

No. 94 Autumn 2015

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Pennsylvania Railroad Technical & Historical Society





Pennsylvania Railroad Technical & Historical Society

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#### FRONT COVER, CLOCKWISE FROM TOP

The HO-scale Bowser RS-12 with Trainphone – PRR Class BS-12ams. (*Tim Garner*) A weathered Bowser H30 covered hopper by Greg Martin. (*Greg Martin*) Dave Messer's completed Funaro & Camerlengo X42 mail storage car. (*Dave Messer*) One of Simon DuHamel's two No. I gauge PRR G29 gondolas. (*Simon DuHamel*)

#### **The Keystone Modeler**

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It's fall again and time to get back to the layout. As much as I enjoy building models, such as the beautiful prototype representations by Funaro and Camerlengo, it is time for me to work on track and scenery. Not everyone who builds models (or simply collects models) has a layout, and not everyone who has a layout cares deeply about exact scale models. But I like both, so I have to pause in my model-building for the winter.

In *Great Model Railroads 2016,* there is a wonderful East Broad Top model railroad built and operated by Pete and Jane Clarke. It has fall scenery and scratch-built structures. Pennsy modelers naturally find this little coalhauling road of great interest, as it fed its loads to the PRR.

There is a Pennsy-themed model railroad in the November *Railroad Model Craftsman*. The West Valley Union Railroad was designed by using a computer program and Michael Wolf has beautifully executed his two-level, fictitious portion of the Pennsylvania. This layout also has fall scenery.

We have had some layout articles and pictures in *TKM*, but I would like to publish more. The main problem is that no one is sending me layout articles. I love models, but I also enjoy layouts. Consider sending me a description of your layout or the layout of a friend (with pictures of course), and I will be happy to think about putting it in *TKM*.

We hope you will enjoy the variety of articles in this edition of *TKM*. Tim Garner reviews the Bowser RS-12, Greg Martin has suggestions in case you don't know how you want to weather your H30, Dave Messer discusses his X42 express box car, and Simon DuHamel shows us his 1gauge G29, Finally, there are also some more photos from the model room at last year's Annual Meeting.

Jim Hunter, Editor

#### 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 – <u>www.prrths.com</u>. 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 <u>www.prrths.com</u>, 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:

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#### With Steve Hoxie

## **PRR Product News**

BACHMANN TRAINS http://www.bachmanntrains.com/home-usa/index.php PRR K4s 4-6-2 Steam Locomotive – N Scale



(Bachmann Trains)

Most N scalers know this by now, but since our last edition **Bachmann** has brought to market an N scale K4 based on the venerable HO model. The N scale version includes a Soundtraxx Sound-Value sound decoder. Both pre-war and post-war versions are offered, each with two different engine numbers.

#### BOWSER MANUFACTURING http://www.bowser-trains.com/

PRR N5c Cabin – N Scale



**Bowser** is planning to produce another run of their N scale N5c, but this time there will be seven different versions, including three with the trainphone system appliances. Models will include Fox Valley wheels and body mounted couplers. Three different road numbers will be offered in each version. Availability is expected in July 2016.

#### THE BRASS CABOOSE

http://stores.ebay.com/thebrasscaboose PRR Decals – G, O, S, HO Scales

This new producer is offering decals for a variety of roads, including PRR. Additional decals are being offered each month.

#### **BROADWAY LIMITED IMPORTS**

http://www.broadway-limited.com/ PRR Alco PA1/PB1 Diesel Locomotive – N Scale



(BLI)

**BLI's** latest run of these popular Alco passenger diesels will be decorated in Tuscan Red with five pin stripes. They will be sold as a powered A/dummy B pair as well as separate powered A unit and powered B unit. Powered units will have Paragon2 sound installed. Delivery is planned for May 2016.

#### PRR L1s Steam Locomotive – HO Scale



Both versions of **BLI**'s newest PRR locomotive are in stores in November. Look for a review in a future issue of *TKM*.

#### PRR M1A/B Steam Locomotive - N Scale

**BLI** is now listing January 2016 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. The delivery date has been adjusted to March 2016.

#### EASTERN SEABOARD MODELS

#### http://www.esmc.com

PRR F49 Deep Well Car – N Scale

-

(ESM) ESM is producing this unique car for N scale in plastic and

#### MICHAEL'S MODEL RAILROAD AND PARTS

http://www.shapeways.com/shops/mmrrp?sort=newest PRR B60B Baggage Car – N Scale

diecast metal. It is scheduled to be available in January 2016.



(Michael's)

**Michael's** is among those adapting to current 3D printing technology and making it work for us. He has the B60B in four versions, three shown finished here, assembled from his available parts and trucks.

#### PRR PB70 Combine



(Michael's)

**Michael's** also has parts available to assemble five versions of the PB70, three shown here. In addition to these headend cars, several P70 versions are actively being worked on. Keep checking the website for availability.

#### MOUNT VERNON SHOPS

http://www.mountvernonshops.com/

PRR GLA and H21 Hopper Car Shadow Keystone Decals – HO Scale

**John Frantz** has available decals for these two hopper classes in the shadow keystone scheme.

TANGENT SCALE MODELS http://www.tangentscalemodels.com/ PRR G31B Gondola – HO Scale



<sup>(</sup>Tangent)

Although we don't usually list reruns of existing models, the **Tangent** G31B gondolas are such good models that announcement of their welcome return to the market is warranted. Three lettering styles are offered: "Original 1951+," "Early Shadow Keystone 1957+," and "Plain Keystone 1962+." Six road numbers in each style are available.

## **Upcoming Events**

December 5- 6 Marlborough, Massachusetts New England Model Train EXPO http://www.hubdiv.org/fallshow/index.htm

January 7- 9, 2016 Cocoa Beach, Florida Prototype Rails Prototype Modeling Meet http://www.prototyperails.com/

January 30-31, 2016 - West Springfield, Massachusetts Amherst Railway Society Railroad Hobby Show http://www.railroadhobbyshow.com/

February 6- 7, 2016 - Timonium, Maryland Great Scale Model Train Show http://www.gsmts.com/

March 18-20, 2016 Malvern, Pennsylvania Railroad Prototype Modelers Valley Forge Meet http://rpmvalleyforge.com/

## **Advance Planning**

May 19-21, 2016 Camp Hill, Pennsylvania PRR&THS Annual Meeting http://pennsyrr.com/index.php/home

June 3-4, 2016 – Enfield, Connecticut New England/Northeast RPM Meet http://www.neprototypemeet.com/Welcome.html July 3-10, 2016 Indianapolis, Indiana NMRA National Convention and National Train Show http://www.nmra2016.org/



# **Simple T1 Tender Modification**



Broadway Limited Imports' great model of the as-built T1 duplex (see review in Spring 2013 *TKM*) features the full streamlined cowl on the tender. On the prototype, sections of the cowl could be moved to provide access to the water hatches for servicing.

Before the cowling was entirely removed from the top of the tender water cistern (when the front-end was redesigned), PRR removed sections over the water hatches to speed engine servicing on many of the T1 locomotives. I decided to model this modification visible in many period photos – particularly shot taken on the Ft. Wayne Division.

It was easy to remove that section of the tender body by slowly running an Xacto #11 blade over the hatch outline multiple times until the panel could be snapped out. I then carefully thinned the underside of the curved cowl to make the edges look more like sheet steel. With a little light file work and dab of paint, I got what you see here.



Tim Garner

# **Product Review: Bowser PRR Baldwin RS-12 (BS-12ams) in HO-Scale**

By Tim Garner – photos by the author unless noted



While there are detail inaccuracies mostly dating to the original Stewart tooling and Kato drive, Bowser has created a nice representation of a oneof-a-kind prototype. This is the right or engineman's side of the unit.

One of Bowser's newest offerings is a ready-to-run Executive Line sound-equipped Baldwin-Lima-Hamilton RS-12. This model is decorated and detailed as PRR BS-12ams #8776. The core of this model was originally released by Stewart as a simple DCC-ready kit. The new model has additional details, such as Trainphone, upgraded painting, and ESU Lok Sound.

#### THE PROTOTYPE

In 1950, Baldwin prepared to compete with EMD, Alco, and Fairbanks-Morse with improvements to its diesel prime movers. In the process, its 606SC engine was upgraded to 1325 hp and renamed the 606A. In its catalogs, the engine was rated at 1200 hp supposedly to coincide with the ratings of its competitors. Baldwin's 1950 line was announced that June. The 606A would be used in Baldwin's new S-12 1200 hp endcab switcher and the RS-12 1200 hp light road switcher. (The old 608SC engine was upgraded to 1750 hp, called 608A, rated at 1600 hp and used in the RF-16 freight sharks at the same time.)

Baldwin offered a full list of options on the RS-12 including Vapor and Elesco steam generators, Farr air filters, single or dual controls, dynamic brakes, plain bearing trucks or roller bearings (by Timken, Hyatt, or SKF), hump control, flange oilers, and a water-cooled air compressor by Gardner-Denver.

In all, 50 units were built before production ceased and it was one of the few Baldwin models of which PRR was not the biggest customer. New York Central bought 17; Seaboard Air Line 10; PRR, 8; Kaiser Bauxite Co., 4; Jersey Central, 4; Durham & Southern, 3; Milwaukee Road, 2; and McCloud River, 2. The Kaiser Bauxite and McCloud River units had dynamic brakes. One of the McCloud River units is preserved. The NYC order was actually a replacement for the Lima-Hamilton LRS 1200 units the road had ordered. When Baldwin and Lima-Hamilton merged (becoming Baldwin Lima Hamilton), they decided to consolidate all production at Eddystone, Pa. and convinced NYC to accept the RS-12 as a substitute.

PRR received the first production RS-12 in April 1951. The unit, #8975, was equipped with Trainphone, plain bearings, and a Vapor OK-4616 steam generator. It was initially classed as BS-12s (which implied it was an S-12 switcher with steam) and was sent to Cleveland for switching and to feed steam to coaches at the station prior to departure. Like most PRR road switchers, all RS-12 locomotives operated longhood forward. The top speed was 60 mph for all PRR classes.

In September of 1952, #8776 was completed and sent to Baltimore. This unit came with Trainphone, Timken roller bearings, a Vapor OK-4616 steam generator, and MU connections – the only PRR unit with all four. It was first classed as BS-12ms. PRR reclassified both units in February 1954 with #8975 becoming BS-12as and #8776 becoming BS-12ams. The #8776 spent much of its career hauling two or three P70 coaches in local commuter service between Parkton and Baltimore, Md. until the end of the local on June 27, 1959.

PRR's last order of RS-12 units arrived in February 1954. Units 8105-8109 were classed BS-12am and sent to the Northern Division. They had plain bearings and MU connections. Unit #8110 was classed BS-12ams and sent to Philadelphia. It had a Vapor OK-4625 steam generator, MU connections, and plain bearings. All the units in this order had a tall short hood (to the top of the cab) and three-bell horns. The #8110 was typically used during Army-Navy football games to keeps the trains warm.



Here is BS-12ams #8776, the prototype for Bowser's model in Baltimore, January of 1960. It was PRR's second RS-12 delivered in September of 1952. Note the roller bearing trucks, train control box on the left walkway, the break in the Trainphone antenna in front of the cab, the multipleunit connections on the ends, and the number and position of the louvered vents. (*Martin S. Zak, Tim Garner collection*)



The only other PRR RS-12 with Trainphone equipment is the 8975 shown here in Pemberton, New Jersey in 1962. This unit has plain bearing trucks and no MU connections. The break in the Trainphone antenna does not appear to have cable connections as on the 8776. This was PRR's first RS-12 delivered April 3, 1951. (*Ken Douglas, William D. Volkmer collection*)



PRR's final order of six RS-12 units featured plain bearings, a high short hood, and larger numberboards. Originally numbered 8108, this unit is sitting at Conway Yard on December 12, 1969 under Penn Central ownership. (Ken Douglas, William D. Volkmer collection)



In 1966 and 1967, the locomotives were renumbered 8084-8091 in preparation for the Penn Central merger and reclassified BRS-12 (8086-8091), BRS-12s (8085-8086), or BRS-12sx (8084). The former #8776 (8086) was retired in October 1967. The former #8075 (8085) was retired in December 1970 after the Penn Central merger.

The #8776 had a six-cylinder engine with a 625 rpm governed speed. Wheels were 42" in diameter with 6.5" x 12" journals and Timken roller bearings. The length of the unit was 42'-1" with 32'-3" truck centers, and 9'-10" wheelbase trucks. There were four Westinghouse 362-DF traction motors driven by a Westinghouse 480 generator.

The weight on rail was 243,000 lbs with a starting tractive effort of 60,750 lbs at 25% adhesion. The maximum speed was

60 mph with a speed of 11.4 mph at maximum tractive force. The fuel tank held 1,000 gallons. Heating water capacity was 900 gals, engine cooling water capacity was 250 gals, and lubricating oil was 170 gals.

#### DETAILS ON THE MODEL

With this model, Bowser has chosen to model a one-of-akind locomotive – BS-12ams #8776. As stated above, this was the only PRR RS-12 that had the combination of Trainphone, Timken roller bearing trucks, steam generator, and MU connections. When comparing photos of the prototype with the model, the first impression is that Bowser got it close, but not exact. You'll need to decide if it is close enough for you or if you want to make any modifications.



End views of the Bowser model. The poling pockets are accurate for a BS-10 (Baldwin DRS-4-4-1000), but not the RS-12. They could be carefully removed with a chisel-blade hobby knife.



Here is the left or fireman's side of the unit. The prototype had a train control box on the walkway.

Part of the reason for the accuracy issues is the roots of this model in the marketplace. It was originally introduced by Stewart in 1993. Stewart advertised it as a DRS-4-4-1000/RS-12 suggesting it could be used as either prototype. Quoting from an August 1993 review in *Model Railroader*:

"Since the two prototypes were so similar in appearance and because Baldwin built just about everything to customer specifications, the Stewart HO model is a generic freight locomotive with typical details. The specific railroad variations are left to the superdetailers."

The DRS-4-4-1000 preceded the RS-12 in Baldwin's catalog. It was introduced in 1947 to compete against Alco's RS-1. Only 22 were built – 9 for PRR (#5591-5596), 3 for the Tennessee Central, and 13 for Canadian Pacific for service on Vancouver Island. However, most of the same inaccuracies apply to both prototypes.



The horn and Trainphone receiver coil are brass castings. There should be a break in the antenna conduit above the rooftop grab iron. The exhaust stack should be taller. In front of the cab are bolt castings for a grab iron ladder which was apparently never installed in this location on the prototype.



A view of the chassis shows some of the underside details. The truck wheelbase is a scale 10" too short. The pipe-like structures on either side of the fuel tank are for screws that hold the unit to the packaging for shipment.

The accuracy of the trucks is the biggest challenge. The AAR-style trucks for both prototypes had a wheelbase of 9'-10". The model truck has a wheelbase of 9'-0". *Model Rail-roader* pointed that out in their review. It is noticeable. The AAR truck prototype closest to that size that I can find is 9'-4". However, the EMD Blomberg B truck does have a 9'-0" wheelbase. I speculate Stewart/Kato used the same truck mechanism/gear tower as used for their line of EMD F-unit drives to avoid the cost of new tooling. Only new sideframes

had to be designed. Bowser did not make a change to the existing tooling. I don't know if accurate replacement trucks that fit this mechanism are available anywhere.

The other issue is that the style of roller bearings used on the model isn't correct for this locomotive. Engine #8776 had round Timken caps held in place by six bolts. The model has simulated rotating ends. The modeler could improve the appearance with round pieces of thin styrene.



The most noticeable discrepancy was the lack of a train control equipment box (and a walkway to cover it) on the left side in front of the cab. This can easily be remedied with a Detail Associates 3-strap signal box (#229-2305) and some sheet styrene to extend the walkway.

On the long hood on both sides the model is missing one set of louvers (10 instead of 11) above the handrail (applies to the BS-10 as well), and both sets above the train control box below the handrail on the left side. The door and louver arrangement does not match on the short hood on both sides. Archer, known for their decals with rivets, also makes HOscale louvers among their line of surface details. These can remedy any louver inaccuracies. The exhaust stack is in the right place, but is too short. This could be addressed by making a replacement from styrene tubing turned to the proper profile.

The metallic gold lettering should be buff-colored. The PENNSYLVANIA appears to be the correct height, but is slightly out of position horizontally. It's not that noticeable, though. The cab numbers are a little too far apart and a little too close to the cab window. The "Fire Extinguisher" lettering on the left side of the long hood is on the wrong hood door, in the wrong color (gold instead of white), and is missing a word ("Inside"). The "Danger 600 Volts" is missing. A simulation of the Baldwin Lima Hamilton builders plate is in the correct spot, but the equipment trust plate on the box in front of the cab has been left off. This locomotive, and all the other PRR RS-12 engines, had wind deflectors on both sides of the cab side windows and a fabric shade or awning over the center. Deflectors are available from Detail Associates, Details West, and Cal-Scale. The shades could be made from styrene and thin wire.

The pilot has poling pockets on either side of the coupler – something not found on the PRR RS-12 units, but is accurate for the DRS-4-4-1000. These could be carved away. The pilot steps and footboards are cast as solid plastic. Usually diesels at this price point have "see through" steps and footboards. Detail parts are available to replace these, though the footboards would be easiest to replace. Also missing on the end are the second hose for the signal line and the steam line below the coupler. These can easily be added as well.

The representation of Trainphone is nicely done in metal with the correct number and size of supports. Photos I've seen of the prototype indicate there should be a break in the antenna between the front cab roof support and the first support on the long hood above the grab iron ladder. This could easily be accomplished with a couple of snips wire cutters and two pieces of thinner wire from the ends into the hood. Trainphone receiver coil and horns are cast in metal and look accurate, though my coil arrived detached from the hood and wedged in the packaging.

The handrails are thin and painted correctly, but they are of a brittle plastic. With light handling, both ends of my model are broken off and need to be repaired. I may substitute wire for durability. The cut lever looks accurate, but the handrail along the top of the pilot is the wrong shape and the two short grabs above each footboard are missing. The pilots include a brake hose and the end handrails include two MU hoses on each end. The numberboards and size of the numbers look correct for this locomotive, but are not lit when the headlight is on. There are no details inside the cab.

The dark green locomotive enamel looks more accurate than most plastic models. You need to hold the model close to the light to see it's green and not black. That's about right I think. The tread detail on the walkways is done well. The front radiator grille and the grille on the roof behind the headlight housing are nicely detailed, but inexplicably are a medium gray instead of the dark green of the body.

The fuel tank assembly includes filler piping detail and red-painted filler caps. These are nicely done.



The Bowser model easily handles a pair of Spectrum P70 coaches – the typical load for this engine. Here is 8776 pulling into Johnsville on my Willsburgh Division layout.

#### PERFORMANCE, OPERATING FEATURES, AND SOUND

The body is held on the chassis by two Phillips screws on each end through the coupler pockets. On top of the chassis are warm white LEDs for the headlights, a circuit board with the DCC sound decoder, and a gray speaker enclosure over one of the gear towers. The headlights can be dimmed with function key F12.

Mechanically, the model is first rate. The drive arrangement is fairly standard for diesels these days. A can motor with a large brass flywheel on each end sits in the center of a diecast frame. Slippery plastic shafts and universals connect the flywheels to the gear towers. The drive is very quiet and smooth running. The slow speed performance is very smooth, but the top speed seems too high. This can be adjusted with decoder settings. The wheels match NMRA RP25 contours and have a dark plated finish.

The locomotive weighs just shy of eleven ounces. It has no problem pulling two or three coaches as did the prototype – even on stiff model railroad grades. The engine comes equipped with metal Kadee-compatible trucks whose reliable performance I prefer to plastic couplers. I do anticipate switching them to the nicer-looking Kadee #58 "scale" couplers.

As mentioned, the model comes equipped with a DCC ESU Lok Sound "Select" decoder and speaker installed. The Bowser package includes a "Quick Start Guide" sheet in the package to explain the main features of the decoder. As on other Lok Sound-equipped locomotives I've tested, the sound of the engine is not tied to throttle settings. The decoder has a feature called *start delay*. Press F8 to begin a start-up sequence – the sound of the diesel engine being started and reaching idle speed. When the throttle is turned up, the engine won't move until sound of the engine reaches notch 1. This effect can be disabled by changing a CV value.

In addition, the revving of the motor is controlled by manual notching – up with F9 and down with F10. I don't know why, but on my NEC DCC system, the upward manual notching is working, but downward is not. While I grant manual notching is more realistic in operation, it is problematic when operating in consists with other engines set for automatic notching or manual notching with different function key configurations. My experience is also that if you have a momentary loss of power to a decoder set to manual notching, the speed of the model will not slow, but the sound will drop back to idle or off. You'll need to restart and notch the prime mover back up on a suddenly silent-running engine.

The decoder comes equipped with 16 horn sounds, two bell speeds, and two brake squeal variations. The decoder is set with a Baldwin single chime as the default horn. Based on photographs, the correct horn for the PRR BS-12 appears to be the Nathan M3. There is one on the decoder, but in the guide, it is mislabeled Leslie M3 – model number Leslie apparently did not use.

Function keys control directional headlights, bell, playable airhorn, coupler clank, warm start, short air let off, spitter valve, switching mode, manual notching, brake set and release, headlight dimmer, compressor, and sanding valve. The volume of each sound can be individually controlled with CV's. A full PDF manual for the Lok Sound Select decoder can be found at <u>www.loksound.com</u>.

#### THE VERDICT

No ready-to-run plastic diesel is perfect and the problems with Bowser's PRR #8776 are not that serious. My overall impression of the model is good. All I plan to do is add the train control box, fix the handrails, add hoses, do a little light weathering, and couple it to two or three "hot" P70 coaches in commuter service.

The workday has ended and the commuters are heading back home.





# 2015 Annual Meeting Models – Part 2 By The TKM Staff



Dave Pfeiffer used an A-B-A set of Proto 1000 Fairbanks-Morse C-Liners to make an accurate model of the PRR FF-3A. Starting with factorylettered ready-to-run models, he added Trainphone, lift rings, air hoses, MU hoses, handrails, lights, backup lights, and modified vent louvers. He finished up with a nice airbrush weathering job.



Yank Yankolonis displayed this road-weary set of EMD cab units with a cabin car. The Tuscan EFP-15 (FP7) and EF-15a (F7B) units started as Athearn Genesis. The second EF-15a is BLI. All have Tsunami sound with extra speakers in the B-units. Yank added a host of extra details including pilot coupler cover door handles, grab irons, coupler lift bar, lighted number boards, headlight LED, windshield washer, sun visors, water tank filler cover, speed recorder on fireman's side, speed governor on engineman's side, working diaphragms, end markers, truck air lines, B-unit hostler horns, and new Cal-Scale Trainphone antenna supports, and many other details. He weathered the set with Floquil grime, rust, grimy black, and engine black paints. The N5B cabin car was a Sunset brass model with additional details added.



◀ Josh Surkosky took a Bachmann N-scale GE 44-tonner (PRR Class GS-4), replaced the couplers, sprayed Future on the body, then weathered with dust oversprays. He used oil paint to create dirt and rust streaks on the pilots.

► This EMD SW6 (PRR Class ES-6) was modeled by Russ Foster in HO. He started with a Walthers model. He installed a new cab from Cannon, a hood from an Athearn SW-1500, Detail Associates grilles and cab deflectors, Custom Finishes marker light brackets, Hi-Tech brake hoses, brass sunshades, sound from ESU LokSound, speaker and enclosure by TDS. Decals are by Champ and Microscale.





Doug Nelson built this Baldwin BSR-24 transfer unit in N-scale from a James Norris-designed 3D-printed kit. The body, fuel tank assembly, and truck frames were 3D printed by Shapeways in frosted ultra detail (FUD). The kit included etched brass detail parts.





Gus Minardi superdetailed a stable of HO-scale EMD hood units from the late 1960's – SD40 (EF-30), SD45 (EF-36), a pair of GP35's (EF-25), and a trio of GP30's (EF-22). The models started as Kato, Atlas, and Proto 2000 units. He added a host of detail parts, repainted the units with 50/50 Scalecoat Brunswick Green and black and Microscale decals.

The Keystone Modeler



Ron added significant weathering to his BLI TI 4-4-4-4 duplex in HO. These engines were notoriously dirty in operation. He appears to have worked the coal pile down as well.







Jim Trope is scratchbuilding a model of PRR's first Atlantic – the E1. This engine was designed to compete with the Reading for traffic to Atlantic City. This will be #820. We hope Jim brings it back to the 2016 Annual Meeting so we can see his progress.











In a final model from Josh, he models a B70 baggage car from a MicroTrains Erie car by changing trucks and doors.





Claus Schlund displayed this kitbashed D70 diner in N-scale. It involved parts from Model Power and Atlas cars and a host of added details. Claus said the car took months of spare time work to capture the class as it looked in the mid-1930's.



Claus took an old Atlas 12 section, I drawing room sleeping car and built an accurate N-scale Plan 3410b Pullman as it appeared in the late 1920's. He resized windows, added shades and passengers, and reconstructed the roof details.



Claus's final model is a MicroTrains kitbash of a Plan 3416 28-1 parlor car from the 1920's. He backdated an air conditioned model to an older "hot car". He used two factory cars to eliminate the AC blister.



Buzz Burnley displayed a 1/4"-scale P70 from an American Standard kit. He added correct underbody details and trucks for the car as it appeared in the 1950's.





Mike Crosby brought a diorama of two PRR warehouses in Fort Wayne, Indiana as they appeared 1940-1950. Mike used styrene sheet, Tichy and Grandt Line windows and doors, and Micro Mark peel and stick brick papers. The vehicles are by Sylvan Models.





# **Modeling PRR's Unique Class X42 Mail Storage Cars**

By Dave Messer – Model by the Author



PRR X42 #2548 in the circle keystone scheme. This image lettering appropriate for a freight box car. (PRR photo, www.mountvernonshops.com)



PRR X42 #2542 with a simplified passenger scheme. (PRR photo, www.mountvernonshops.com)

With its head-end traffic growing rapidly after World War II, PRR had a need for additional cars to move storage mail – pre-sorted and bagged mail loaded in one city and moved intact to its destination. Although storage mail was often shipped in baggage cars, PRR instead chose a less expensive 60' boxcar design, but with the twin doors positioned like a baggage car. The 10 cars built in 1950 were assigned the next "X" class (X42) and painted in the standard freight car red and lettered in the circle keystone scheme. Within a year at least one car was painted in passenger Tuscan red with a double gold stripe, and subsequently some cars received the shadow keystone scheme. Although fitted with an AB brake system, the cars were equipped with four-wheel roller bearing express trucks plus steam and signal lines for use in passenger trains.

Models of this unique car have been offered previously in brass, but Funaro & Camerlengo (<u>www.fandckits.com</u>) has recently issued one in resin kit form. The one-piece body casting is an outstanding representation of the prototype, and includes indents for the multitude of grab irons with which these cars were fitted. Construction of the car follows the usual steps for resin kits, but I have the following comments and specific suggestions to assist the modeler:

a) The most difficult part of the construction is careful removal of the casting vents from the edge of the car body and frame. However, after doing this I found

that the inside of the body shell was still too narrow for the frame to fit in place. Rather than attempt further precision surgery to trim the floor without damaging the cross bearers, I opted to mill out the inside of the lower edge of the body with a Moto-tool to allow the frame to seat properly on the "shoulder". I then added the "tabs" along the bottom edge of the body, including the long ones to support the strap steps under the doors.

- b) For detailing the model, examine the prototype photos included, as a few details are not mentioned (e.g. the retainer valve, for which inexplicably no casting is provided, so I used one from my scrap parts box and added the retainer line). I also added cut levers (Detail Associates No. 6215) plus steam, air and signal lines (Cal-Scale No. 275) to complete the end detail.
- c) The cast resin ladders included are incorrect for the eight-rung ones on the prototype, so I substituted better detailed styrene ones albeit also seven-rung (also from my scrap parts box) rather than attempt to cut and file the flash from the ones supplied.
- d) I recommend the T-4 express trucks available from F&C as the closest to the prototype, but they are also resin castings that require removal of considerable flash, including the axle bearings that need to be care-

fully drilled and/or reamed out to allow Kadee No. 522 36" passenger wheelsets to turn freely.

- e) If you follow the recommendation to install Kadee No. 178 couplers, I suggest cutting back the center sill by 1/16" at both ends to allow the box to be screwed to the floor.
- f) The instructions make no mention of weighting the car, but the assembled model is very close to the NMRA recommended weight, so I only had to add two ¼-oz. weights to the frame prior to assembly.

With these suggestions, the kit assembles into an excellent representation of a unique and distinctive PRR prototype to add to your passenger or M&E trains. As for the era, these cars lasted through the Penn Central years into Amtrak.



Images of the completed model. (Dave Messer)





# PRR G29 Gondolas in 1/32 Scale

By Simon DuHamel



Side view of Simon's scratchbuilt G29. (Simon DuHamel)

I have been a member of the PRRH&TS for three years. I model the Pennsy in the 1930-1957-era in Gauge 1. I have followed your fine internet magazine since I started back in 2009 to model Pennsy. And let me tell you while I am at it how useful I have found it to this modeler living in faraway France. I have often wanted to contribute to your magazine.

Recently I just finished a pair of G29 gondolas and I felt that photos of this should be sent to your magazine as these are scratchbuilt models of a PRR prototype.

As a Pennsy fan I felt ashamed not to feature any gondolas on my pike, considering that the Pennsy was the boulevard of the steel industry in the USA at the time frame I model. There weren't any available except for some pricey Row and Co. brass. So I looked into the prospect of making a few.

My original plan was to use Piko (ex MDC) dreadnought ends to build them, and I wanted to make one of those 70 footers, but when I looked into PRR equipment diagrams (what would I do, without them?), I found that these had drop ends and a rather fragile position for the hand brake. Instead, I settled on a 50' G29. It fitted my period slot and looked like I could get pretty close to it using those Piko end castings.

I built in styrene since I wanted to incorporate some Piko parts. My modeling may look a bit simplified to many (in particular the underbody details), but keep in mind that my models are made to operate in the garden. I don't want to look for fallen parts in the ballast. Also keep in mind that there are practically no parts available in this king of scales – 1/32. You HO and 1/4" scale fans don't know how lucky you are.

While I am on the subject, Pennsy fans should be aware that some excellent lost wax castings for Pennsy prototype are being made available by TRS steam services in 1/32 scale.



End and underbody views of Simon's G29 gondolas. (Simon DuHamel)





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# **PRR Class H30 Three-Bay Covered Hopper** Making Bowser Better...Tips and Techniques Part 1

By Greg Martin



PRR builder's photo of H30 #255570 in the original freight car color. The contrast in the photo shows exactly why the modeler should shadow his models, again an art project. Your layout room lighting will never show this contrast so we need to build it into our modeling. (*Collection Richard Burg*)

I have said this too many times. I am not a modeler who believes in mediocrity, in other words, I don't make a habit of going out and buying ready-to-run equipment that I simply take out of the box, check the wheel sets, the coupler heights and let it roll; that is just not my standard of modeling. However, the hobby is changing, and no matter how hard we try, it doesn't appear to be going back to kits, albeit they are still out there.

Bowser's offering of the Pennsy H30 is not a resin kit, but there is still one resin kit in production if that is your wish. Is it better? Honestly I have no idea, as I have never built one, and there is also a composite kit available if you are up for the challenge. I will build mine eventually, but that is another article. We're going to focus on the Bowser offering. But I don't intend to repeat my review of the kit as I have done some time ago in The Keystone Modeler. What I do want to share is how to take something good and make it a bit better. That's not to say some parts of this model couldn't be better, and as you sit down with a closer review you do find some items that could be improved, and I will mention them as we move forward. So the focus here will primarily be on what I believe every Keystone Modeler should attempt to do to improve his/her skill sets and challenge himself, and that is the finish of the model.

I have long been a believer that most modelers can improve the finished model at the point of weathering. What to me is more important than a coat of dirt and grime on a finished piece of equipment it how well the details stand out once in place on a layout. Layouts typically don't represent true daylight conditions that we see genuine equipment in. Typically layout lighting is done with fluorescent lighting that doesn't exhibit the strong contrast of light that we see in the out-of-doors. The way I have found to resolve this is by what I call highlighting and shadowing to compensate for the lack of strong contrast in color shifts and shadow that exist in nature. There is also one item I found that needed to be added that we will deal with, and I will share a tip I use that some might find handy in their modeling. So let's get started.

#### SIMPLE UPGRADES

I found that the Bowser H30 doesn't have a coupler release lever. The funny thing is that they did tool the coupler release bracket, and I am not sure I even caught this in my original review. How could it be missed (as I slap my forehead)? Regardless, I think it needs to be added to be more realistic. This is a simple fix.

Here's a Tip...Under normal circumstances I would make my "cut lever" release stanchion from the clasp of either an Athearn or Train Miniature/Walthers door track or metal Details Associate or plastic Tichy ring and you can certainly do that. Of late I have been making my own that are easy and are very durable from two strands of copper wire from a common household electrical wire. I cut a small length of the wire and with my tweezers pull just two strands out, bend them over a #74 drill and twist the two together making a short stem that can be cemented into a hole from a #78 drill. This allows for my couple release lever to pass through without issue. I form my coupler release lever from .012" wire aligned with the grip done, with a small rear-ward tip. Then I bend the wire at a 90° angle outward and at that point straight across for a scale foot and then downward towards the bottom of the coupler box where I attach it. The entire process takes only minute. You have likely all done this before.

Drill a #78 hole into the couple release lever bracket, insert the loop or ring with either a dab of contact cement (I like Barge Cement) or CA. Let it stand for just a few minutes. Insert your cut lever and, with a dab of contact cement, attach the end to the couple box. I like this technique because it allows easy removal if the coupler needs to be serviced. Once set at the end add a dab of CA to the loop or ring to secure the coupler release bar. The copper wire will remain somewhat flexible and will be a bit more durable with heavy-handed operators at your op session. This is a bit more painless than what I have found in the past. That is all I plan to do to upgrade the model.

If you feel inclined, and you are up for a challenge, here are some things that can be done if you are in the craftsman mood. You can remove and replace the brake appliances, the corner stirrups, install better air hoses, and apply individual hatch handles. Be my guest.

#### HERE'S HIGHLIGHTING AND SHADOWING TECHNIQUE

There are a couple of items that you will have to get at the art supply store:

- India Ink in a small bottle with a dropper if possible
- A Fine tip drawing pen (and ask for help as it needs to draw a pencil fine line)
- Three Prismacolor<sup>®</sup> Scholar<sup>™</sup> pencils Orange , Yellow Ochre, and Terra Cotta
- White Charcoal Pencil or #1402 colored pencil
- Conté Crayon, the one with two colors of Terra Cotta

What you should have around the house is a #2 graphite pencil, Post-it<sup>®</sup> sticky notes, and some rubbing alcohol to thin the India ink. Be careful: India ink is forever. These will become your tools for highlighting.

While you're away from the computer, head to your local hobby shop (in my case a trip to Portland, OR 54 miles one way) and you will need some Testors<sup>®</sup> Flat White in the ¼oz. bottles or the equivalent, some flat light gray, rust and your favorite red oxide freight car color. These will become your shadowing tools. We'll go into the freight car color more as we get into more detail of the Bowser FCC colored offering.

# GETTING STARTED WITH THE H30 IN CIRCLE KEYSTONE GRAY PAINT

Once our details have been added we will get right into the highlighting process.

The process of highlighting the car's details is fairly simple for a light colored car. You'll need to sharpen your graphite pencil to a nice sharp point and keep it sharp. Wherever two joints meet at a right angle ex., a piece of metal angle and the cars side sheathing, you need to highlight it. Wherever two flat plates are layered (example: the side sheathing and the upper eave support), you need to highlight the joint. Where the running board meets the roof of the car you need to highlight it. What you are doing, if you can visualize it, is creating your own shadow. In your mind's eye this creates distance, separation and value. If you were to use black to create you highlighting effect, and I have, it will certainly create a much higher contrast than I have done here, but the effect might be too stark, so I have moved away from black ink as a highlighting tool for a lighter colored car.



The gray circle keystone H30 after graphite pencil highlighting.



Top of the A end of the car showing white highlights and colored markings.

For simplicity sake use the pencil as it will achieve the results we are looking for. This will take a bit of time because you want to pick all the details you can, including the handles on the hatches, the raised area on the air brake valve and even the hinges where the hatch rods meet. Leave no stone unturned. Sit at the kitchen table with a table lamp and get at it. The finished car in contrast to an unfinished car is dramatic. If you make a mistake just remove the graphite with a cotton swab and some rubbing alcohol and start over. Press the tip of the pencil lightly into the joint and pull the pencil towards you and **look at the end point rather than watching the pencil slide along the joint**. You will get faster at this.

Once you have highlighted every point you can, and there are some tough spots on the slope sheets, take the pencil and lay it flush to the running board and lightly highlight the diamond plate on the running board. This will really make the diamonds pop out at your eye. You will find that as you use the technique you will get better at it. Once completed you will likely not remember what the original car looked like. You'll likely find yourself using the technique on other completed cars as well.

The next step will be to shadow the car with contrasting colors. The key here is subtle shades. Generally I start with the lightest color, and in this case, because the car is such a light shade of gray (lighter than our PRR Paint Committee recommended color), you're going to use the Testor's flat white to bring out the highlights. Load your airbrush with your paint mixture of 40% paint and 60% thinner. I work from right to left and first tack my Post-it to the exterior braces on the left hand side. Check your spray pattern to not more than 1/4 inch in width. You will likely have to boost your air output to above 40psi so the pattern doesn't fall onto the car in a splatter pattern. The pattern should resemble a powder effect, which is the best way I can describe it. With short bursts at a random downward pattern, spray onto the sticky note so that about 40% hits the car side. Wider at the top and tapering to near zero on the bottom, the key word is random. We're not looking to make an even line here, so at some points it can and should be wider and in some spots nonexistent. Move down the car

side attaching the sticky note to each brace at the point where the brace and the side sheathing meet and not coating the pencil line. It takes a bit of practice. Think burst... burst ... burst... Move to the top of the car and on the roof do exactly the same at the lap seams and avoid the hatches at this point. You do not want to apply the white to the running board as it stands alone. For the hatches, I think of where a fellow might grab the open hatch with his glove, and at that point I hold my sticky note under the top of the hatch and give a fast burst. We can simulate the dirt later with a pencil. It's a subtle effect, and with paint this thin you may and likely will have to apply a couple of coats *randomly*. Once you can see the opaque color shift you have achieved the effect. The desired effect is not to make the car become white it is to simply lighten the basic color. It's a brightened highlight.

Next let's load the airbrush with a slightly darker gray than the basic color, and, depending on the number of years of service, it could be as dark as SP Lettering Gray or perhaps even darker. Again the mixture here is about 60/40 thinner to paint, and again at higher than normal air pressure. This color needs to be powder fine creating a very feathery edge. Just as with the white, we will shadow the opposite side of the braces starting left to right attaching the sticky note to the right side of the brace where the brace meets the side sheathing, keeping the pencil line covered. Again you want to allow only 40% of the color to actually hit the car and the line should be no more than ¼ inch wide. The roof of the car is shadowed on the opposite side of the lap panels keeping the amount of over-spray thinner at the top and wider as the color comes to the roof edge. Dirt flows down as far as the eye is concerned. Next attach the sticky note to the edge of the running board, covering it and spraying towards the hatches. Next, cover the hatches and spray down onto the car. The keyword here is subtle. The running boards need to remain the basic color. At the underside of the car, cover the hopper gates at the braces and spray upwards. On the ends you will want to spray wheel streaks thinner at the bottom and dissipating towards the top. I wanted my car to look as if there were three years of wear, so I didn't apply any additional weathering, but you could if your car represents a car in more years of service in this scheme. Apply the color in layers, the more passes you make with the color the darker it becomes but for me the keyword is subtle.

If I were to have weathered this car adding more age to the scheme I would likely use my favorite weathering color Testors® #1188 Rubber in the ¼oz. bottles. I would thin it to our 40/60 ratio and lightly run the color along the bottom edge of the side sheathing and up a bit on the braces trying to avoid the top of the braces. If you do get it on the top of the braces use a pencil eraser to remove it. Rubber is a good dark grimy color and I use it on my wheels as well. I dry brush my trucks with a thinned mixture of flat black and, while drying, a bit of Rubber is applied. I would also use Conté Crayon to add scratches that would have penetrated the paint leaving rust spots, but again I am trying to keep this car in a more pristine condition, as it was repainted in 2-54 per the data provided by Bowser. So for now at least, I am considering this car to be complete. It will be interesting to see how others treat the weathering of their cars on the PRR-Modeling list.



Side view of the completed car.



▲ Elevated view of the B end of the finished car.

► Elevated view of the A end of the finished car.

In the next issue, Part 2 covers improving the Freight Car Color H30.







A BLI Q2 crosses over the Willsburgh yard throat on Tim Garner's PRR Willsburgh Division layout. The bridges are modified Central Valley kits. Tim took the photo.