Erecting Shop is on the horizon. (William D. Volkmer)

In all, Baldwin produced 56 DR-4-4-1500 units (28 A and 28 B) in the sharknose styling. PRR bought all but the two A and two B demonstrator units (which ended up on the Baltimore & Ohio after a stint on the Elgin, Joliet & Eastern). Baldwin also built 22 A and 11 B units with the "babyface" carbody for the CNJ, MP, and NYC.

These first units were delivered with a paint scheme unique to PRR sharks, but in gold leaf on passenger and buff on freight. On A-units, to the rear of the cab door, was a PRR keystone logo within a circle. Extending from the circle to the rear of the unit were five parallel stripes as found on PRR's GG1 electric locomotives. "PENNSYLVANIA" was spelled out along the carbody with the unit number above the stripes and repeated smaller with an "A" low at the end of the carbody. The unit number was also displayed within a red keystone below the headlight. B-units displayed the five stripes, roadname, and small unit number with a "B", but no large number or logos.

The relatively plain nose on both passenger and freight units was not well received. PRR shop personnel later added the converging five stripes on the nose, as on the GG1, extending forward from the gold circle.

SPECIFICATIONS ON THE BF-15 AND BF-15A

Common to both models was the four-cycle 608-SC De La Vergne diesel engine. It had eight 12¾ in. dia. by 15 in. long

cylinders. The engine cranked out 1,500 hp at a governed speed of 625 rpm. They rode on four axles with 42 in. diameter wheels. The trucks featured SKF roller bearings. The gear ratio was 63:15. The 24-RL air brakes were powered by a WABCo Type 3-CD compressor. Both were geared for a maximum speed of 65 mph and had fuel capacities of 1,200 gallons. The locomotives were delivered with two doors on the pilot to cover the coupler. That's where the similarities end.

Each BF-15 had a Westinghouse 471-A main generator and four 370-G traction motors while the BF-15A had the 471 and 370-GL respectively. The BF-15 was 54 ft. 4½ in. long. The BF-15A was 3½ in. longer.

BF-15 A-units weighed 266,000 lbs. and B-units weighed 257,000 lbs. BF-15A units were lighter by 8,200 lbs. for A-units and 6,600 for B-units mostly because of the fabricated frame. This resulted in differences in maximum continuous tractive force as well. The BF-15 delivered 43,000 lbs. at 11 mph versus 42,800 lbs. at 10.5 mph for the BF-15A. Engine cooling water capacity was 325 gallons for BF-15 units. It was lower for BF-15A A-units at 310 gal. and higher for B-units at 369 gal. Lubricating oil capacity was 25 gal. higher on the BF-15A units. The horns changed from a single note to two single chime horns. Number boards changed to a smaller rubber-gasket design. Pilot-mounted sand filler boxes were added, the builder's plate was relocated, and the battery/tool box, fuel tank, and fuel filler spout changed positions.



It's May 18, 1959 and it looks like a perfect day for railfanning. We're at "SLOPE" interlocking in Altoona, Pa. at the start of the Allegheny grade. An A-B-A set of sharks is led by BF-16 #2020A, an unidentified BF-16 B-unit, and BF-15A #9700A has a westbound while some ALCo helpers are rolling toward the bottom of the grade for another push. The abandoned turntable pit visible in the top photo to the right was where helpers were turned in steam days. The trailing shark was part of the first A-B-B-A set of BF-15A units shipped by Baldwin on April 27, 1950. (Both photos, William D. Volkmer)

THE RF-16 ARRIVES

On December 21, 1950, an A-B-A diesel was shipped from Baldwin. Numbers 9708A, 9708B, and 9709A were the first of 102 RF-16 freight sharks delivered between then and April 30, 1952. This model was like the BF-15A, but with a four-cycle 1,600 horsepower 608-A engine, a Westinghouse 471B main generator, and improved Westinghouse 370-DZ traction motors on A-units and 370-G on B-units. The eight cylinders were ½ in. longer than in the 608-SC engine. Each unit weighed the same as the BF-15A, but the maximum continuous tractive force increased to 48,600 lbs. at 9.9 mph. They also had a faster top speed of 70 mph, a taller nose door, and larger number boards.

First assigned class BF-3, PRR renamed the class BF-16 in the fall of 1951. Nine units in the 9500's were delivered as three A-B-A locomotives. Another 39 units also came in A-B-A sets numbered in the 9700's along with twelve units in A-A sets. The 42 units in the 2000's arrived in 14 A-B-A lash-ups.

The BF-16 featured the same five-stripe paint scheme as the BF-15 and BF-15A. A-units in the 9000-series had the same flat coupler doors. Most of the 2000-series received a different bulging design (see photo of #2012 on page 34 of Doug Nelson's book of Phil Hasting's PRR photos). Jack Consoli believes 2000A-2009A did not get them, but 2010A-2027A did. BF-16 units were delivered with three-chime Nathan M3 horns with all bells facing forward. All PRR A-unit sharks of all models were delivered with Trainphone equipment.

Baldwin had better sales with the RF-16. There were 109 A and 51 B units produced. PRR purchased 72 A and 30 B units. B&O took 19 A and 13 B units while NYC bought the remaining 18A and 8 B units. Of all the sharknose diesels produced, passenger or freight, the PRR owned over 76%.

SERVICE RECORD

The BF-15 units were assigned to various regional trains in the Middle Division in the Eastern Region and the Cleveland, Eastern, and Panhandle Divisions in the Central Region with the intention of reducing the need for helpers. The heavy duty Westinghouse electrical equipment proved well-suited to heavy iron ore and coal trains that tended to damage the traction motors on the earlier EMD units. Maintenance of the fleet was handled at the Altoona, Columbus, Crestline, Enola, and Renovo shops.

The BF-15A units went into Renovo to Erie and Pitcairn to Buffalo service after arrival. The BF-16 units, with their slightly higher horsepower, were put on mineral trains between Lake Erie at Cleveland, Ashtabula, and Erie and the steel mills near Conway, Mingo Junction, and Wheeling. Ten BF-16 units (9734A-9738A and 2024A-2027A) were equipped with "hooks" – a bar attached beneath the number R1 axle (first on the right). This was to trip signals on New York Central intermittent inductive train stop territory into Erie and Buffalo

where PRR had trackage rights. (Seven F7 units were also equipped and were accordingly renumbered into the 1900 series. None of the sharks survived long enough to be renumbered in 1965.)

By 1960, all the BF-15 and BF-15A units were assigned to Crestline for maintenance and worked in the Lake Region. The air throttles on Baldwin cab units prevented them from being MU'ed with units from other manufacturers, but the railroad couldn't justify the expense of changing them or adding connections to the noses of A-units. All the BF-15 and BF-15A units were retired between December 31, 1963 and May 7, 1965. All the BF-16 models were retired on July 2, 1966 or January 13, 1967. While historians generally consider the sharks less successful than the EMD F-units, on the PRR they remained in service almost as long.

During their service lives, some changes were made to all the units. Eventually, the pilot doors were removed from all units. The BF-15A and BF-16 had vents added for compressor cooling to the rear of the cab doors on both sides. An ICC-mandated, oddly shaped ladder with additional steps and grab irons was added on the engineman's side of the nose to assist with maintenance (as did all cab units – GG1 units, too). In a cost saving move, the classy five-stripe scheme was replaced with the standard single stripe freight scheme.

THE ALCO RE-ENGINED UNITS

In the late 1950's, the PRR expected they would need to rebuild the fleet to keep the Baldwins going. By that time, Baldwin-Lima-Hamilton had thrown in the towel and left the locomotive business. To see if the sharks could live on, PRR sent wreck-damaged BF-16 units 2001A and 9726A with BF-15 unit 9583B to ALCo in Schenectady, N.Y. in 1959 to be rebuilt with the prime mover and electrical equipment of the 1,800 hp RS-11. They had been in a slow-speed head-on at "PG" Tower near Homestead, Pa. in the spring of 1958. There was not much carbody damage, but the frames were bowed as a result. They sat at the Altoona Works 12th Street Shop for a year before Philadelphia made a decision and the units headed north.

The units returned to the PRR in December 1959, now with the class ABF-18. They were given numbers 9632A, 9632B, and 9633A – the next numbers up from the last ALCo FA-2 cab units. The units broke in as helpers in Altoona then moved to Renovo to work in the Northern Region.

Soon after delivery, NYC and B&O began receiving big orders for GP20's and GP30's from General Motors subsidiary EMD. To protect lucrative traffic in GM autos and auto parts, PRR decided it would be better to also order new units. What's more, new higher horsepower units could replace older units on a three for four ratio. These rebuilds were white-lined by July 1966. Bill Volkmer had a chance to experience the converted units. "As a railfan, I got a cheap thrill when

climbing into the cab of a Baldwin shark and seeing a totally ALCo electrical cabinet on the rear wall, plus an unmistakable ALCo throttle stand, while listening to an ALCo 251 engine idle behind me. There was no mistaking what was under the hood."

At the same time this ALCo conversion was done, PRR was sending 26 of the oldest EF-15 (EMD F3) A and B units for extensive overhaul. PRR soon announced an order for 52 new 2,250 hp EMD GP30 units. Management wanted to use the 52 oldest EMDs as trade-ins, sending freshly rebuilt units off to the EMD scrap line.

PASSENGER SHARKS GO FREIGHT

The PRR quickly lost faith in the reliability of the 18 A-units and nine B-unit BP-20 passenger sharks delivered to the road in 1948. Just as it downrated the Baldwin Centipedes to freight and helper service, PRR decided to see if it could turn the passenger sharks into useful freight engines.

In 1953, locomotives 5784A, 5785A, 5786A, 5787A, 5780B, 5782B, 5784B, and 5786B became class BF-16Z. This was done by regearing them for freight train speeds and down-rating the two 1,000 hp 606-SC engines in each carbody to 800 hp for a total of 1,600 hp per unit. They were repainted in the narrow single-stripe paint scheme found on most PRR freight cab units. They were typically seen in lash-ups with the other conventional four-axle freight sharks.

Apparently, the conversions were not considered all that successful. No additional units were converted and they were the first sharks retired – all on September 27, 1962.

NO PRR UNITS WERE SAVED

No PRR sharks were saved for posterity, but two former New York Central units that later saw service on the Monongahela, the Delaware & Hudson, and the Michigan Northern Railway, are said to be stored out of public view on the Escanaba & Lake Superior Railroad with mechanical damage. Sharks are so completely identified with the PRR that it would be wonderful to see them in PRR territory in dark green locomotive enamel, five stripes, keystones, and Trainphone equipment. Well, we can dream, can't we?

SOURCES

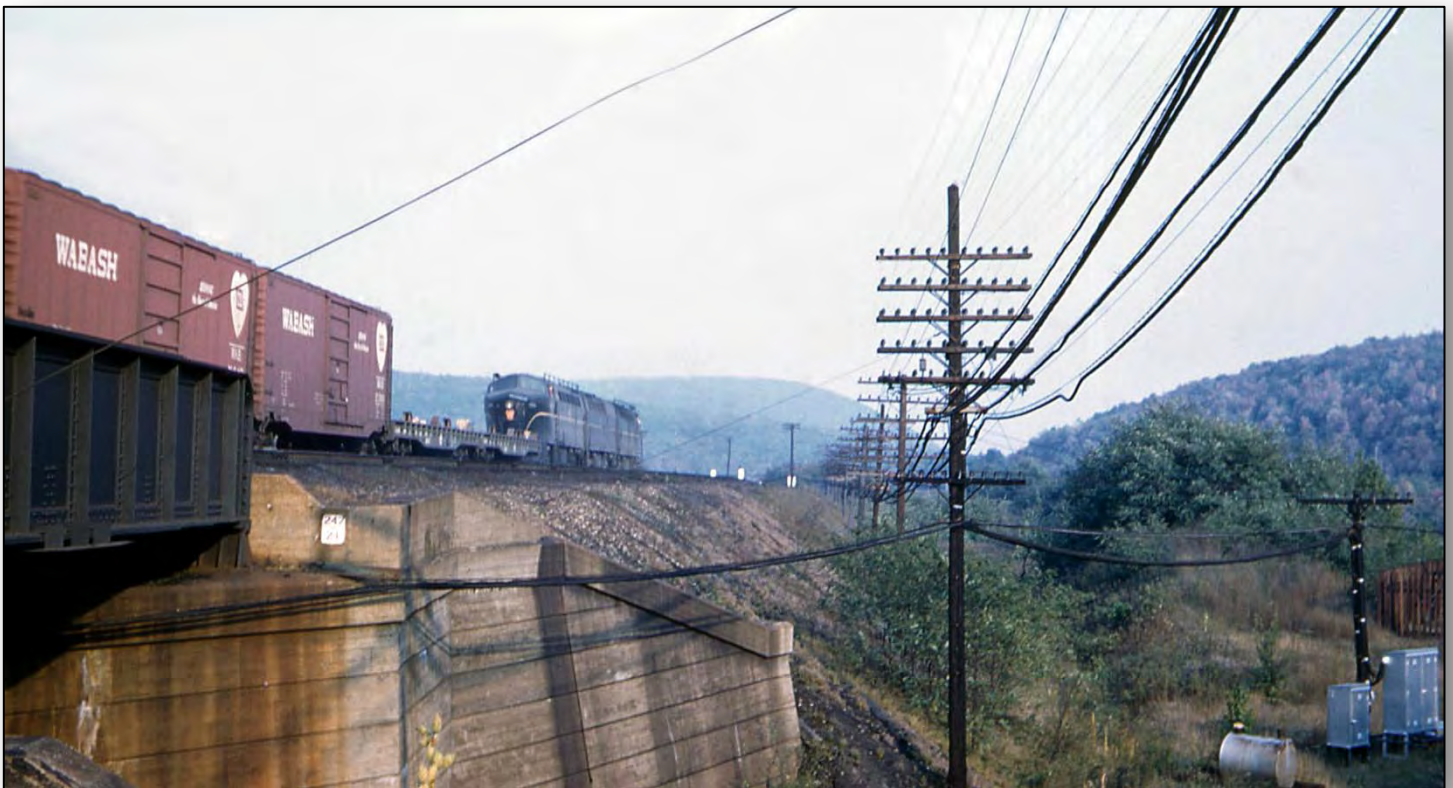
- Paul Carlton, A Pennsy Diesel Power Review, D. Carleton Railbooks, ©1995.
- John D. Hahn Jr., Pennsylvania Railroad Diesel Locomotive Pictorial, Volume Four – Baldwin Cab and Transfer Units, Withers Publishing, ©1998.
- Eric Hirshimaki, Black Gold – Black Diamonds, The Pennsylvania Railroad and Dieselization – Volume 2, Mileposts Publishing, ©2000.
- Alvin F. Staufer and Bert Pennypacker, Pennsy Power II, Alvin F. Staufer, ©1968.
- William D. Volkmer, PRR Hudson to Horseshoe, Morning Sun Books, ©1994.
- Robert J. Yanosey, Pennsy Diesel Years – Volumes 1-5, Morning Sun Books, ©1988, 1989, 1990, 1991, 1993.
- Fact checking by my two favorite PRR diesel experts – Bill Volkmer and Jack Consoli.



BF-15 (DR-4-4-1500) #9572A, a BF-16 B-unit, and BF-16 (RF-16) #9722A lead a coal train off the Cresson Secondary on January 17, 1959. The train is about to cross the bridge over the Pittsburgh Division mainline in Cresson, Pa., loop behind "MO" tower, and head for Altoona. The lead unit was shipped from Baldwin March 30, 1949, builder's number 73705. The B-unit still wears the original 5-stripe paint scheme. (William D. Volkmer)



▲ An eastbound freight has just left the darkness of the New Portage Tunnel in Tunnel Hill, Pa. on the Pittsburgh Division. The train is starting down “The Slide” in the late afternoon light on October 4, 1959. Up front are BF-16 #9724A, BF-15A #9702B, and BF-15 #9572A— one of each four-axle freight shark class. ▼ As we turn, the train has just crossed the westbound connection of the New Portage Secondary to the westbound mainline. This freight bypass extends from here to “WYE” interlocking in Duncansville, Pa. where it connects with the Hollidaysburg & Petersburg Secondary. (Both photos, William D. Volkmer)





▲ This Bill Volkmer image was featured on one of the first railroad postcards I ever purchased and is a long-time favorite. This unposed photo in Erie, Pa. on August 25, 1958 features, from left to right, BF-16 #2025 (shipped from Baldwin April 21, 1952), BF-16 #9738 (shipped March 31, 1951), and an A-B-B-A set of EMD F3 units (PRR class EF-15) led by #9563. ▼ An A-B-A set of sharks led by BF-16 #9735 is laying sand west of Canton, Oh. on May 16, 1964. The heavy duty Westinghouse electrical gear on these machines made them good at lugging slow heavy freight trains. (Both photos, William D. Volkmer)





After diesels vanquished steam, some coaling stations soldiered on providing traction sand to the new units. ▲ A long string of seven sharks led by BF-15A #9703 rests by the Cleveland, Oh. tower. To the left is one of the seasonally leased Bangor & Aroostook GP-9 units and an EMD switcher. To the right is a Tuscan red EMD E8 (PRR class EP-22). ▼ BF-16 #9743A, #9743B, and #2025A sit near the Enola coaling tower on February 21, 1963. In this shot, seldom photographed unit numbers on the blunt ends can be seen. (Both photos, William D. Volkmer)





▲ BF-16Z #5785A, a former passenger shark, sits coupled to two BF-16 units at Erie, Pa. Photo and video evidence suggests there was rarely, if ever, more than one former passenger shark in a consist. Due to their air throttles, sharks were never MU'ed with other types of power. ▼ BF-16 #2018A is sitting in the Canton, Oh. enginehouse on June 23, 1964. It hit a gravel truck at a grade crossing on its run from Youngstown to Canton. Even though it would not be repaired and would be used as a parts source for other units, it was not officially retired until January 13, 1967. (Both photos, William D. Volkmer)





▲ Here's another view of freshly varnished BF-16 #9711A and #2015A at East Altoona. EFP-15A #9854A (EMD model FP7) sits to the left, a pair of ALCo FA units is to the right, and some ALCo helpers are in the distance. Note the red grimy fire hydrant – a seldom-modeled engine terminal detail. ▼ ALCo re-engined shark ABF-18 #9633A sits in Enola on October 10, 1962. (Both photos, William D. Volkmer)



Product Review: BLI's PRR BF-16's in HO Scale The Baldwin RF16A and RF16B Freight Road Units

By Jack Consoli – photos by the author unless noted



Out of the box BLI PRR 5-stripe class BF-16 freight cab units.

After much anticipation, Broadway Limited Imports, LLC, recently released their all newly-tooled HO scale version of the Baldwin RF16A and RF16B freight locomotives. These locomotives include improvements over earlier models from other manufacturers such as correct nose contours, factory applied Trainphone apparatus and more details and features than the prior models. As to specific details, their ad copy states:

BLI will offer the Shark units in AB sets as well as single units. All units are available with our brand new Paragon2 Sound and Control system. Here are some features of the models as well as our sound system.

- Industry-Leading Features (of sound-equipped models):
- All new Paragon2 sound and control system for DC and DCC
- Integral DC/DCC dual mode decoder for ease of operation
- Industry best slow-speed operation in DC and DCC
- Functions are accessible in DC using the DCMaster
- Prototypical light operation with headlight
- Authentic Baldwin Shark sounds! Controllable in DC and DCC.
- All-wheel drive and all-wheel electrical pick-up
- Factory installed engineer and fireman figures
- Near brass-caliber detail at a plastic price
- ABS plastic body with heavy die cast chassis for maximum tractive effort
- 5-pole can motor with skew wound armature
- Many separately applied details such as handrails, ladders, horn, and brass bell
- Operating knuckle couplers
- Will Operate on Code 70, 83, and 100 rail
- Recommended Minimum Radius: 18 inches

- Superb back EMF motor control in DC and DCC
- Recordable DCC operation for automated playback
- 8 Diesel rev levels for realistic sounds during operation
- 16-bit Sample Rate for exceptional high frequency sound clarity
- Playback Horn for multiple whistle lengths and patterns
- Choice of 3 selectable horns
- Alternate Whistle/Horn where applicable for locomotive with air horn and steam whistle – both the main whistle and alternate can be easily played
- Adjustable bell ringing interval for faster or slower bell
- Numerous user-mappable functions with available keys
- Passenger Station Ambient Sounds – Controlled with Function Key
- Freight Yard Ambient Sounds – Controlled with Function Key
- Lumber Yard Ambient Sounds – Controlled with Function Key
- Farm Ambient Sounds – Controlled with Function Key
- Crew Radio Communications – Controlled with Function Key
- Maintenance Yard Ambient Sounds – Controlled with Function Key

Their initial offerings w/Paragon 2 Sound/DC/DCC include the following PRR locomotive road numbers in the 5-stripe lettering scheme:

- P120 PRR BF-16 A/B set, #2004A/2004B (unpowered B)
- P121 PRR BF-16 A/B set, #2008A/2008B (unpowered B)
- P122 PRR BF-16 A, #2007A
- P123 PRR BF-16 B, #2002B
- P132 Undecorated kit. PRR type, tall door, BF-16 A
- P135 Undecorated kit BF-16 B

These are definitely the nicest Sharks thus far produced, notably with improvements to the A-unit nose contours, and with the factory applied Trainphone transmitting and receiving structures, and other PRR-specific details. Overall, the models feature fine detail, including see through screens with simulated structure behind, lighted numberboards, constant lighting, working marker lights and numerous other details. The units run well, and the sound equipped units nicely reproduce the sounds, including the correct prime mover and horn, of the prototypes. The units are factory-equipped with a hook and loop drawbar arrangement between the A/B units as well as an optional set of couplers to replace it.

Along with all these positive features, there were a few minor things about these models I viewed as negatives. As with most HO models, they suffer from mold design limitations that render some detail cross-sections slightly oversize, and the flush-mounted windows and screens are never quite as seamless as the prototype appearance. There are also some minor detail discrepancies between the models and the specific PRR prototypes they are supposed to represent. Realistically these fall under the umbrella of what level of prototype-specific detail is reasonable to expect a manufacturer to reproduce for a single railroad's model offering. These small items are inevitable victims of limited tooling budget and complexity. For specifics, read on....

PROTOTYPE BACKGROUND

The PRR purchased 30 A-B-A 3-unit and 6 A-A 2-unit "locomotives" (72 A-units and 30 B-units), or 102 of Baldwin's model RF16 (Road Freight 1600 horsepower) cab locomotives. They were built between December 1950 and April 1952 in three number series: 9594-9599, 9708-9745 and 2000-2027, but were not delivered in chronological order, which is important when trying to sort out detail differences amongst the units. Prior to their delivery, the Motive Power department had reduced their earlier assessment that a road "locomotive" should be 6000 horsepower which had driven all the predecessor DR4-4-1500 and RF15 models being delivered as 4-unit BF-4 sets. Most of the RF16's were thus classified (or intended to be classified) initially as BF-3 under the PRR's 1947 "locomotive"-based classification system. The class signified Baldwin-built, Freight service, in a 3-unit locomotive set. Six A-A sets were delivered as BF-2 "locomotives", intended for a specific service. However, in the midst of the RF16 deliveries, the PRR introduced their subsequent "unit"-based classification system in June 1951 in which the units became PRR class BF-16, signifying: Baldwin, Freight service, 16-hundred (1600) horsepower per unit. Thus, 2008-2027 were initially classified BF-16, whereas all the others had their old classes *changed* (not "reclassified") to BF-16. A simplified roster below lists the deliveries in chronological order (all were originally class BF-3 except where noted):

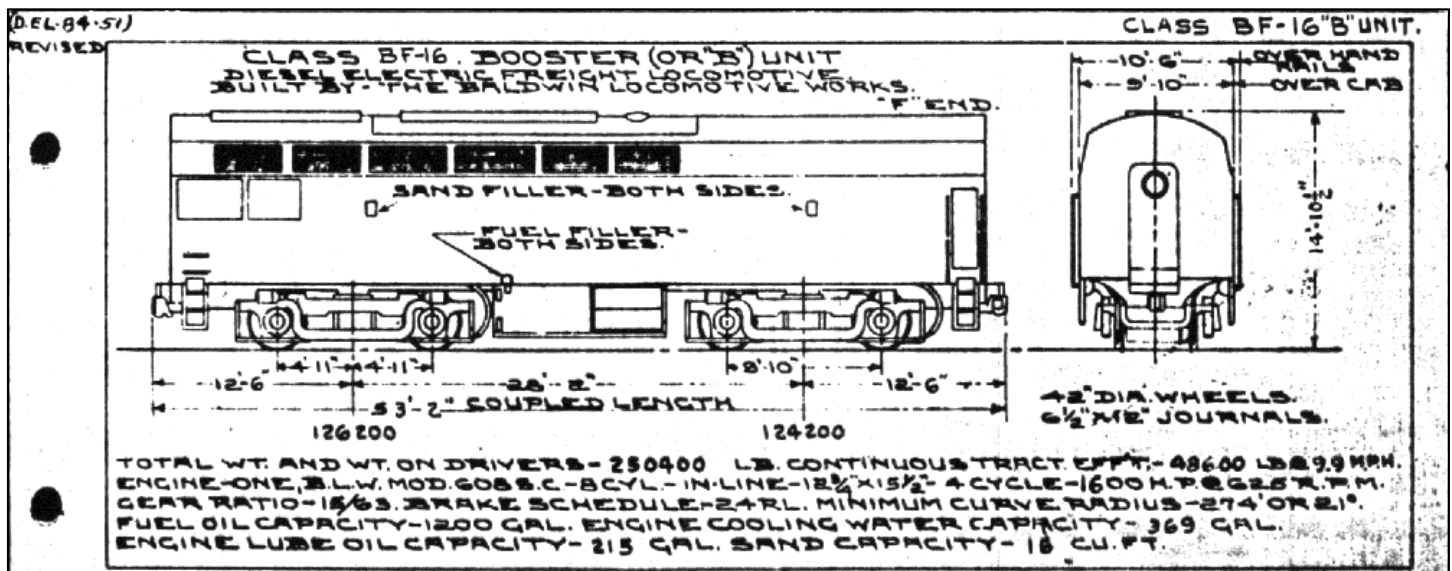
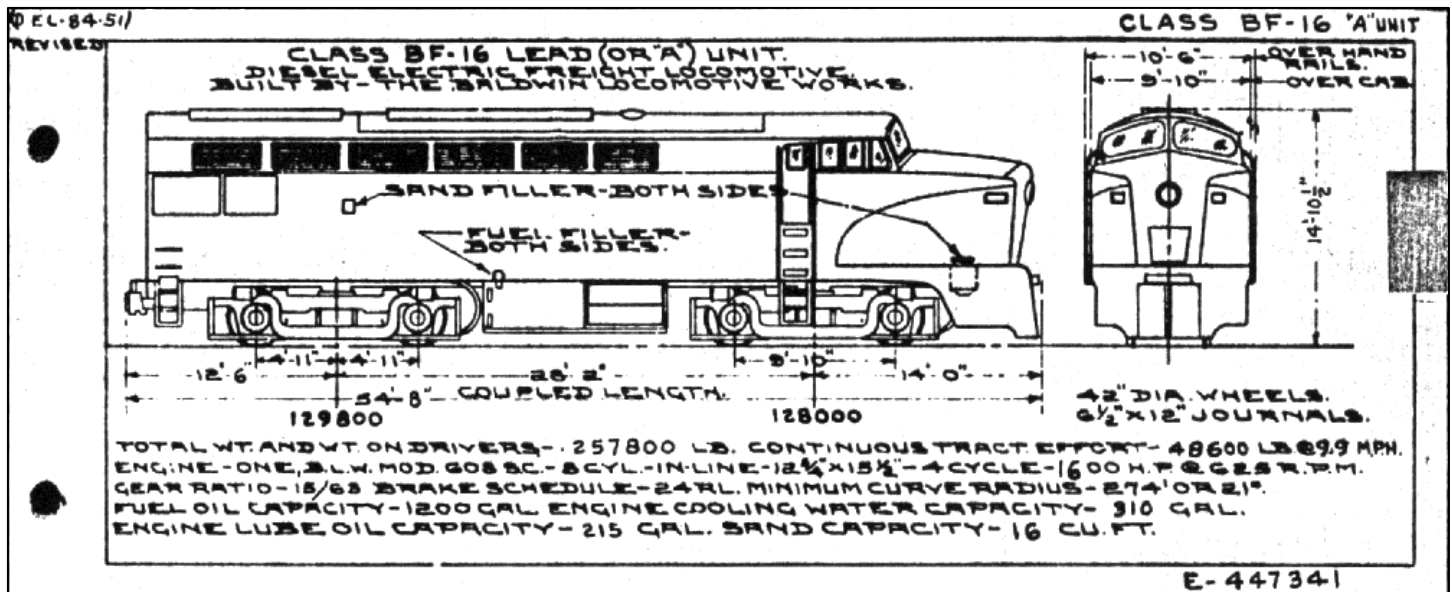
- 9708A-9715A w/even #B's were delivered 12/50-1/51
- 9740A-9745A w/even #B's were delivered 1-2/51
- 9728A-9731A w/even #B's were delivered 2/51
- 9716A-9727A (w/o B's) were delivered 3/51 (as BF-2)
- 9732A-9733A w/even #B were delivered 3/51
- 9594A-9599A w/even #B's were delivered 4/51
- 9734A-9739A w/even #B's were delivered 5/51
- 2000A-2009A w/even #B's were delivered 6-10/51 (2008A/B/2009A as BF-16)
- 2010A-2027A w/even #B's were delivered 2-4/52 (as BF-16)

The Baldwin freight sharks were not the most successful, nor the least numerous freight diesel cab locomotives the PRR operated. The 1600 horsepower RF16's were the final shark variant, succeeding the earlier 1500 horsepower DR4-4-1500 and RF15 models. Like their brethren, they suffered from some mechanical issues and became orphans in 1956 when Baldwin exited the locomotive market. These factors combined to relegate them to non-"Blue Ribbon" service (to use the passenger department's term for highest importance) and maintenance assignment points off the mainline. When healthy, they were appreciated for and utilized for their above-average pulling capacity which resulted in their often being employed in mineral train service. The 102 BF-16 plus the 68 BF-15/BF-15a operated alongside their 4-axle cab-unit competitors: 52 AF-15/AF-16 ALCO FA/FB's, 24 FF-16 FM C-Liners and 363 EF-15/EF-15a/EH-15/EFP-15 EMD F-units. Like many of these other models, all the Sharks were dropped from the roster effectively as soon as possible: in this case, within a year, plus or minus, of the dates when their 15-year financing obligations were fulfilled. Despite this less than penultimate service history, they have always been a favorite with railfans and modelers.

MODEL DETAIL REVIEW

The BF-16 units as a whole were generally similar in appearance as built, with some minor differences in the Baldwin and PRR-specified details between groups. Broadway Limited has numbered their models for the 2000-series group built in the latter half of 1951 as that is the group they most closely duplicate. Out of the box, the A-unit details match 2004A-2009A, and the B-units match 2004B-2026B (even), all a couple years into their service lives on the PRR.

Note, however, that as with most equipment on the PRR, a number of modifications and upgrades were made to the units that resulted in changes to the external appearance, even within relatively short time periods, so any model cannot be expected to be correct for any extended period of time.



BF-16 A- and B-unit diagrams revised in 1951 after the changes to the classification system. Note the images on these diagrams appear to represent the earlier DR4-4-1500 units with their short nose door, three cab side windows and horizontal louvered side grilles: likely an expedient by the drafting department by just copying and updating the existing BF-15 diagrams. (Courtesy Robert Schoenberg)

The overall dimensions of the units appear to be in agreement with the prototype, although I didn't check every single dimension to the nearest inch. Certainly nothing jumps out at you as being seriously wrong when viewing the model. At the finer detail level, I will present below the specifics of the PRR prototypes and the model's fidelity to these features.

A-UNIT NOSE

WINDSHIELDS, WIPERS AND WASHERS

All the BF-16 A-units were delivered with bare metal windshield surrounds and were factory-equipped with one wiper and a washer in the form of a small squirt tube mounted below the bottom of each half of the windshield. The BLI

model duplicates these features except that the washer tubes are missing.

GRAB IRONS

The BF-16 A-units had tall nose doors (as compared to the earlier models) and had a vertical grab iron along each side of this door. All the units also came factory-equipped with ladder rest grabs on the sides of the nose as well as the "eyebrow" grabs above the windshields, a longitudinal grab on the roof above the cab side windows and a horizontal grab near the top of the pilot on each side above the step cut-outs. The models have all of these grab irons and correctly represent the units as-built.



(Left) Stock BLI PRR BF-16 A-unit nose. (Right) The first BF-16, 9708A, showing the as-delivered appearance with large rectangular rounded-corner numberboards with 5" numbers, bare metal window frames, four segment cab side windows with the rear one blank, unpainted step kick plates, tall nose door, windshield, ladder rest and cab roof grabs, numbered nose keystone and 5 stripes. 9708A-9745A came equipped with the flat coupler doors. (Baldwin)

LIFTING LUGS

The BF-16 A's were built with lifting pads under the sills just behind the pilot that were utilized when lifting the front of the locomotives using a yoke and hook-type apparatus, and thus the prominent nose mounted lifting lugs applied to EMD cab units were not required. The predecessor BF-15a models had a slightly different arrangement that was unsatisfactory as built, and resulted in the PRR cutting notches in the sills at these points to better access the lifting pads after they were placed in service. These notches were not necessary on the improved BF-16 design and the model appears correctly as such.

NUMBER BOARDS

All BF-16 A's were delivered with large rectangular numberboards with rounded corners and 5" white numbers almost flush-mounted in the sides of the nose. The BLI model is mostly correct for these units, but their numberboards protrude more than on the prototypes, probably due to their being applied as separate parts. Some of the models have been observed to have these parts misapplied at an angle.

HEADLIGHTS AND MARKER LIGHTS

The PRR units all had single beam headlights protruding from the nose sheets in a circular enclosure. Separate circular marker lights were mounted to each side on the horizontal centerline of the headlight on the front faces of the nose. The model headlights are operating white LEDs and the marker lights display red when lit, also via LEDs. Summarizing information on the prototype light functions presented in earlier issues of TKM:

- Prior to 1955, headlights/backup lights weren't required to be used at all during the day: only at night or in tunnels or adverse weather.
- Starting in 1955 they were to be used night and day.
- For road engines like the sharks, the headlight on the leading end was to be on when leading (with nothing coupled to that end), whether going forward or reverse; otherwise it was to be turned off.
- Likewise, if a square end was leading, going forward or reverse (with nothing coupled to it), the backup light was to be on; otherwise it was to be turned off.
- Headlights were to be dimmed when approaching other trains or employees that would be annoyed by the headlight.
- The function of classification lights and their associated white or green displays were long gone by the time the sharks arrived. Marker light functionality was still used during the diesel era and although some or all of the builder's built-in nose marker lights such as Baldwin's could be changed in color manually, only the red aspect was used for the marker light function on the PRR. The PRR-applied marker lights incorporated only red lenses. The usage appeared to simplistically be: if that end of a unit was trailing (with nothing coupled to it) the markers were to be on, otherwise they were to be off. Photos of PRR diesels with the red markers lit are not very common, but occasional rear end views of helper units do illustrate this practice.

- Since the purpose of the numberboards on locomotives was for tower operators to help identify passing equipment, it would follow that only the lead unit boards were necessary to be on when running, at least at night.

On the models, the headlights and back-up lights are controlled by the direction of travel. They can optionally be turned off in any state of operation. The numberboards are always on regardless of travel direction and cannot be turned off. The red marker lights are all also on regardless of travel direction, but all can be turned off as a group. They *should* be directionally controlled such that they are on when they are at the trailing end of the unit. Even when in the Advanced Consisting mode, which conveniently turns off any of the headlights/backup lights between units at all times, the markers are either all on or all off. Thus, in the conditions when you need to have the marker lights on an A-unit, you can't ever get it correct and only have the trailing ones lit. There may be a home rewiring remedy for getting them to operate prototypically, but I haven't sorted that one out, yet. The markers and backup light on the front square end of the B-units are non-operating so you can get just the rear end markers of a B-unit lit.

FLAG BRACKETS

All the PRR BF16's were originally equipped with two front and two rear "special classification flag and marker light brackets." These small castings were located on both sides of the A-unit cab roof between the base of the first Trainphone stanchion and the grab iron, within reach of the cab windows. The brackets have been included on the models.

CAB SIDE WINDOWS

While the BF-15 and BF-15a had the three cab side windows, the BF-16 A's had what at first glance appears to be four windows in the same space. However, the rear-most of the four "windows" was actually fixed and opaque, either being metal, wood or painted glass. The triangular front window pivoted much like an old automobile "vent" window. The two middle windows would slide back over the rear panel and be stored there when open. The "dummy" window had a bare metal frame like the other three. The model is correct in having the rear panel opaque, but its surrounding frame was not painted silver like the three real windows ahead of it as it should be.

HORNS

A three-chime Nathan M3 horn was factory applied on the right (engineer's side) of the cab roof on all the BF-16 A-units. The M3 had all three bells facing forward, with the longest bell in the center, and the shortest towards the outside. Although some units had replacement horns applied during their lifetime, others retained their originals until retirement. This horn is nicely rendered on the model and the sound matches recordings I have heard online.

CAB-SIDE LADDERS

The PRR did not begin to apply the ICC-mandated access steps, ladder and handholds to the right side of the BF-16 A-unit noses until 1959, so the models are correct for the earlier period of their existence.



(Left) Model view of the nose showing the Nathan M3 horn and other details. Note that the five stripes are not painted on the sides of the recess for the cab side door, but should be. (Right) BF-16 2014A with the center two cab side windows open and the front one closed. Roof, eyebrow and ladder rest grabs; bare metal window frames; windshield wipers and washers; M3 horn and flag bracket and front end details of the Trainphone antenna are all visible, 1953.



(Left) BF-16 9744A with flat coupler doors open, revealing drop coupler in "T" opening. 1955. (Right) 9701A with flat doors open more clearly showing "T" opening in pilot with the coupler up. The notches cut into the sills behind the pilot to access the lifting pads are visible on this BF-15a were not required on the BF-16.

MULTIPLE UNIT CONTROL

None of the BF-16 were delivered or later modified to add MU capability on the nose ends of the A-units. The models are correct without them for the life of the units.

ENCLOSED COUPLER PILOTS

The BF-15a 9700A-9707A and early BF-16 9708A-9745A were delivered with flat coupler doors and a "T" shaped opening in the pilot behind the doors. The "T" shaped opening provided room for the drop-style nose coupler used on these units. When the doors were removed starting late 1954 the openings in the BF-15a appear to have been left as-is, whereas the lower part of the "T" appears to have been filled in partially on some of the 9708A-9745A BF-16 units. I have not seen any early photos of the six BF-16, 9594A-9599A, to confirm whether they also came with the flat doors, but as they were delivered in between 9732A-9733A and 9734A-9739A, it seems likely that they did. In later photos the pilots on these units appeared as did 9738A (right).

Unlike the earlier sharks, the first of the 2000-series BF-16 A-units were delivered without coupler doors. These were the 1951-built 2000A-2009A and had a simple rectangular-with-rounded-corners pilot opening. The subsequent 1952-built units, 2010A-2027A did get doors applied. Unlike the earlier units, these were bulbous clamshell type doors, which differed from the earlier units because retractable (not drop-style couplers) were employed on these units. Once the doors were removed on these units, the openings appeared similar to the units delivered without doors except that the openings had square corners, instead of round.

SANDBOX FILLERS AND UNCOUPLING LEVERS

All PRR BF-15a and BF-16 units were delivered with sand fill boxes on the top ledge of the pilot on both sides of the units. Bent metal rod uncoupling lever handles were set into rectangular recesses on both sides of the pilots. These items are well rendered on the models.



BF-16 9738A with doors removed and the bottom part of the "T" coupler opening filled in. 1967.



1951-built BF-16 2005A delivered without coupler doors and with round-cornered coupler opening. The front cab side window is pivoted open and the middle two have been slid back to rest over the blank panel in this builder's photo. Note the side screens and crank case vent are not present as-built. (Baldwin)



(Left) 1952-built BF-16 2014A with bulbous clamshell coupler doors, 1953. (Right) BF-16 2012A with the bulbous coupler doors removed showing its resulting square-cornered pilot opening. 1967.

CARBODY

CARBODY DOORS AND KICK PLATES

The BF-16 A-units were delivered with unpainted stainless steel kick plates above the body steps at nine locations around the units. The B-units had similar kick plates at two locations. All the carbody doors at the locations above the kick plates were inset, or below flush with the surrounding body. Each door had a rounded-corner rectangular window. These features are represented correctly on the models.

SCREENS/GRILLES

The BF-16 had six openings per side along the upper section of the carbody for ventilation. Whether they were technically considered to be screens or grilles is not clear as the openings were quite fine and hard to discern. Each screen had a vertical support member in the center of the opening. The models have separate etched metal screens with the vertical center supports, however, the limitations of scale render them as having coarser, more distinct openings and not seated flush to the surrounding body panels as the prototypes.

ADDITIONAL VENTILATION SCREENS

All the PRR BF-15a and BF-16 A and B units were delivered without the carbody side screens in the side panels about a third of the way back along the units. The order to initiate Betterment 1101 to "Add Main Generator Air Exhaust Ducts and Inlet Filter Panels" was issued 12/51 – so this screen would be retrofitted to units beginning in 1952, at the earliest.

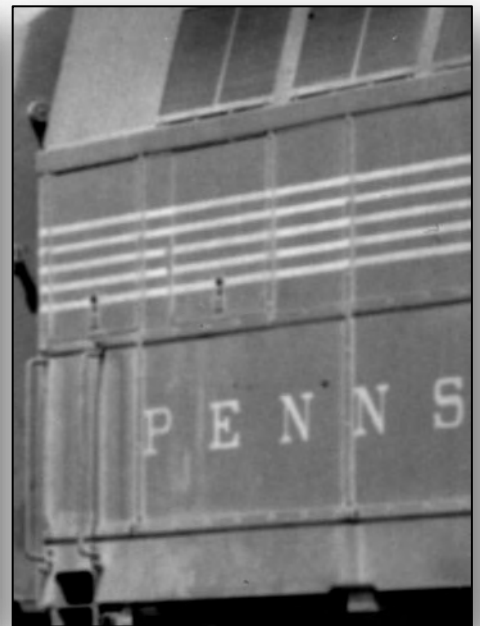
There was a small batten strip installed horizontally through the center of the intake side screen: on the A-units it was aligned with the main batten strip on the body side, however, as the B-unit screens were placed higher up on the sides, the batten on the screen was above the main side batten strip. The units on other roads had these installed as well so they are included in the models.

ACCESS DOORS AND LATCHES

All the BF-15a, 9700-9707, and early BF-16, 9708-9745 and 9594-9599 had what appear to be screw-like fasteners on the two access doors at the rear of the units above the horizontal batten strip on the engineer's side. The earlier BF-15 instead had dual latches on each of these doors and, this configuration was reintroduced on the June 1951-built 2000A-2003A, 2000B and 2002B. The subsequent units, 2004A-2027A and 2004B-20026B (even), built starting in July 1951 all had a single latch on each door. There were no similar access doors or latches on the fireman's sides of the units. The BLI units have the single latch per door configuration.

BUILDER'S PLATES

The first BF-16 units came with the distinctive five-side Baldwin Locomotive Works builder plates mounted above the fuel tanks. In the midst of BF-16 deliveries however, the results of the merger were seen as the later units had rectangular Baldwin-Lima-Hamilton plates applied. The changeover occurred during the March 1951 deliveries of the 9716A-9727A BF-2 group: 9717A had the last of the BLW plates and 9718A had the first of the BLH plates.



(Left) Right rear of 9743A illustrating the screw-type fasteners, two per access door as built on all the 9500- and 9700-series BF-16. (Middle) Rear end of BF-16 2002B, showing access doors with dual latches as applied to 2000-2003. The notch in the sill for the rear jacking pad forward of the drop steps is evident here. (Right) Access doors on 2014A showing the single latch per door configuration applied to 2004-2027.



Right side details of the BF-16 B-unit shows single latch access doors and added side screens.

FINANCING PLATES

Rectangular metal plates identifying the financing of the units under Conditional Sales Agreements were mounted behind the builder's plates along the side sills while the 15 year financing was in effect. As they only had three lines of text as opposed to four lines on the earlier Equipment Trust plates, these CSA plates were longer, but not as tall. Both sets of plates are finely printed and properly located on the models and are appropriate for the models as numbered in the 2000-series.

LIFTING PADS

There were also lifting pads under the frame just in front of the drop steps near the rear of both A- and B-units. To access these pads, notches were incorporated into the sills. The B's also had a similar set behind the front set of drop steps. The 1952 units, 2010-2027 however, did not have these notches, and neither the NYC nor B&O units had these notches, so

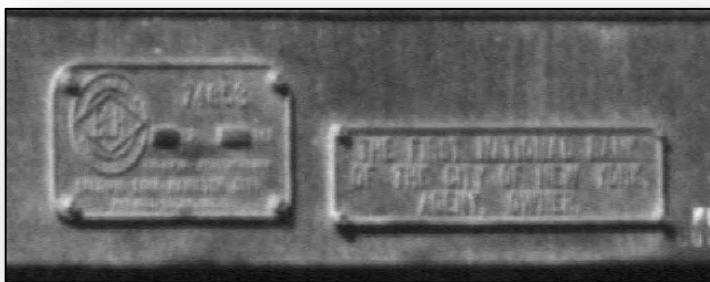
BLI chose to not incorporate them into the models. They could be added easily with a bit of judicious filing.

SQUARE END DETAILS

Overall, the configuration and details of the square ends of the units are correct on the model. These PRR BF-16 end details include top-center mounted Pyle National backup light with exposed conduit extending from the side, circular PRR electric marker lights (with red lenses), flag brackets (near the end of the stripes), roof overhang lip, lift lugs and grab irons on the doorframes, buffers, MU air hoses and brackets and passage doors with round windows. The only details missing on the model are the coupler cut levers.

HOSTLER HORN

I have never seen a photo of a PRR BF-16 with a hostler horn on the front face of the square end of the B-unit or anywhere else. This may be an indication that the B-units were not equipped with hostler controls.



▲ BF-16 9598A sill detail, fireman's side - (front to left). Rectangular BLH plate is in front of PRR CSA plate which reads: "THE FIRST NATIONAL BANK OF THE CITY OF NEW YORK, AGENT, OWNER."

► Engineer's side model view.





Rear square ends of A- and B-unit models. Correct details have been applied: thanks to BLI for adding PRR-specific electric marker lights.

DIAPHRAGMS

All indications are that at least some of the PRR BF-16 units were delivered with diaphragms between the units as were all the other cab units, including the passenger sharks, but I do not have either direct documentation or photographs to prove this is true or which units did or did not get them. In early December 1951, the PRR was asking EMD to stop equipping their cab-units with diaphragms, so it would seem logical that a similar situation occurred with Baldwin, but this is just a guess. Since the units without the coupler doors, 2000-2009 were all delivered by October 1951, it is likely they were delivered with diaphragms. It is possible that some or all of the 2010-2027 units delivered in 1952 were delivered without diaphragms. In December the PRR initiated Betterment 1102 "Cab, Rear Door and Buffer Arrangement – Modification of Walkway between Units" for BF-15a and BF-16 classes which is worded very closely to the tracing showing removal of the diaphragms on the EMD cab units. Thus removal may have begun on the early BF-16 before the final units were even delivered. Regardless, since BLI has chosen to model the units with added body side grilles, added c1952-54, if diaphragms had been factory installed, they likely were removed in the same period anyway.

ROOF

The model's roof details on the BF-16's are well rendered. They include the four bracket-style lifting "eyes", the circular exhaust stack, roof-mount filler (at rear of A-units and front of B-units), dynamic brake structure, rear vents and separate etched metal radiator screens and recessed fans (see photo next page).

TRAINPHONE ANTENNA

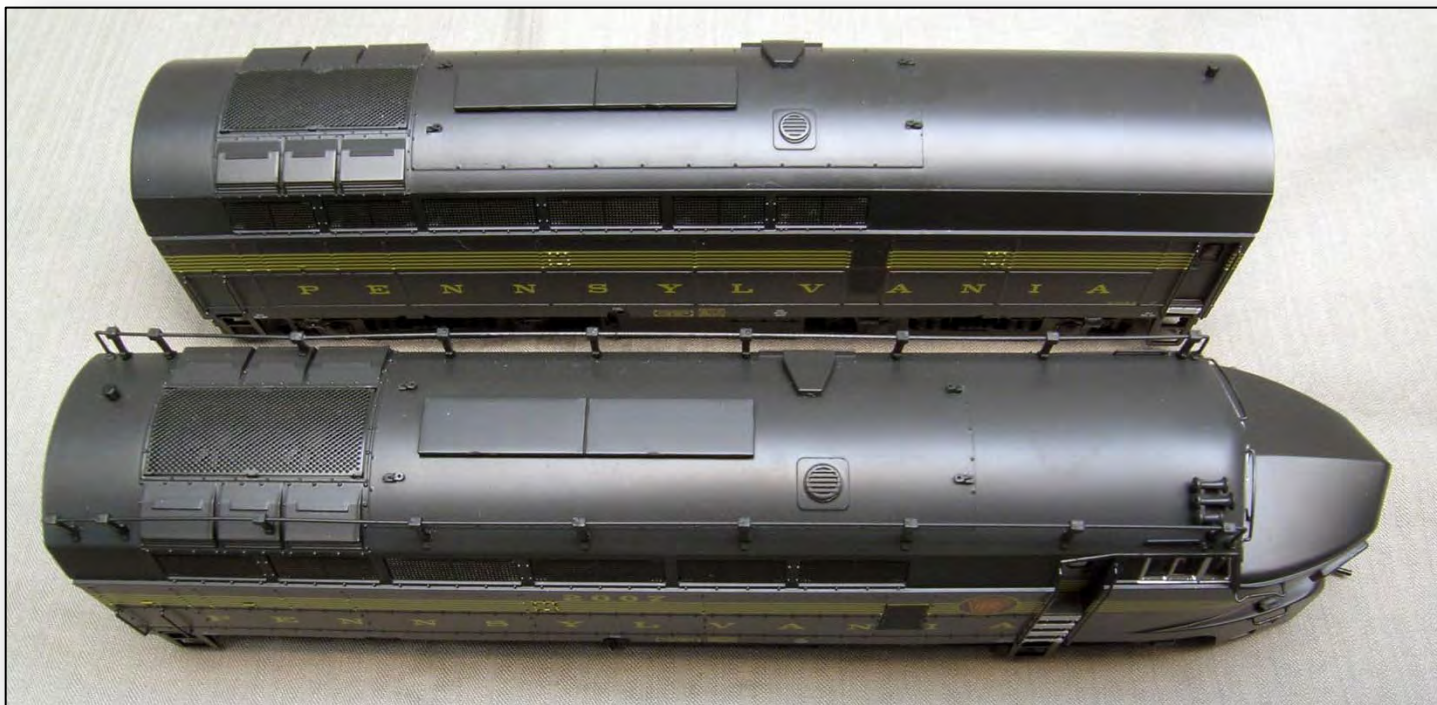
All the BF-16 A's were equipped with the distinctive PRR Trainphone transmitting and receiving equipment at the factory which employed the configuration of parallel loop structures mounted on the units' roof. The transmitting loop or "sending inductor" was on the fireman's side. The conductor from the electronics inside the car body exited the cab roof sheet through a cylindrical fitting vertically and entered the front end of the roof conduit via a 90° elbow. At the rear of the roof, the conduit similarly turned downward, and entered the carbody roof. The loop continued down through and under the carbody and down through both trucks to the rail. This part of the loop is nearly invisible except for small jumpers from the truck sideframes to the front bearing cap on the front truck and the rear cap on the rear truck. The conduit for the receiving antenna on the engineer's side was almost identical to the transmitting loop

except it was stub-ended behind the rearmost support of the nine support stanchions per side. These have been done correctly on the models.

CRANKCASE BREATHER

A modification that was added to the PRR RF16 units as well as those on other railroads was described in "BLH Green

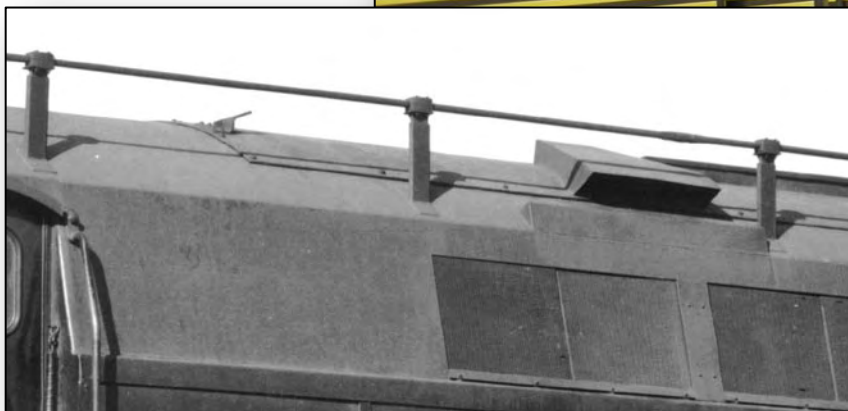
Stripe Bulletin No.188" as modification "B": "Crank Case Evacuator System". The PRR initiated Betterment 1169 in July 1953 to apply this to (all) 102 BF-16 class locomotives. Externally this added the trapezoidal vent on the roof just above the eave on the fireman's side above the first and second side screen. There was also a triangular lip mounted on the roof eave below it. These features are included on the models.



▲ Roofs of the BLI B and A units.

► Detail view of side, roof and truck details of BF-16 A-unit.

▼ BF-16 9598A showing side screens, crank case breather vent and lip, roof lift eye and trainphone stanchion support details, 1964.



RUNNING GEAR AND UNDERBODY DETAIL

The underbody details and trucks are well done on the models. This includes the bell, fuel tank, fuel filler and fuel gauge details. The trucks have the correct style axle bearing caps, 9'-10" axle spacing and 42" diameter wheels.

SPEED INDICATORS

All 72 BF-16 A-units were built with Barco speed indicators. The axle drive unit for these devices was mounted on the bearing cover of the front axle of the front truck (axle #1) on the engineer's side of the locomotive. This detail is not included on the models.

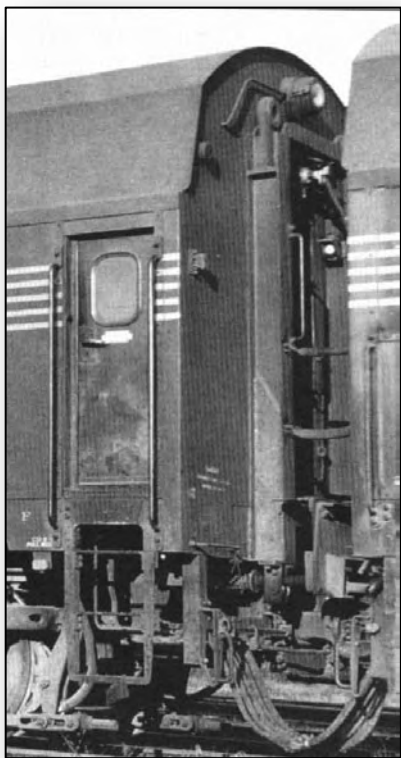
SPEED CONTROL

A system-wide program was authorized in February 1951 to equip 321 passenger locomotives, steam, electric and diesel, with speed control by the spring of 1953. As a result, the 1952 A-units, 2010A-2027A, had a three-speed control apparatus installed. Externally visible hardware for this apparatus was the Automatic Train Speed Control direct acting speed governor, its output conduit and a small plug connector box under the sill. This Union Switch & Signal Co. device was a large rectangular box mounted on the end of the rear axle of the front truck on the fireman's side (see photo of #2025 on page 14). With the models being numbered in the earlier 1951 series, 2000A-2009A, this detail was not applied.

PAINTING AND LETTERING

The freight sharks were the only freight units to have the 5-stripe scheme applied which included the 20 $\frac{3}{4}$ " monogram keystone inside the buff circle, interrupting the stripes just behind the cab door on the A-units. Since this scheme was otherwise only used on passenger service locomotives, in this application to freight units the striping and lettering was specified as being done in Buff color. Other than the Buff color, the tracings for the BF-16 show that they received pretty much the standard incarnation of the 5-stripe scheme as-built. The units were delivered with the numbered nose keystones and the 5" white numberboard numbers, which were the current standard when these units were constructed.

The 5-stripes were originally applied over the length of the units making for an uninterrupted streamlined appearance, except for the encircled side keystone, and where they were not painted across the recessed rear side door on the Fireman's side of the A's and B's nor the recessed front body side door on the engineer's side on the B-units. The stripes were however, painted across the recessed A-unit cab doors as well as the sides of recesses adjacent to the doors. Maybe the PRR was trying to avoid the problems they had experienced on other locomotives earlier when painting stripes across glass, because unlike the cab doors, the windows in the body doors were directly in line with the



(Left) Front of BF-16 2004B, 11/59, showing how the stripes were not carried across the body-side doors and their windows. Visible on the end are the backup light with conduit, roof overhang lip, lifting lugs, flag bracket, PRR marker light, buffer and the safety chains connecting the units that replaced the diaphragms as part of the "walkway modifications". (Middle) View of BF-16 2007A's left side screen showing the stripes and "E" were painted across the screen, but they were barely visible, 1955. (Right) View of BF-16 2014A illustrates how the stripes disappeared over the side screen as well as how the stripes were painted across the cab door and sides of the recess into which it was set.

stripes. The stripes ended at the rear end of the sides, but did not wrap around the ends at all. This was true at both the front and rear of the B-units

When the side ventilation screens were added, it appears that the stripes were painted across the screens at least on some units, but due to the openness of the mesh, they are mostly invisible. On the A-units the top stripe remained intact as it was just above the screen, but the higher placement of the screens on the B-units interrupted all five stripes. On the fireman's side on the A-units, the "E" in the roadname fell on top of the screen and was simply painted on the screen, but without any added backing the letter was only partially visible. These effects were approximated on the models where the "E" is printed over the etched metal screen, but the stripes were not.

Changes to the freight shark scheme included specification of the new monogram (intertwined "PRR") keystone on the nose as of June, 1953 and the conversion to the typical freight unit single stripe scheme, issued September 1952. Although the nose keystone change was generally implemented fairly promptly, the earliest confirmed dated photo of a single stripe Shark I have seen is from 1953, and some units remained in 5-stripes much longer, some even until they were retired.

As is always the case with PRR locomotive models, the fidelity of the Dark Green Locomotive Enamel and Buff colors is always debated. My personal impression of these models is

that, as is typical with most PRR diesel models, the green is not close enough to black and the Buff is a bit too yellow. Please note that the bright lights used when I photographed the models makes them appear greener than under normal layout lighting. The decoration on the models follows the as-delivered scheme well as to color separation between the dark green body and black underframe equipment colors and the size, location, colors and use of the correct PRR fonts for the various components of the scheme. The one shortcoming I noted is that the stripes are not applied to the sides of the cab door recesses on the A-units.

CONCLUSION

As described above, with the changes that the prototypes underwent over time, the out-of-the-box models cannot possibly be correct for all possible modeling periods, particularly as over the years they were painted in the 5-stripe scheme. BLI configured the models to represent units that would have been in service circa 1953-1954. Overall, I would rate these as very nice models. BLI deserves credit for going the distance to get the official Baldwin drawings to get the distinctive nose and body contours correct as well as for applying all the PRR-specific details. The models have only minor flaws as noted above, but *The Keystone Modeler* should be able to make these a more accurate addition to their model roster with a bit of work (this is a *modeling* magazine, after all). BLI has already announced the next run of these models that will be decorated in the single-stripe scheme.



PRR Dennison, Ohio Oil House

By Ed Swain



A three quarter view of the finished oil house adjacent to the turntable.

In 1905, the Pennsylvania Railroad built a new engine servicing facility in Dennison, Ohio. A new oil house was part of that facility. An article on the Dennison shops and yards will be in a future issue of the *Keystone*. The PRRT&HS archives in Lewistown, Pa. has an extensive collection of drawings of the Dennison facilities. Drawings of the oil house are part of that collection and I used them to build my model.

The oil house was 21'-5" x 81'-9" overall. It was brick construction, had a steel truss roof support, and a Ludowici tile roof. Ground level included a 32' x 22' store room and a 50' x 22' locker room. The basement was 60' x 30' and held six large tanks, each on three steel supports. The tanks were 3'-9" radius and about 20' long. The rear wall was recessed below ground level and had six windows to provide natural light in the basement. On the front of the oil house was a concrete apron with filling boxes for each of the tanks. The basement extended under the apron.

A full size model would not fit in the space available on my layout. As a result, I shortened the length to 60'. I also

could not include the recessed rear wall and windows or the concrete apron. Otherwise the model closely follows the drawings.

To represent the thick masonry walls and recessed windows, I cut the sides, ends and firewall out of 1/8" basswood. When laying out the sides and ends, be sure to allow for the gutter that sits on top of the side walls, just below the lip of the tile roof. I cut a notch in each corner of the ends and firewall for the stone corbels. I cut a floor to fit inside the walls, and assembled the sides, ends and floor. The firewall was cut to fit between the sides and sit on top of the floor. I painted the floor concrete and the walls in the locker room a light green. Since the store room would not be visible I painted the walls black.

Styrene sheet, painted concrete, was glued around the base of the walls to represent the poured concrete foundation. Micro-Mark® makes adhesive backed textured building papers. I used #84730 Aged Factory Brick and #84732 Aged Factory Brick Details to represent the brick walls. I wrapped the

walls with the brick paper, aligning the joints where they would be hidden by the downspouts. The sheet of details provided the course of brick below the windows, the courses of brick under the gutter, and the arch over the round end windows. After completing the brick, I cut and shaped the stone corbels out of 1/8" basswood. Then I painted them a concrete color and glued them into the notches.

I painted Tichy windows black and installed them flush with the inside of the walls. The cast iron lintels and sills were represented by thin pieces of styrene painted black. The door to the locker room, with the frosted glass window was built up from styrene strips. I painted them brown. The rollup door to the store room was represented by a styrene frame and corrugated sheet painted brown. There are cast iron door jamb guards on the sides of both doors, represented by a piece of styrene.

Next are the large copper gutters, made from a piece of angle with a strip glued to one side at a slight angle. The resulting cross section looks an angled stirrup step. These are painted to represent aged green copper and glued on top the sides.

Before proceeding with the roof, I put wood blocks painted grey in the locker room to represent the lockers. I installed the supply room door partially open so I added some barrels and other details that can be seen under the door. For the roof, I glued strips along the inside of the ends and both sides of the firewall to hold a sub-roof. A ridgepole and supports along the sides behind the gutters completes the support for the sub-roof. These should be installed so that the top of the sub-roof is flush with the top of the gutter. This way, the tile roof can slightly overhang the gutter. The insides of the ends and both sides of the firewall, where they will show above the roof, are painted concrete. A friend has a mold for a tile roof, and I used a couple of castings to represent the Ludowici tile. The roof was painted terracotta.

The caps on the end walls and firewall were made from basswood and painted concrete. The stove pipes are from the parts box. I used white glue and black paint to make a pitch to seal around the pipes. Finally, the downspouts were made from rod and painted to match the gutters. According to the drawings, the gutters go into the ground sewer system.

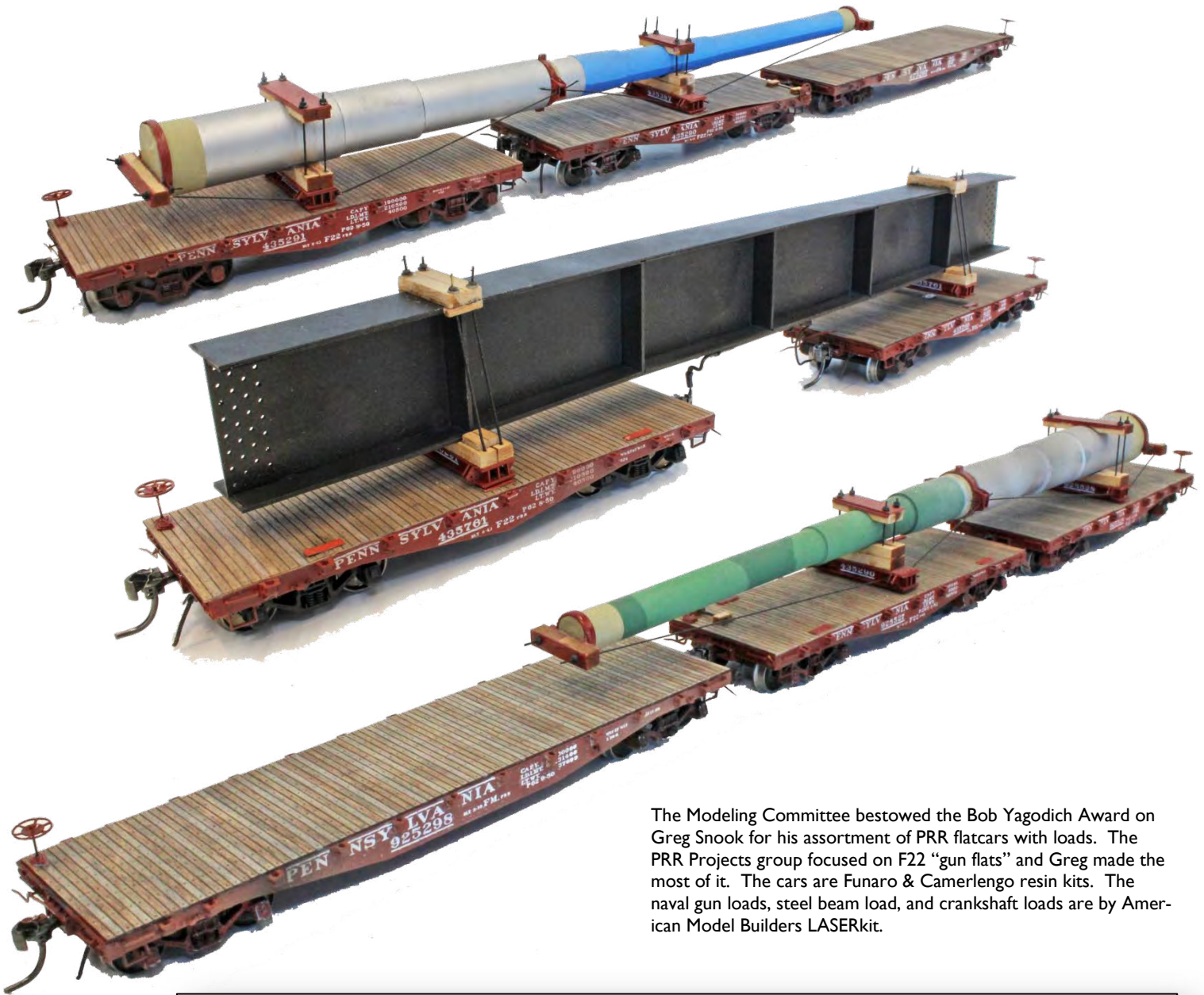


A lower view showing the doors and windows.



2015 Annual Meeting Models – Part 1

By The TKM Staff



The Modeling Committee bestowed the Bob Yagodich Award on Greg Snook for his assortment of PRR flatcars with loads. The PRR Projects group focused on F22 "gun flats" and Greg made the most of it. The cars are Funaro & Camerlengo resin kits. The naval gun loads, steel beam load, and crankshaft loads are by American Model Builders LASERkit.





George Pierson's diorama of Port Royal, Pa. on the Middle Division in 1920 was voted Best-in-Show. The display is a portable version of George's larger HO layout. The buildings are all scratchbuilt and kitbuilt to plans from photos and remaining physical evidence. Search "Tuscarora Valley RR narrow gauge PRR layout" on YouTube for video coverage of George's layout.



► Keith Thompson, an S-scale modeler known for his expert modeling with resin, has turned his skills toward 3D printing. He designed Sn3 East Broad Top scale test car #30 with CAD software, including the railing, and had it printed by Model Shapeways. The wheels are by Northwest Short Line. Couplers are HO-scale.



▼ Tim Garner decided to upgrade his HO-scale PRR wreck train with a 120-ton derrick. He assembled the challenging Tichy kit and decorated it with Mt. Vernon Shops decals by John Frantz. Tim used Kadee Andrews trucks and #58 "scale" couplers. The rubber air hoses are by Hi-Tech Details.



Here is Jim Hunter's brass N5B in the Iron Horse series by Precision Scale Models. Jim indicated the box said N5A, but the model was easily converted to an N5B. He added markers and decorated it for 1950-1951 using Scalecoat II and Middle Division decals. The chain was used to allow crews to uncouple the cabin car from pushers on the fly.



Quality Craft Models issued a difficult N5C cabin car kit in 1978. It featured flat etched brass walls and soft metal castings. It was later issued by Gloor Craft. Jim Hunter and Kris Kollar both displayed their successful efforts to turn the kit into a great model. ▲ Jim added trucks, couplers, window glazing, grab irons, markers, Trainphone, and air hoses. He decorated the model with Scalecoat II paint and Champ decals. ▼ Kris added the same details including scratchbuilt soldered end ladders. The lettering on the brake reservoir is nicely done.





◀ Dave Pfeiffer and ▼ Tim Garner both took a whack at Funero & Camerlengo's ND cabin car kit. Both used Floquil paints and the decals supplied with the kit. Both added brake hoses, couplers, and wheels. Tim added Cal-Scale brass markers. According to Tim, Dave did a nicer job.



Josh Surkoskey showed this kitbuilt model of a N5C cabin car with Trainphone in N-scale. It features the shadow keystone scheme introduced by the PRR in the mid-1950s.



Chris Lepore displayed this impressive model of an F35 depressed center flat car in 1:20 scale as it looked in the early 1940's. Chris assembled this from a GAL Line laser-cut plastic kit. He added brass steps and grab irons, widened the deck, and added end-frame details to the trucks. He used Scalecoat paint and Stan Cedarleaf decals.



▲ Neil Campbell kitbashed this HO-scale X41b boxcar from the 1947-1952 era using two CB&T bodies, Branchline end and ladder detail, Intermountain roofwalk, Tangent trucks, wire grabs, strip styrene, and Life-Like doors. He used Polyscale and Krylon paint with Champ decals.

◀ Neil also built this Funero & Camerlengo G28 kit. He used Floquil paint for the car and Krylon and Floquil paint sticks for the decking. He used Mt. Vernon Shops decals.





Neil Campbell displayed this HO-scale Bowser X31A boxcar with upgraded details including wire grabs for the ladder rungs. He repainted it with Floquil paint, lettered with Speedwitch Media decals, and weathered with powders and paint washes.



Dave Pfeiffer built this HO-scale X26C kit by Funaro & Camerlengo. He replaced the running board with an etched one by Plano. He used Floquil paint, Gerald Glow decals, and airbrush weathering.



We can always count on Claus Schlund to display N-scale models that make us larger scale guys go, "How did he do that so small?" These two GLA hoppers started as Bowser models. He backdated them with Archbar trucks, added body-mount couplers, weathering with dry brush Floquil and chalk, and a coating of real coal on the plastic insert.

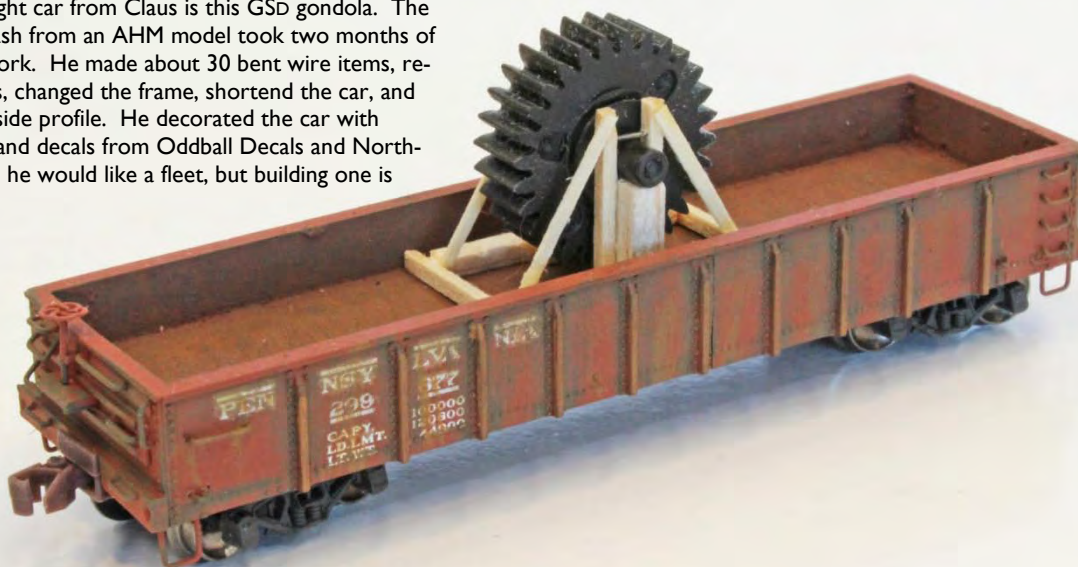


Here Claus has modeled a G24 gondola with a galvanized wire load. He made 96 individual coils of speaker wire strands to fill this N-scale car. He also changed the trucks and couplers on this ready-to-run car and weathered it with watercolor dry paint cakes wetted with isopropyl alcohol and Floquil rust.



This N-scale Claus creation is a GLD hopper from the 1920's. He changed the trucks, added an air line, new paint, and decal segments from Mt. Vernon Shops and Northeast Decals. Since this is a small PRR class, Claus said he'll only need one.

A final N freight car from Claus is this GSD gondola. The “major” kitbash from an AHM model took two months of spare time work. He made about 30 bent wire items, re-built the ends, changed the frame, shortened the car, and changed the side profile. He decorated the car with Floquil paint and decals from Oddball Decals and North-east. He said he would like a fleet, but building one is enough.



Fred Monsimer built this hard-to-find HO-scale Eastern Car Works F38 flat car kit for its 1956 appearance. He added deck plating, partial brake piping, grab irons, and new brake wheels. He make the brake stands and stirrup steps. The car will be weathered after he completes a nuclear reactor load.



Gus Foster showed us two of the new HO-scale Funaro & Camerlengo K8 stock car kits decorated with the shadow keystone scheme of the 1950's. He supplied trucks and couplers and added door latches and air hoses. He painted the cars with Floquil and weathered with Bragdon powders.

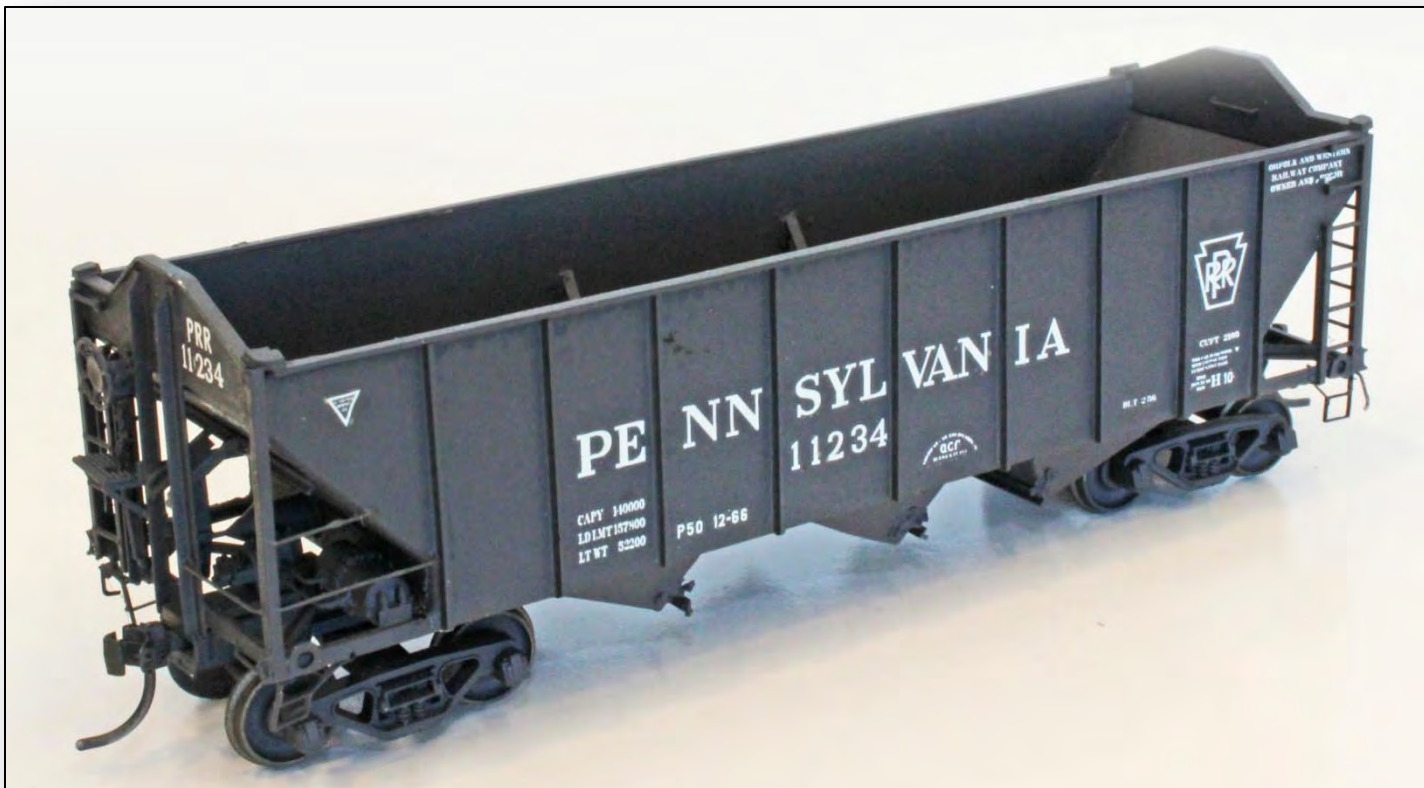
Keith Thompson built one of the best-looking FM flat cars we've seen in S-scale. He designed the car in his computer with 3D CAD software and had Model Shapeways print it 3D. He added trucks, couplers, and wood deck. Paint is Scalecoat.



This F23 flat is another 3D-printed car in S-scale by Keith. He added trucks, couplers, and a brake wheel. He made the deck from styrene with decal rivets. The paint is Scalecoat and decals are from John Frantz's Mt. Vernon Shops.



Keith was very productive during a brutal New Hampshire winter. His third 3D-printed flatcar from his own plans is an F22 gun flat. It also has Scalecoat paint and Mt. Vernon Shops decals. The gun flats were a PRRPro project and Keith generously scaled his plans for N-scale so the small scale guys could order frames from Model Shapeways, too.



John Teichmoeller, whose book on modeling PRR hoppers is a treasured resource for countless PRR modelers, displayed this H10 triple hopper. John indicated these are not the same as the 2,000 H2A cars the PRR leased from the Norfolk & Western for 10 years, but they are similar. A main difference is the dual angled slope sheets that also appeared in PRR's later H39 and H43 triple hoppers, reputedly copied from N&W plans. John built this car from an out-of-production HO-scale RailRoad Progress craftsman kit. He used Stewart 70-ton ASF Ride Control trucks, Mt. Vernon Shops decals, and other decals.



After years of tolerating two off-the-shelf HO-scale Athearn 34-foot ribbed hoppers on his layout, Tim Garner decided to turn them into a better-looking H31 hoppers. He replaced all the cast-on grabs and steps with Evergreen styrene rod and A-Line stirrup steps. He used Hi-Tech Details brake hoses and brackets, Tichy brake wheel, scratchbuilt slope sheet braces, wire brake lines, and cut levers. Trucks are Kadee. Paint is Floquil and decals are Champ.



Doug Nelson, who authored the great book on Phil Hasting's PRR photography, is a talented N-scale modeler. He displayed a nicely weathered sample of the ready-to-run Broadway Limited Imports H32 covered hopper.



Doug also showed off a weathered H30 by Fox Valley Models in N-scale.

It may not look N-scale, but it is. Josh Surkosky displayed this heavily weathered G31b. Tom Mann weathered the model with sprayed rust-colored paint, alcohol, Burnt Sienna oil paint, and chalks to get this effect.





Josh built these G22B models from out-of-production TrainCat etched brass kits with NZT Products DB4 containers. He painted the cars with Floquil paint and decals from TrainCat. He used Windsor & Newton water-based oil paint washes, fade sprays, and powders. By the way, these are N-scale.



Josh built this FD2 from a kit from N-Scale Kits. He added wire tie-downs and Shapeways trucks. He had to grind down both the lower and upper decks to scale. Paint, decals, and couplers are coming.



Josh created the F25 and F25A from SPF Design (Allen Eck) etched brass kits. He made all the grab irons. He used Floquil paint and Allen Eck decals. He weathered the cars with washes and powders. He used Bowser Crown trucks on one car and MTL Andrews trucks on the other. Josh indicates the Bowser truck is more accurate, but the MTL truck has crisper detail.



J. M. Johnson displayed this 1952 local freight train in HO-scale. It's a mix of kit, scratch, and kitbashed equipment. He's added separate ladders, grabs, marker lamps, and other details.



Matthew Hurst showed us the rear of a 1946-1947 freight train with a Bowser N5C cabin car, a kitbashed Accurail H31B composite hopper, a superdetailed Ambroid X41A boxcar, and a superdetailed Ambroid X23 boxcar. Matthew made extensive modifications to the kits including adding an equipment box, markers, and full underbody detail to the cabin car.

