



MTH
ELECTRIC TRAINS®



M.T.H. Electric Trains
Signature Series

O Scale and HO Scale North American and European Models

2014

The M.T.H. Signature Series



Signature Series models offer the final word in realism: beautifully detailed M.T.H. O and HO scale models weathered to look like hard-working locomotives and rolling stock. Each model is individually weathered by a master modeler with more than 30 years of professional modeling experience. The resulting finish ensures that these new Signature Series models for 2014 will look right at home on any scened, scale-detailed layout.

All models are airbrush-weathered, using proprietary techniques that capture the subtle natural wear and tear produced by road dust, rain, rust, wind and everything else that railroad equipment experiences in real life. The Signature Series airbrush

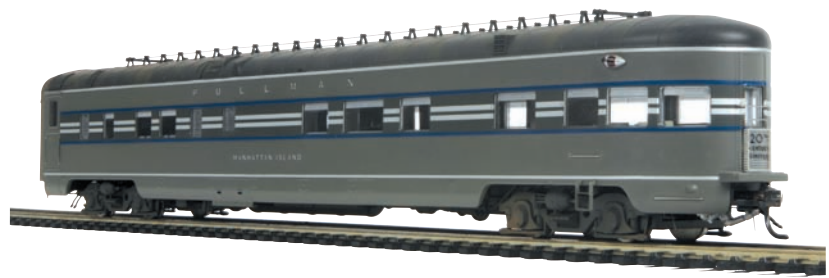
weathering process brings out details in a model that previously went unnoticed, and replicates effects usually obtainable only with chalks and pinpoint washes.

No two Signature Series finishes look exactly alike. Each model of the same engine or passenger set has its own unique finish, with noticeable but subtle differences visible in side-by-side comparisons. Because these models are designed to run as well as they look, each locomotive and car is sealed with a flat finish to allow handling and the use of smoke fluid.





M.T.H. Signature Series models first appeared in 2012, providing hobbyists with unique offerings not previously available from a major model railroad manufacturer. Each Signature Series item is an excellent solution for modelers who either have not had the confidence to attempt weathering techniques or simply don't have time to do it themselves. Most importantly, these professionally weathered models can withstand the rigors of operation while providing the final element of realism needed to depict real-life railroading on an O or HO scale layout.



We invite you now to turn the page and see what our Signature Series has to offer, in new ways to help you enjoy this most wonderful of hobbies.



Contents

O Scale North American


- O Scale Steam Engines..... 4
- O Scale Diesel Engines..... 12
- O Scale Electric Engines..... 16
- O Scale Specialty Set..... 18

O Scale European

- O Scale European Electric Engines..... 22
- O Scale European Passenger Sets..... 24

HO Scale

- HO Scale Steam Engines..... 32
- HO Scale Diesel Engines..... 48
- HO Scale Electric Engines..... 56

See it in Action!
 When you see this icon,  search for the item number on www.mthtrains.com to see a video of this item in action!

M.T.H. Electric Trains
Signature Series

www.mthtrains.com



Anatomy of a Premier Steam Engine



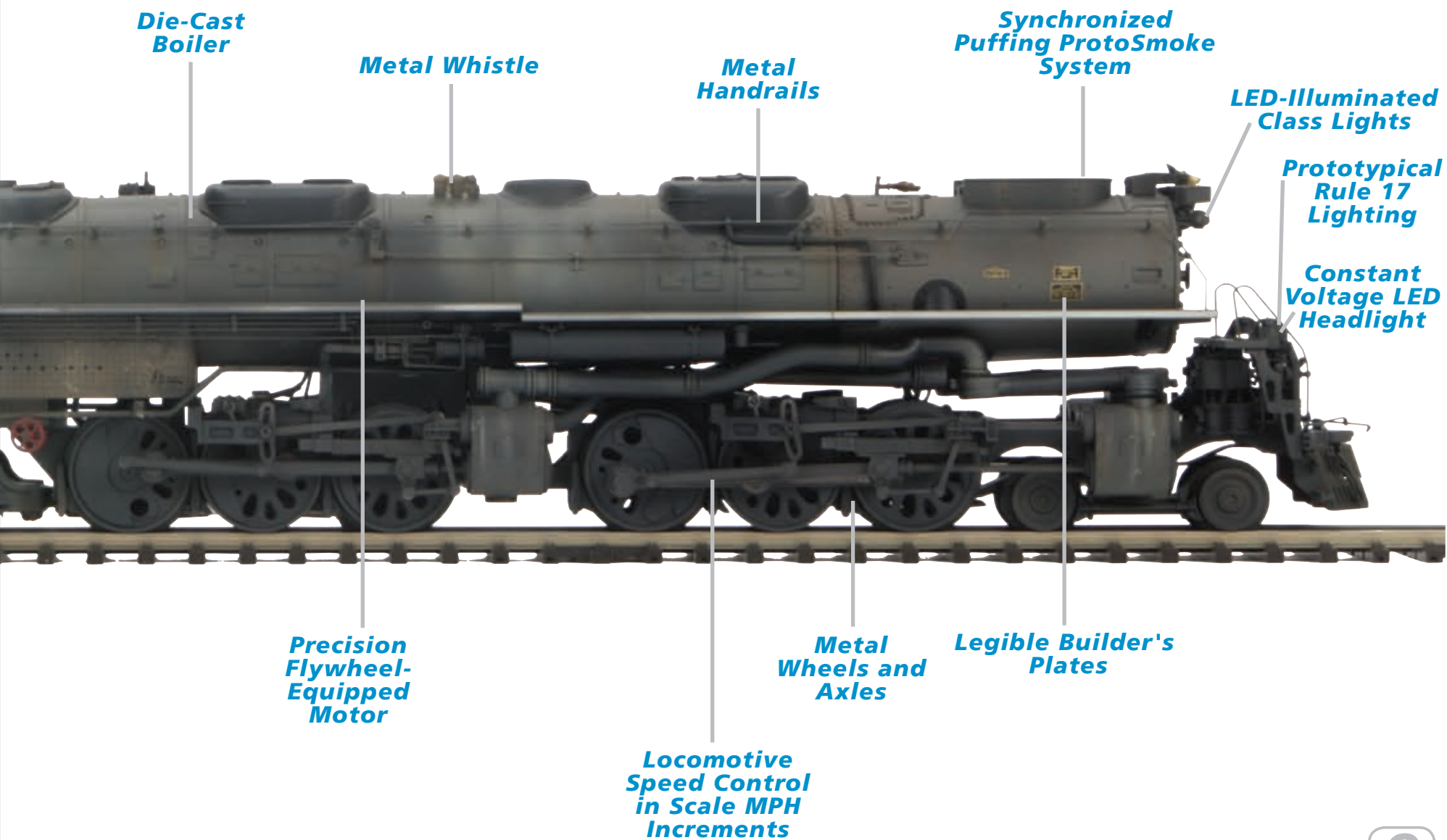
Premier engines are full O scale models, 1/48 the size of their North American prototypes (our European Premier models are built to 1:45 dimensions for German and Swiss prototypes and 1:43.5 for English and French models). Because of this, they often require larger radius curves than traditional O Gauge models.

Premier engines are as detailed as we can reasonably make them, and feature a large number of added-on parts. Premier steamers, for example, feature separately applied piping rather than piping cast onto the boiler. While smoke is standard on virtually most O Gauge steamers, M.T.H. steam locomotives were the first to feature synchronized puffing smoke, timed to a prototypically correct 4 sound chuffs and puffs per wheel revolution. Articulated steamers go a step further when our Proto-Sound 3.0 onboard digital sound system randomly manipulates each drive train to go in and out of synch with the other drive train — just like the prototype!

**Wireless
Drawbar**

**LED Lighted
Cab Interior**

**Authentic
Paint Scheme**



Die-Cast Boiler

Metal Whistle

Metal Handrails

Synchronized Puffing ProtoSmoke System

LED-Illuminated Class Lights

Prototypical Rule 17 Lighting

Constant Voltage LED Headlight

Precision Flywheel-Equipped Motor

Locomotive Speed Control in Scale MPH Increments

Metal Wheels and Axles

Legible Builder's Plates



4-6-2 K-4s Streamlined Steam Engine



Features Include

- Die-Cast Metal Chassis
- Authentic Paint Scheme
- Metal Wheels and Axles
- Constant Voltage Headlight
- Die-Cast Truck Sides
- Remote Controlled Proto-Coupler™
- Engineer and Fireman Figures
- Operating Firebox Glow
- Metal Handrails
- Metal Whistle
- Operating Marker Lights
- Lighted Cab Interior
- Synchronized Puffing ProtoSmoke® System
- Operating Tender Back-up Light
- Locomotive Speed Control
- Die-Cast Boiler and Chassis
- Die-Cast Tender Body
- Precision Flywheel-Equipped Motor
- Proto-Scale 3-2™ 3-Rail/2-Rail Conversion Capable
- Wireless Drawbar
- Real Coal Load
- Proto-Sound® 3.0 With The Digital Command System Featuring Passenger Station Proto-Effects™
- Unit Measures: 22" x 2 3/4" x 3 7/8"
- Operates On O-72 Curves





Pennsylvania 4-6-2 K-4s Streamlined Steam Engine w/Proto-Sound 3.0
20-81002-1 Hi-Rail Wheels \$1049.95

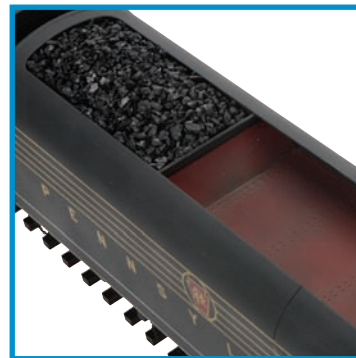
On perhaps the greatest railroad ever, no steam locomotive was more revered than the legendary Pennsylvania K-4s Pacific. Evolving from a program begun in 1914 to develop heavy freight and passenger classes utilizing common boiler designs, the K-4s was an instant success. From 1917 to 1928, a total of 425 units were built at the Juniata and Baldwin Shops.

The 4-6-2 K-4s became the Pennsylvania's principal passenger hauler, possessing a consummate blend of speed and power. Often double headed on east coast limiteds in front of a Pullman consist, the K-4s was a common and beautiful sight on the Pennsylvania's rails, and became synonymous with that railroad's steam power.

In 1936, K4s No. 3768 became the Pennsy's first streamlined steam engine. She headed name trains like the *Broadway Limited* and the *Spirit of St. Louis*.

Later, after World War II concluded, the Pennsy's needs changed and the K-4's appearance underwent a series of changes to better serve those needs. The most apparent changes showed up on the 1947 Postwar or Modern version of the K-4 and included a solid drop-coupler pilot, repositioned boiler front headlight and the addition of a steam generator below the headlight.

Featuring all of the craftsmanship and detail that make an M.T.H. steam locomotive the industry's best value, this K-4s will quickly find a home on your layout or in your collection for years to come.



4-6-4 Steam Locomotive



Features Include

- Die-Cast Boiler and Tender Body
- 1:48 Scale Proportions
- Die-Cast Metal Chassis
- Authentic Paint Scheme
- Metal Wheels and Axles
- Constant Voltage Headlight
- Die-Cast Truck Sides
- Precision Flywheel-Equipped Motor
- Locomotive Speed Control In Scale MPH Increments
- Wireless Drawbar
- Remote Controlled Proto-Coupler™
- Engineer and Fireman Figures
- Operating Firebox Glow
- Metal Handrails and Bell
- Metal Whistle
- Operating Marker Lights
- Lighted Cab Interior
- Synchronized Puffing ProtoSmoke™ System
- Operating Tender Back-up Light
- Proto-Scale 3-2 3-Rail/2Rail Conversion Capable
- Proto-Sound 3.0 With The Digital Command System Featuring Passenger Station Proto-Effects™
- Unit Measures: 27" x 2 5/8" x 4 1/8"
- Hi-Rail Wheels Operate On O-42 Curves





Passenger volume for the Atchison, Topeka & Santa Fe's 922 miles of main line service between La Junta, Colorado and Chicago resulted in the production of a new class of 4-6-4 Hudson locomotives from the Baldwin Locomotive Works. Six of these Class 3460 oil burning locomotives were delivered in 1938 to the Santa Fe. At the time, the locomotives were the largest 4-6-4 types yet produced and utilized a fuel oil tank built into the water tank inside the tender. Such an arrangement allowed for easy conversion of the locomotive to a coal-burning type.

The Santa Fe, like many railroads in the 1940s flirted with streamlining. Engine No. 3460 was actually delivered to the A.T.S.F. with light steel shrouding and a gloss blue paint scheme that earned the nickname "Blue Goose". M.T.H. cataloged the streamlined version in 2011 and is proud to now offer the unshrouded version of one of the Santa Fe's most important locomotives.

Fully outfitted with the power and performance of Proto-Sound 3.0, the Class 3460 Hudson, like all Premier steam engines, is equipped with synchronized puffing smoke, Proto-Speed control for incredible slow speed action and the hobby's only Passenger Station Proto-Effects which recreate the sound of an engine arriving at a station, complete with arrival and departure announcements, conductor direction and boarding and disembarking sounds.



Santa Fe 4-6-4 Steam Locomotive w/Proto-Sound 3.0
20-81003-1 (Hi-Rail Wheels) \$1149.95

4-6-6-4 Challenger



Features Include

- Die-Cast Boiler and Tender Body
- 1:48 Scale Proportions
- Die-Cast Metal Chassis
- Authentic Paint Scheme
- Real Coal Load (Where Prototypical)
- Metal Wheels and Axles
- Constant Voltage Headlight
- Die-Cast Truck Sides
- Precision Flywheel-Equipped Motor
- Locomotive Speed Control In Scale MPH Increments
- Wireless Drawbar
- Proto-Scale 3-2 3-Rail/2-Rail Conversion Capable
- Remote Controlled Proto-Coupler™
- Engineer and Fireman Figures
- Operating Firebox Glow
- Metal Handrails and Bell
- Metal Whistle
- Operating Class Lights
- Lighted Cab Interior
- Synchronized Puffing ProtoSmoke™ System
- Operating Tender Back-up Light
- Proto-Sound 3.0 With The Digital Command System Featuring Passenger Station Proto-Effects™
- Unit Measures: 32" x 3 1/8" x 4 1/8"
- Hi-Rail Wheels Operate On O-72 Curves



The first Challengers were conceived in 1936 as fast freight engines to replace the Union Pacific's fleet of three-cylinder 4-12-2 locomotives. With an extra center cylinder for added power and a top speed of 45 mph, the 4-12-2s had been successful freight engines when built in 1926. But a decade later they were considered slow and difficult to maintain. So American Locomotive Company (Alco) was commissioned to build what became one of the most successful fleets of articulated engines on any railroad. Forty Challengers were built in the 1930s. The pressure of wartime traffic brought an order for 65 more with bigger tenders and many minor improvements.

The Challengers were steam power at its zenith. They incorporated all the technology that represented super-power steam, including roller bearings on all axles and drive rods — but none of the foolishness that characterized some of the desperate efforts to save steam in the post-war years. Most Challengers were assigned to freight duty, hustling 20-car trains across mountains and deserts to California and Oregon at speeds up to 70mph.

It was in a roundabout way that six Challengers ordered by the UP ended up hauling coal through the Appalachians for the Clinchfield Railroad. In the midst of World War II, the War Production Board refused the Rio Grande's request to order new articulateds of its own design from Baldwin Locomotive Works. Instead, the Board diverted the last six Challengers in UP's order to the Rio Grande — which turned up its nose at the locos and decided to lease them for the duration rather than buying them. After war's end, the Rio Grande returned the unwanted engines to the government. In 1947, the War Assets Administration sold the orphan locos to the Atlantic Coast Line and Louisville & Nashville Railroads, which put the Challengers to work on their jointly-owned subsidiary, the Clinchfield, Carolina & Ohio. Thus a group of engines intended to speed over western deserts and mountains ended up thundering through Appalachia.

Did You Know?

The UP apparently expected to get the remaining six Challengers they had ordered after the war — but the U.S. government, who owned them, stored them in Salt Lake City until striking the deal that sent them to the Clinchfield.



Union Pacific 4-6-6-4 Challenger Steam Engine w/Proto-Sound 3.0
20-81004-1 (Hi-rail Wheels) \$1599.95

4-Truck Shay



Like many innovations, the Shay locomotive was invented by an entrepreneur trying to get a jump on the competition. When Civil War veteran and ex-schoolteacher Ephraim Shay opened a sawmill in Michigan in the 1870's, logging was largely a winter operation. Roads made of ice and snow enabled lumberjacks to bring timber to mills with horse-drawn sleds.

Shay reasoned - correctly, as it turned out - that laying rails through the woods would allow him to supply his mill year-round and undercut his competitors' lumber prices. Horses, Shay's original motive power, proved problematic as they tended to get run over by log cars on downgrades. Shay experimented with a small steam engine but the pounding of the side rods was too much for his light temporary track. The lightbulb moment came when he noticed that his flatcars, however, were not tough on the track, and he

decided to power a flatcar with a steam engine and a belt drive to one axle. It was several years later in 1880 that machinist John Carnes at the Lima Machine Works, while modifying a locomotive for Ephraim Shay, came up with the idea of powering all trucks with a drive shaft and beveled gears. Within a few decades, the re-named Lima Locomotive Works was one of America's Big Three steam locomotive builders.

Of the 2,770 Shays that Lima produced, only six were built after 1930. By 1944, when the Western Maryland ordered a massive 3-truck Shay to serve a Maryland coal mine, few Lima employees remembered how to build one. Shop crews preferred working on more familiar engines for the war effort, and it took a year to construct WM No. 6. What turned out to be the last and nearly the largest Shay ever built worked just four years before the mine closed and she was retired. Fortunately, one of the nation's

first railroad museums opened nearby just a few years later, and No. 6 became the WM's contribution to the B&O Transportation Museum in Baltimore. Even more fortunately, No. 6 was later traded to the Cass Scenic Railroad in Cass, West Virginia, where she steams in tourist service today.

The M.T.H 4-Truck Shay reappears in our 2014 Signature Series fully detailed with digital sounds recorded from the actual engines used at Cass including the correct six chuffs per drive shaft revolution. Few, if any, previous O gauge models have duplicated the rapid-fire exhaust notes that make a Shay at crawl speed sound like it's going a hundred miles an hour. The combination of DCS and Proto-Sound 3.0 allows this model to portray the slow speed theatre and tremendous pulling power that marked Ephraim Shay's invention.



Western Maryland 4-Truck Shay Steam Engine w/Proto-Sound 3.0
 22-81005-2 (Scale Wheels) \$1149.95

Features Include

- Die-Cast Boiler and Chassis
- Die-Cast Tender Body
- 1:48 Scale Proportions
- Authentic Paint Scheme
- Real Coal Load
- Metal Wheels and Axles
- Constant Voltage Headlight
- Die-Cast Truck Sides
- Precision Flywheel-Equipped Motor
- Locomotive Speed Control In Scale MPH Increments
- Proto-Scale 3-2 3-Rail/2-Rail Conversion Capable
- (2) Remote Controlled Proto-Couplers
- Engineer and Fireman Figures
- Operating Firebox Glow
- Metal Handrails and Bell
- Metal Whistle
- Synchronized Puffing ProtoSmoke System
- Operating Tender Back-up Light
- On-board DCC Decoder
- Proto-Sound 3.0 With The Digital Command System Featuring Quillable Whistle With Freight Yard Proto-Effects
- Unit Measures: 20 1/2" x 2 7/16" x 4 1/16"
- Operates On O-72 Curves



EMD F59PHI Diesel



Features Include

- 1:48 Scale Proportions
- Directionally Controlled Headlights
- Intricately Detailed, Durable ABS Body
- Metal Wheels, Axles and Gears
- Die-Cast Truck Sides, Pilots and Fuel Tank
- (2) Remotely Controlled Proto-Couplers
- Authentic Paint Scheme
- Metal Handrails and Horn
- (2) Precision Flywheel-Equipped Motors
- Locomotive Speed Control In Scale MPH Increments
- Proto-Scale 3-2 3-Rail/2-Rail Conversion Capable
- Lighted Cab Interior
- Illuminated Number Boards
- (2) Engineer Cab Figures
- Moveable Roof Fan Blades
- Metal Body Side Grilles
- Operating Ditch Lights
- Operating ProtoSmoke Diesel Exhaust
- Onboard DCC Receiver
- Proto-Sound 3.0 With The Digital Command System Featuring Passenger Station Proto-Effects
- Unit Measures: 15" x 2 5/8" x 3 7/8"
- Operates On O-31 Curves





Amtrak F59PHI Diesel Engine
20-81008-1 Proto-Sound 3.0 \$579.95

In 1988 Toronto-area commuter operator GO transit commissioned EMD to design a new commuter locomotive to replace the aging F40PH — which had been North America’s standard passenger engine for more than a decade. The new F59PH design incorporated a 3000 horsepower prime mover and a separate head end power (HEP) motor/generator set for car lighting, heat, and air conditioning. The new engine used 12 cylinders instead of 16 to produce the same horsepower as the seventies-era F40PH, and with lower emissions. On the exterior, however, the new locomotive didn’t look like a passenger engine; it had the boxy, muscular look of a freight hauler.

The Canadian-born design really came into its own on the West Coast of the United States. In 1994 the California Department of Transportation placed an order for nine F59’s for “Amtrak California” service and specified a new look that, while officially designated the F59PHI, became known as the California F59: rounded nose, side skirts covering



the fuel tank, and a streamlined carbody to blend with high, bi-level passenger cars. Other railroads apparently liked the new look and the engine’s performance, and the F59PHI became a common sight on the West Coast. Commuter operators include Metrolink in Los Angeles, Translink in Vancouver, B.C., and Seattle’s Sound Transit “Sounder” service. On the other side of the continent, F59PHI’s can be found on Montreal commuter runs and Amtrak service out of Raleigh, North Carolina.

Replicate the services that are reviving commuter rail travel in many parts of the United States with MTH’s fully-detailed F59PHI. The F59PHI returns to the Premier line for the first time since 2005, complete with accurate station announcements for an Amtrak California route.

Did you know?

The addition of a separate motor/generator for head end power in the F59 eliminated an annoyance with the older F40PH, which had only a single motor: the prime mover in the F40 had to run at full throttle all the time, even when a train was stopped, in order to provide light and climate control to the passenger coaches. In fact a small number of F40’s were built with a longer carbody to accommodate a separate HEP diesel motor.



Alco PA A-B-A Diesel Set

O
scale



Denver & Rio Grande Western Alco PA A-B-A Diesel Set
20-81001-1 Proto-Sound 3.0 \$1039.95

The PA was Alco's glamour girl. While Electro-Motive's E-units easily beat Alco's passenger engine in terms of popularity, the PA is widely regarded as the most beautiful first-generation diesel — period. Perhaps no other locomotive looked so right at the head of the streamlined trains of the late forties and fifties that were the last hurrah of American long-distance passenger service. The 294 PA's and cabless PB's built between 1946 and 1953 powered some of America's most famous name trains, from the Pennsylvania's *Broadway Limited* to the New Haven's *Merchants' Limited*.

The muscular PA profile and its elegant nose, with the characteristic grille around the headlight, were designed by Ray Patten, General Electric's head of industrial design. At the time, GE and Alco were partners in the locomotive business, with GE making the

electrical equipment for all Alco diesels. Patten's design was described as "a locomotive so distinctive and so powerful looking that it actually helps railroads sell their services to passengers and shippers."

Under the hood of the PA beat a 16-cylinder model 244 prime mover that developed 2000 hp. Depending on their gearing, PA's could hustle a passenger consist along at up to 100 mph.

Long after all other PA's had gone to scrap, four restored ex-Santa Fe units remained in service on the Delaware & Hudson into the late 1970s. Sold to the Ferrocarriles Nacionales de Mexico (FNM) in 1978, most of the units eventually deteriorated to junk status, although one remained operational. But in April of 2000, Doyle McCormack — who also happens to be the engineer of 4449, the restored Southern Pacific

Daylight — and the Smithsonian Institution repatriated two of the junked units for rebuilding. One of the units will be restored to Santa Fe livery for static display, while Doyle is bringing the other PA back to life in the Nickel Plate Road "Bluebird" scheme.

Recreate the excitement of first-class passenger travel with these Premier Alco PA locomotives. Our Proto-Sound 3.0 sound and control system brings you the authentic sounds of an Alco prime mover and station announcements for a Rio Grande name train - along with the ability to start your train so gently you won't spill the water in the diner and then accelerate up to scale speeds of over 100 mph, just like the prototype.

Features Include

- (2) Remotely Controlled Proto-Couplers
- Metal Chassis
- Illuminated Number Boards
- Directionally Controlled Headlights
- Die-Cast Truck Sides, Pilots and Fuel Tank
- Authentic Paint Scheme
- Metal Handrails and Horn
- Lighted Marker Lights
- Moveable Roof Fan Blades
- Metal Body Side Grilles
- Intricately Detailed ABS Bodies
- Metal Wheels, Axles and Gears
- (2) Precision Flywheel-Equipped Motors In Each A Unit
- Lighted Cab Interiors
- (2) Engineer Cab Figures In Each A Unit
- (2) Operating Smoke Units
- Locomotive Speed Control in Scale MPH Increments
- Operating MARS Light
- Proto-Sound 3.0 With The Digital Command System Featuring Passenger Station Proto-Effects
- Unit Measures: 50 1/2" x 2 5/8" x 3 3/4"
- Operates On O-31 Curves

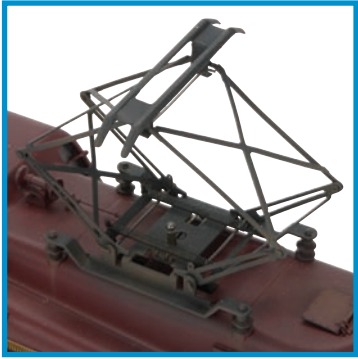


Pennsylvania GG1 Electric



Features Include

- Intricately Detailed Die-Cast Body
- Directionally Controlled Headlights
- Metal Wheels, Axles and Gears
- Remotely Controlled Operating Pantographs
- Enhanced Detail Die-Cast Truck Sides & Pilots
- (2) Remotely Controlled Proto-Couplers
- Authentic Paint Scheme
- Metal Chassis
- (2) Precision Flywheel-Equipped Motors
- Lighted Cab Interior
- See-Through Metal Body Side Grills
- Opening Doors
- Opening Hatches
- Illuminated Number Boards
- Lighted Marker Lights
- Locomotive Speed Control In Scale MPH Increments
- (2) Engineer Cab Figures
- Operating Smoke Unit
- Proto-Sound 3.0 With The Digital Command System Featuring Passenger Station Proto-Effects
- Unit Measures: 20" x 2 5/8" x 4"
- Operates On O-72 Curves



For more than two decades, the Pennsylvania Railroad experimented with locomotive designs in search of a high-speed, mainline passenger electric. That search ended in 1934 with the GG1, a cooperative effort by the PRR, Baldwin, Westinghouse, and General Electric, based largely on neighbor New Haven's successful EP3 juice jack. Industrial designer Raymond Loewy cleaned up the original riveted body to create a design that looked contemporary for half a century.

The GG1 fleet hustled passenger traffic of all types along the Pennsy's multi-track raceway from New York to Washington and west to Harrisburg, including the

famed *Congressional* and *Broadway Limited*. With 18 Pullmans in tow, a GG1 could hit 100 mph. Regearred for freight service and run as double-headers, a pair of GG1s delivered about the same tractive effort as a Union Pacific Big Boy, with virtually no noise, no smoke, much less wear on the track, and significantly less maintenance. Many GG1s racked up more than five million miles of service, outlasting the railroad that built them and serving its two successors, the Penn Central and Conrail. If there were a Locomotive Hall of Fame, the Pennsylvania Railroad GG1 would surely be one of the first inductees.

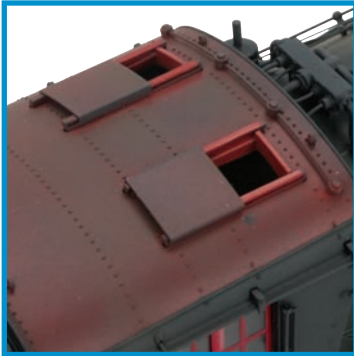
Add this fully die-cast Hall of Famer to your layout in an authentic PRR passenger scheme, featuring Pennsy name train station sounds, smooth performance at any speed from a crawl to full throttle, dual-motored power to rival the prototype, smoke from the train heat boiler, and pantographs that automatically raise and lower according to the direction of travel. We've even added sound effects to accompany the raising and lowering of the pantographs when the locomotive changes direction.



Pennsylvania GG-1 Electric Engine
20-81007-1 Proto-Sound 3.0 \$899.95

S-2 Passenger Set

O
scale



The first 4-8-4 Northern to appear on the Great Northern did so in 1929 after arriving from the Baldwin Locomotive Works. Designated Class S, the locomotives were purchased by the Great Northern in two models, S-1 and S-2. Designed for fast passenger work, the S-1s featured 73" drivers but gained a reputation of being hard on the rails.

By 1930, the Great Northern had received another 14 4-8-4s, this time designated as Class S-2. These locomotives utilized a radial stay firebox rather than the Belpaire variety found on the S-1. In addition,

larger 80" drivers, the tallest of any Northern model, gave the S-2 fast speed ratings but a reputation for being slippery when pulling a heavy train.

Built for passenger service, the S-2, which pulled an all-welded Vanderbilt tender, sported the classic Cascade Green livery of the Great Northern along with chrome plated cylinder covers and steam chest heads. The striking appearance made the locomotive the perfect choice for the *Oriental Limited* and *Empire Builder* passenger trains until the Northern's retirement in the mid 1950s. No. 2584 remains on

display, in her Cascade Green livery, at the Havre, Montana depot.

O Scale modelers can celebrate the 83rd Year of the *Empire Builder* with this limited release of the S-2 locomotive and passenger set — exclusively from M.T.H. Electric Trains. Outfitted with industry-leading features including Proto-Sound 3.0 and its built-in DCC decoder, the S-2 is outfitted with Proto-Scale 3-2, which allows the user to configure it in minutes for use on 2-rail or 3-rail track.



Features Include

Set Includes:

- Great Northern 4-8-4 S-2 Steam Engine w/ Proto-Sound 3.0 (Hi-Rail Wheels)
- (2) 70' Madison Coaches
- 70' Madison Baggage Car
- 70' Madison Observation Car

Locomotive Features:

- Die-Cast Boiler and Chassis
- Die-Cast Tender Body
- Authentic Paint Scheme
- Real Coal Load
- Metal Wheels and Axles
- Constant Voltage Headlight
- Die-Cast Truck Sides
- Precision Flywheel-Equipped Motor
- Locomotive Speed Control In Scale MPH Increments
- Wireless Drawbar

- Proto-Scale 3-2 3-Rail/2-Rail Conversion Capable

- Remote Controlled Proto-Coupler
- Engineer and Fireman Figures
- Operating Firebox Glow
- Metal Handrails and Bell
- Metal Whistle
- Lighted Cab Interior
- Synchronized Puffing ProtoSmoke System
- Operating Tender Back-up Light
- 1:48 Scale Proportions
- On-Board DCC Receiver
- Proto-Sound 3.0 With The Digital Command System Featuring Quillable Whistle With Passenger Station Proto-Effects
- Unit Measures: 26 1/2" x 2 3/4" x 4 1/8"
- Operates On O-42 Curves

Passenger Set Features:

- Intricately Detailed, Durable ABS Bodies
- Metal Wheels and Axles
- Overhead Interior Lighting
- Die-Cast 6-Wheel Trucks
- Operating Die-Cast Metal Couplers
- Colorful, Attractive Paint Scheme
- End-of-Car Diaphragms
- Separate Metal Handrails
- Fast-Angle Wheel Sets
- Needle-Point Axles
- Detailed Car Interiors
- 10 Passenger Figures in Coaches and Observation
- 1:48 Scale Dimensions
- Detailed Car Underframes
- Sliding Baggage Car Doors
- Operates On O-42 Curves



Great Northern S-2 Passenger Set
20-81006-1 Proto-Sound 3.0 \$1599.95

Anatomy of an O Scale

Until now, European O gauge hobbyists have often had to choose between models that look realistic and models that run well. M.T.H. Electric Trains is one of the only model railroading manufacturers to deliver accurate, highly detailed scale models that run superbly and have more features than any previous O gauge trains — all at attractive pricing.

M.T.H. locomotives feature on-board DCC, full compatibility with all 2-rail and 3-rail AC and DC operating systems, scale detailing, vivid sounds, synchronized puffing smoke in steam engines, steady speeds down to 3 scale miles per hour, and a choice of 4 coupling systems.

O scale model railroaders, whether they be 3-rail or 2-rail fans, who have or plan to have a premier model railroad will find choosing an M.T.H. Premier Line locomotive or rolling stock item a worthy choice. Our steam and electric locomotives are unmatched in value and performance and our passenger and freight cars can withstand the scrutiny of many a seasoned modeler. Almost all of our Premier Line European models can be configured for use on 2 or 3-rail track and come in multiple cab numbers, making M.T.H. Premier Line products the most versatile O scale products produced today.

Premier steam engines are the gold standard in O Scale railroading. These beautifully detailed 1:43.5 to 1:45 scale locomotives display the highest standards of craftsmanship, realistic detail, and solid construction. Each is configured with a smooth, powerful drive train that performs like no other. Every Premier steamer features a die-cast boiler and tender, comes with a flywheel-equipped motor, pours billowing smoke from the ProtoSmoke system prototypically timed with the drive wheel revolutions, and is outfitted with lighting effects that make for a realistic operating experience.



**Fine Scale Couplers
or Remotely
Activated
Proto-Couplers**

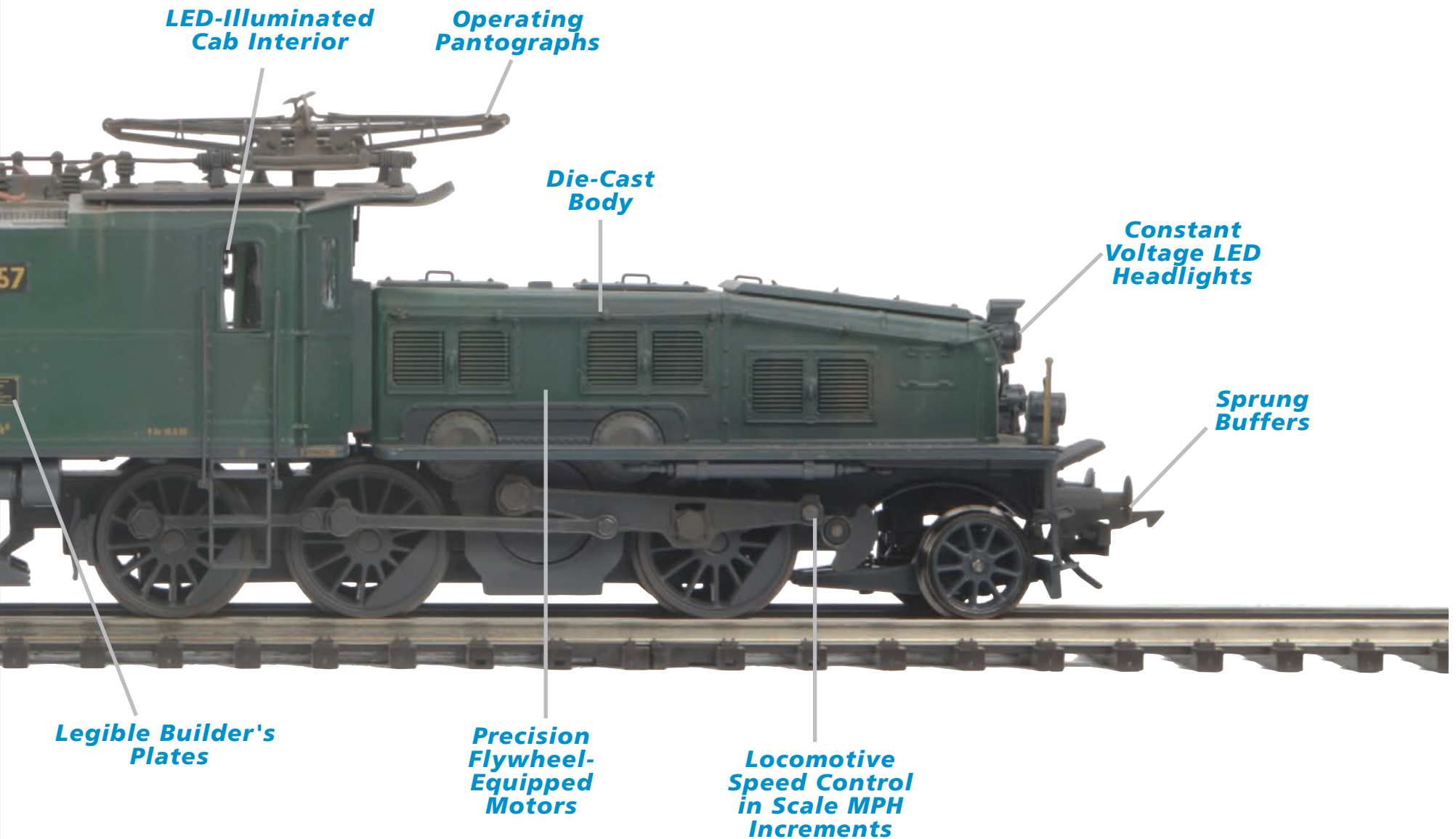
**Proto-Sound 3.0
Digital Control
Package with
DCC Receiver**

**Metal
Wheels and
Axles**

**Authentic
Paint Scheme**



European Electric Engine



Swiss Crocodile Electric



In a country famous for mountain railroading, the Gotthard route is the greatest challenge, the one by which the Swiss Federal Railways measures its locomotives. Constructed at a cost of more than 200 lives, the Gotthard line snakes its way around spiral tunnels, across more than a thousand bridges and open passages, and through narrow mountain valleys, culminating in a 2.6% climb to the 9-mile-long Gotthard Tunnel — the longest in the world when it was opened in 1882. The Gotthard was the stomping ground for the 2-10-0 “Elephants,” the largest steam engines ever used in Switzerland. But when the decision was made to electrify the route, the Elephants were replaced by Crocodiles.

To conquer the Gotthard’s tight turns and steep grades, Swiss Locomotive and Machine Works (SLM) designed a freight locomotive in three articulated sec-

tions: a double-ended center section housing two engineer’s stations, twin pantographs, and the huge high voltage transformer; and two end sections, each with two electric motors powering a single jackshaft that transmitted power to the 53” drivers, using steam-locomotive-type drive rods. The jackshaft drive was dictated by the motors available at the time, which were too large to be truck-mounted as in later designs. The nickname “crocodile” (krokodil in German) arose from the engine’s long articulated “snouts.”

All crocodiles were delivered in brown paint, but many were later repainted green. Initial practice was to run with both pantographs raised, but some engines were later refitted with improved pans that

allowed single-pantograph operation. The hugely successful Crocodiles ruled the Gotthard route into the 1950s, when they were displaced by newer power. Many worked into the 1970s on less strenuous routes and switching, and several have been preserved.



Tuscan - Ce 6/8 II Crocodile Electric Engine With Proto-Sound 3.0

20-81009-1 Hi-Rail Wheels \$999.95
 22-81009-2 Scale Wheels \$999.95



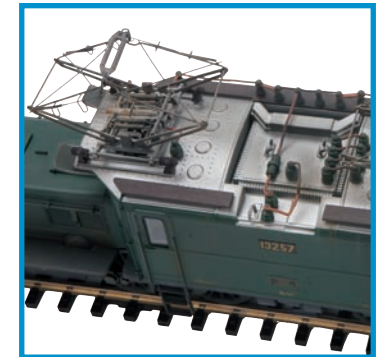
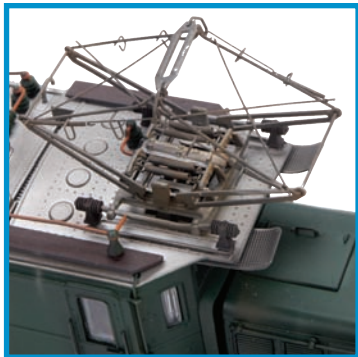
Dark Green - Be 6/8 II Crocodile Electric Engine With Proto-Sound 3.0

20-81010-1 Hi-Rail Wheels \$999.95
 22-81010-2 Scale Wheels \$999.95

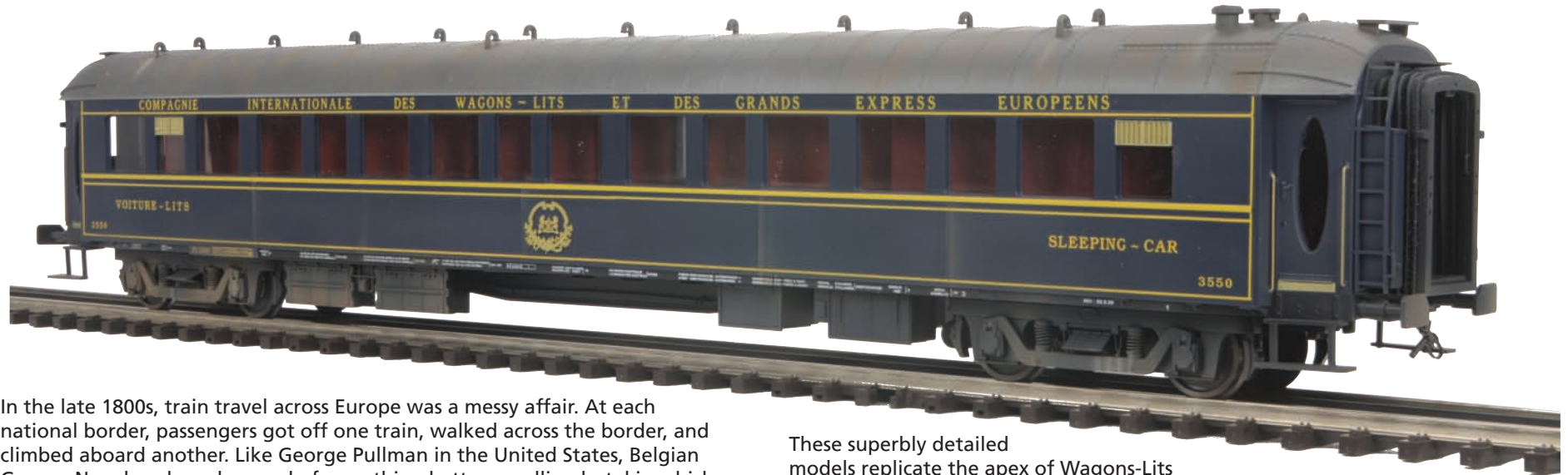
Features Include

- Intricately Detailed Die-Cast Metal Body
- Directionally Controlled LED Headlights
- Metal Wheels, Axles and Gears
- Die-Cast Truck Sides and Pilots
- (2) Remotely Controlled Proto-Couplers**
- Accurate Paint Scheme
- Metal Chassis
- Metal Handrails and Horn
- (2) Precision Flywheel-Equipped Motors
- Locomotive Speed Control In Scale MPH Increments
- LED Lighted Cab Interior
- Proto-Scale 3-2 3-Rail/2-Rail Conversion Capable
- (2) Handpainted Engineer Cab Figures
- Metal Body Side Grilles
- European NEM Fine Scale Couplers Included
- NEM 310/311 Fine Scale Wheels*
- NEM 365 Coupler Pockets*
- NEM 362 Lenz® Compatible Couplers Included*
- Sprung Buffers
- (2) Motorized Pantographs
- Catenary or Track Power Selector Switch
- LED Lighting Effects
- On Board DCC Receiver
- 1:45 Scale Proportions
- Proto-Sound 3.0 With The Digital Command System Featuring German Language Passenger Station Proto-Effects
- Measures: 17 9/16" x 2 1/2" x 3 3/4" (419mm x 64mm x 95mm)
- Hi-Rail Wheels Operate On O-54 Curves
- Scale Wheels Operate On 36" Radius Curves

* Scale Wheel Models Only
 ** Hi-Rail Wheel Models Only



Wagons-Lits Passenger Set



In the late 1800s, train travel across Europe was a messy affair. At each national border, passengers got off one train, walked across the border, and climbed aboard another. Like George Pullman in the United States, Belgian George Nagelmackers dreamed of something better: a rolling hotel in which travelers could sleep, eat, and relax from one end of their journey to the other. Beginning with the *Orient Express* in 1883, Nagelmackers made that dream a reality, with passengers rolling seamlessly across European borders in rolling stock supplied by his Compagnie Internationale des Wagons-Lits et Grandes Express Europeens ("wagon-lit" being French for sleeping car).

These superbly detailed models replicate the apex of Wagons-Lits car construction, the luxurious sleepers and day Pullmans built in the late 1920s. Featuring hand-finished art deco interiors including walls with inlaid wood designs, these cars delighted travelers on European name trains well into the 1960s.

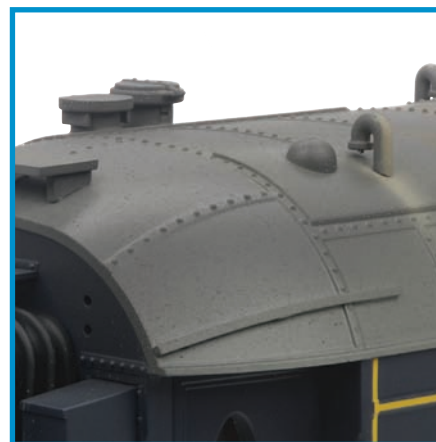
Features Include

- Intricately Detailed, Durable ABS Bodies
- Metal Wheels and Axles
- Die-Cast Trucks
- Operating Die-Cast Metal Couplers (Hi-Rail Only)
- Colorful, Attractive Paint Scheme
- Fast-Angle Hi-Rail Wheel Sets
- Detailed Interiors With Overhead LED Lighting
- Separate Metal Handrails
- Needle-Point Axles
- 1:45 Scale Dimensions
- O Scale Kadee Compatible Coupler Mounting Pads
- Sprung Buffers
- European NEM Fine Scale Couplers Included*
- NEM 365 Coupler Pockets*
- NEM 362 Lenz® Compatible Couplers Included*
- Hi-Rail Wheels Operate On O-72 Curves
- NEM 310/311 Standard Fine Scale Wheels Operate On 84" Radius Curves

* Scale Wheel Models Only



Wagons-Lits - 5-Car Express Passenger Set
 20-81011 (Hi-Rail Wheels) \$849.95
 22-81011 (Scale Wheels) \$849.95



Rheingold Passenger Set



Named for Richard Wagner's *Das Rheingold* opera and advertised as "The Fastest Train from the North Sea to the Alps," the luxurious *Rheingold* was the most romantic way to travel the Rhine River Valley in the era between the World Wars. Our model replicates a baggage wagon and first- and second-class cars, staffed by German railway catering firm Mitropa, from the original train inaugurated in 1928.

With spacious interiors designed by contemporary artists and architects, the *Rheingold* featured a kitchen for every two cars, excellent food, and big picture

windows for viewing some of the finest scenery in Germany, Holland and Switzerland. This super-detailed trainset makes a perfect companion for the M.T.H. Bavarian S 3/6 steam engine, which sped the *Rheingold* between Emmerich and Mannheim, Germany, or for other Dutch, German or Swiss locomotives of the 1920s and '30s.

Features Include

- Intricately Detailed, Durable ABS Bodies
- Metal Wheels and Axles
- Die-Cast Trucks
- Operating Die-Cast Metal Couplers (Hi-Rail Only)
- Colorful, Attractive Paint Scheme
- Fast-Angle Hi-Rail Wheel Sets
- Detailed Interiors With Overhead LED Lighting
- Separate Metal Handrails
- Needle-Point Axles
- 1:45 Scale Dimensions
- O Scale Kadee Compatible Coupler Mounting Pads
- Sprung Buffers
- European NEM Fine Scale Couplers Included*
- NEM 365 Coupler Pockets*
- NEM 362 Lenz® Compatible Couplers Included*
- Hi-Rail Wheels Operate On O-72 Curves
- NEM 310/311 Standard Fine Scale Wheels Operate On 84" Radius Curves

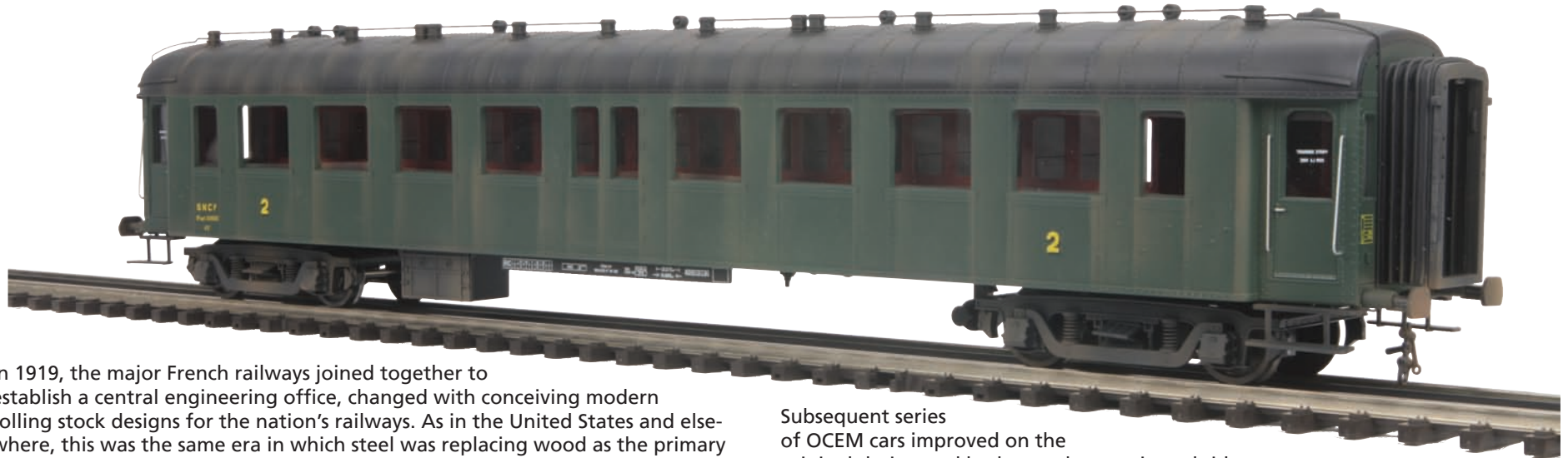


Deutsche Reichsbahn - 5-Car Rheingold Standard Passenger Set

20-81012 (Hi-Rail Wheels) \$899.95
 22-81012 (Scale Wheels) \$899.95



OCEM Passenger Set



In 1919, the major French railways joined together to establish a central engineering office, charged with conceiving modern rolling stock designs for the nation's railways. As in the United States and elsewhere, this was the same era in which steel was replacing wood as the primary material for passenger car construction. So it was that one of the first projects of the new *Office Central d'Elaboration du Matériel* (OCEM) was the design of new steel mainline passenger cars.

The first of the new OCEM passenger cars was delivered in 1924, and 1,036 of the initial series — known as "RA" for *rivets apparents*, or exposed rivets — were delivered by 1932. A postal car version was also built on the same chassis.

Subsequent series of OCEM cars improved on the original design and had smooth, non-riveted sides.

The OCEM cars proved exceptionally durable, with the majority of the fleet serving into the late 1970s and the last OCEM's retiring in 1987. The postal versions served even longer, until the end of postal rail traffic in 1995. Our M.T.H. models replicate the original RA cars in the SNCF livery they wore in their last several decades of service.

Features Include

- Intricately Detailed, Durable ABS Bodies
- Metal Wheels and Axles
- Die-Cast Trucks
- Operating Die-Cast Metal Couplers (Hi-Rail Only)
- Colorful, Attractive Paint Scheme
- Fast-Angle Hi-Rail Wheel Sets
- Detailed Interiors With Overhead LED Lighting
- Separate Metal Handrails
- Needle-Point Axles
- 1:45 Scale Dimensions
- O Scale Kadee Compatible Coupler Mounting Pads
- Sprung Buffers
- European NEM Fine Scale Couplers Included*
- NEM 365 Coupler Pockets*
- NEM 362 Lenz® Compatible Couplers Included*
- Hi-Rail Wheels Operate On O-72 Curves
- NEM 310/311 Standard Fine Scale Wheels Operate On 84" Radius Curves



SNCF - 5-Car OCEM Passenger Car Set
20-81013 (Hi-Rail Wheels) \$899.95



Anatomy of an HO Steam Engine

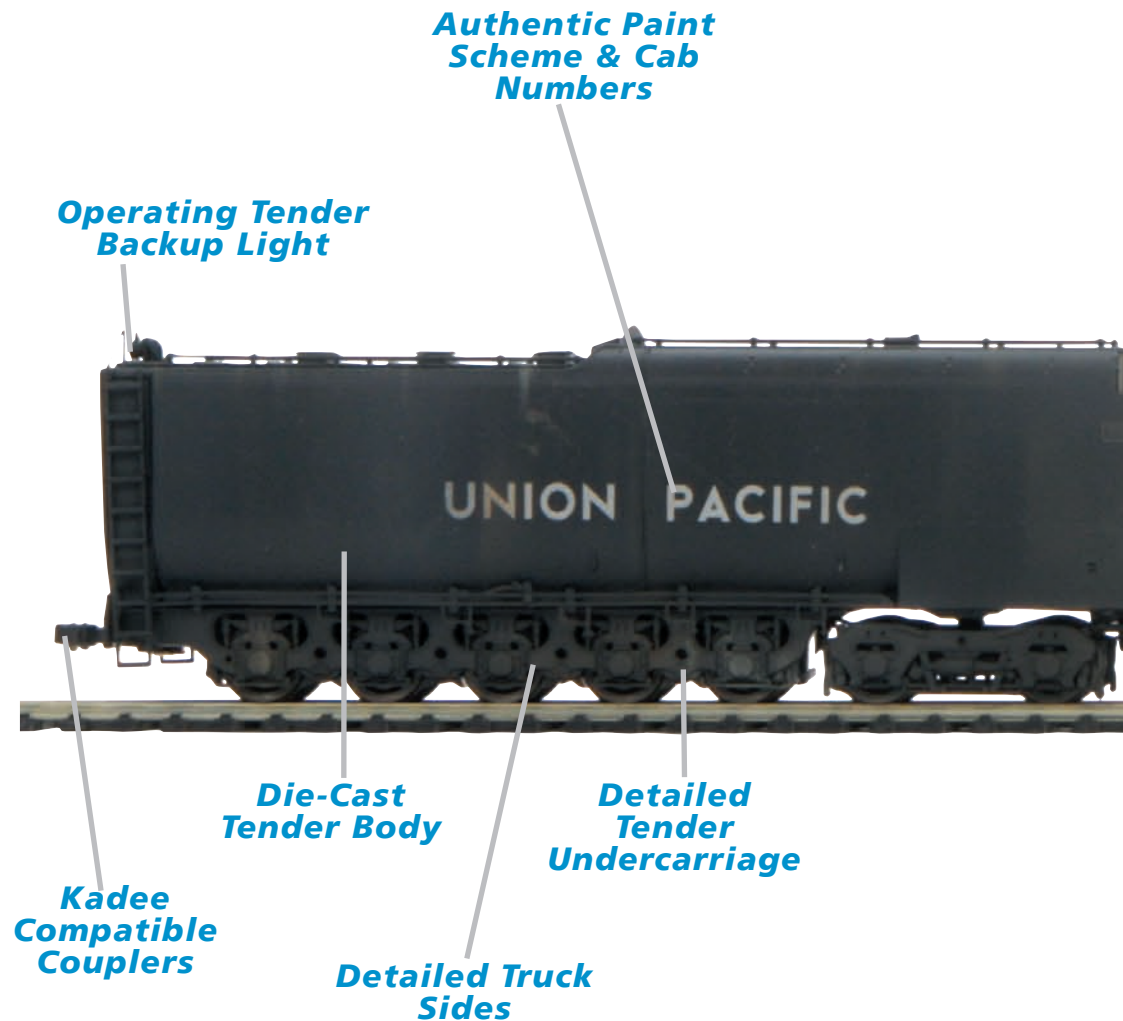
The M.T.H. HO product line features locomotives sporting the absolute latest in cutting-edge digital electronics for the HO market. Our slogan “HO Trains That Do More” is no understatement. Our sound-equipped locomotives are compatible with all HO operating systems: analog DC, NMRA-standard DCC, and M.T.H.’s Digital Command System (DCS). LED lighting, synchronized smoke output and durable ABS or die-cast metal bodies ensure that M.T.H. HO locomotives and rolling stock are worthy additions to any HO roster.

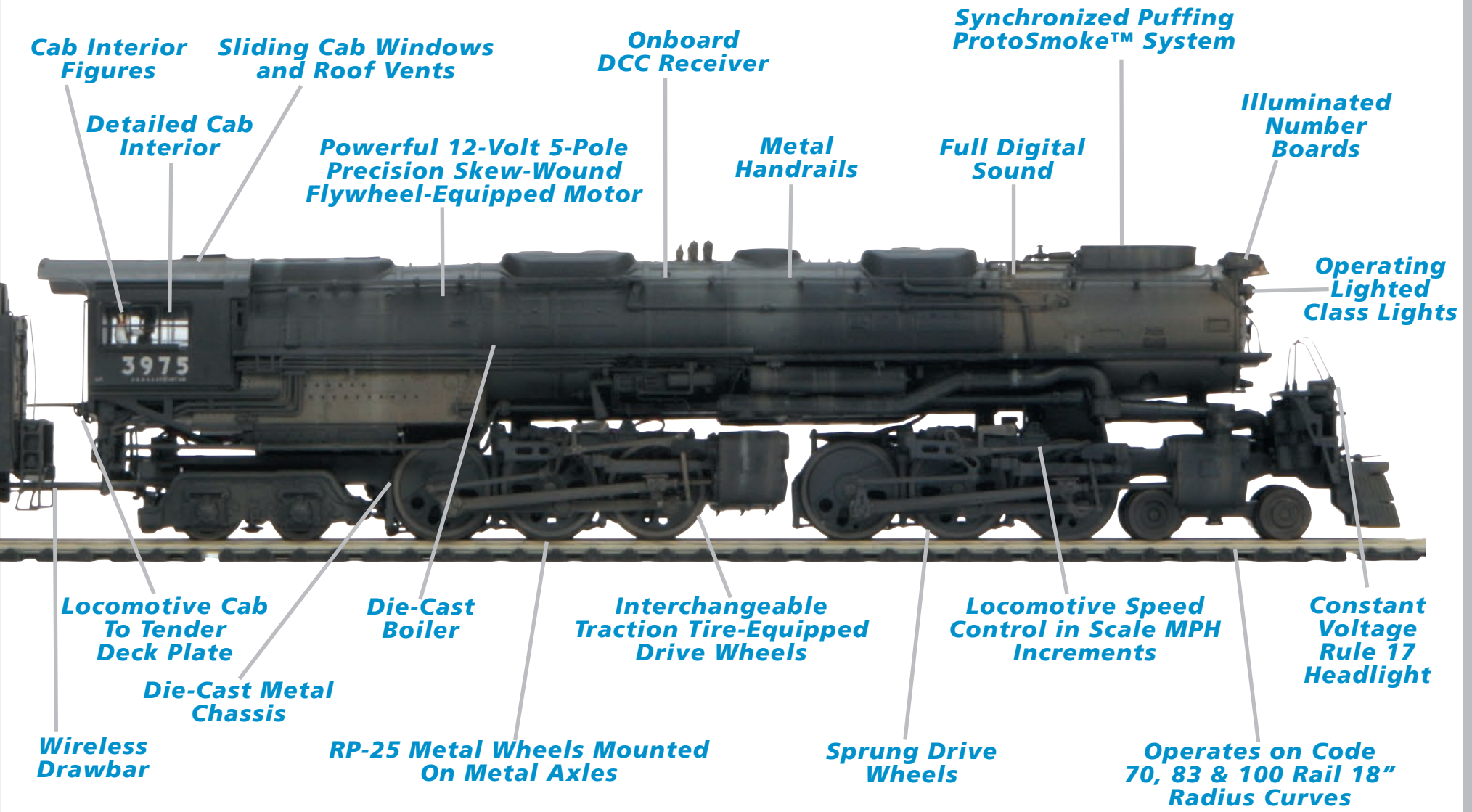
Because it partners our precision drive train — with its powerful 5-pole precision flywheel-equipped, skew-wound motor — with sophisticated software algorithms capable of managing locomotive speed in 1/87th scale increments and automatically sensing your layout’s operating mode, an M.T.H. HO locomotive with Proto-Sound 3.0 is easily the most sophisticated, smoothest running, best sounding locomotive you can buy.

Like all modern electronics, Proto-Sound 3.0 continues to evolve, thanks to its software-based heritage. In 2013, many of our diesel models began shipping with new software that changed and improved some of their operating characteristics. Improvements included the presence of new DCC features including Advanced Consisting, Feature Mapping and Speed Mapping. Changes included the ability of the locomotive — in command mode — to immediately start its sounds upon movement of the locomotive, eliminating the previous requirement to press Startup or F-3 to turn on sounds and lights.

If you operate Märklin HO AC 3-rail trains, choosing any of the Proto-Sound 3E+ models featured in this catalog will give you an opportunity to run sound-equipped North American and European prototypes together on your AC 3-rail HO railroad.

Outfitted with NEM 340 Wheels and NEM 360/362 Coupler & Pocket Assemblies, each Proto-Sound 3E+ model contains a 3rd rail slide shoe for use with Märklin HO stud rail, and can operate on AC power. Like their 3.0 counterparts, 3E+ models feature full digital sound, synchronized puffing steam locomotive smoke timed to the drive wheels’ revolutions, speed control, 28 DCC functions, hundreds of DCS sounds and features, and command control receivers for use with Märklin DCC command control and Motorola 1 and 2 command control. In fact, Proto-Sound 3E+ models will automatically operate in six different modes without user intervention: AC or DC Powered Analog/Conventional, DCC Command Mode with any DCC Controller, Märklin DCC Command Mode, DCS Digital Command System mode, and Motorola 1 and 2 Command Modes.





Cab Interior Figures

Sliding Cab Windows and Roof Vents

Detailed Cab Interior

Powerful 12-Volt 5-Pole Precision Skew-Wound Flywheel-Equipped Motor

Onboard DCC Receiver

Metal Handrails

Full Digital Sound

Synchronized Puffing ProtoSmoke™ System

Illuminated Number Boards

Operating Lighted Class Lights

Locomotive Cab To Tender Deck Plate

Die-Cast Metal Chassis

Die-Cast Boiler

Interchangeable Traction Tire-Equipped Drive Wheels

Locomotive Speed Control in Scale MPH Increments

Constant Voltage Rule 17 Headlight

Wireless Drawbar

RP-25 Metal Wheels Mounted On Metal Axles

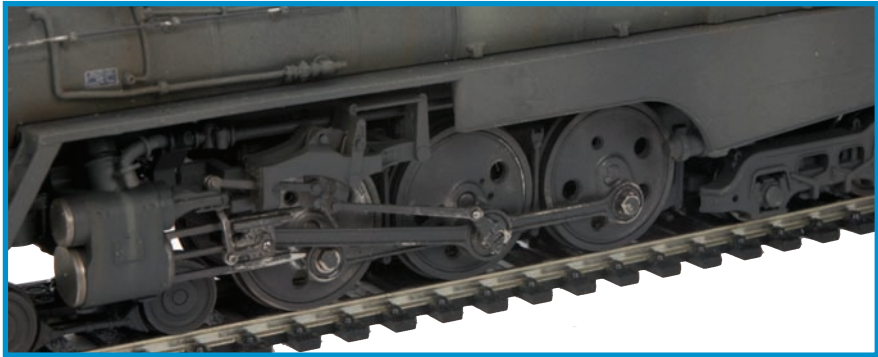
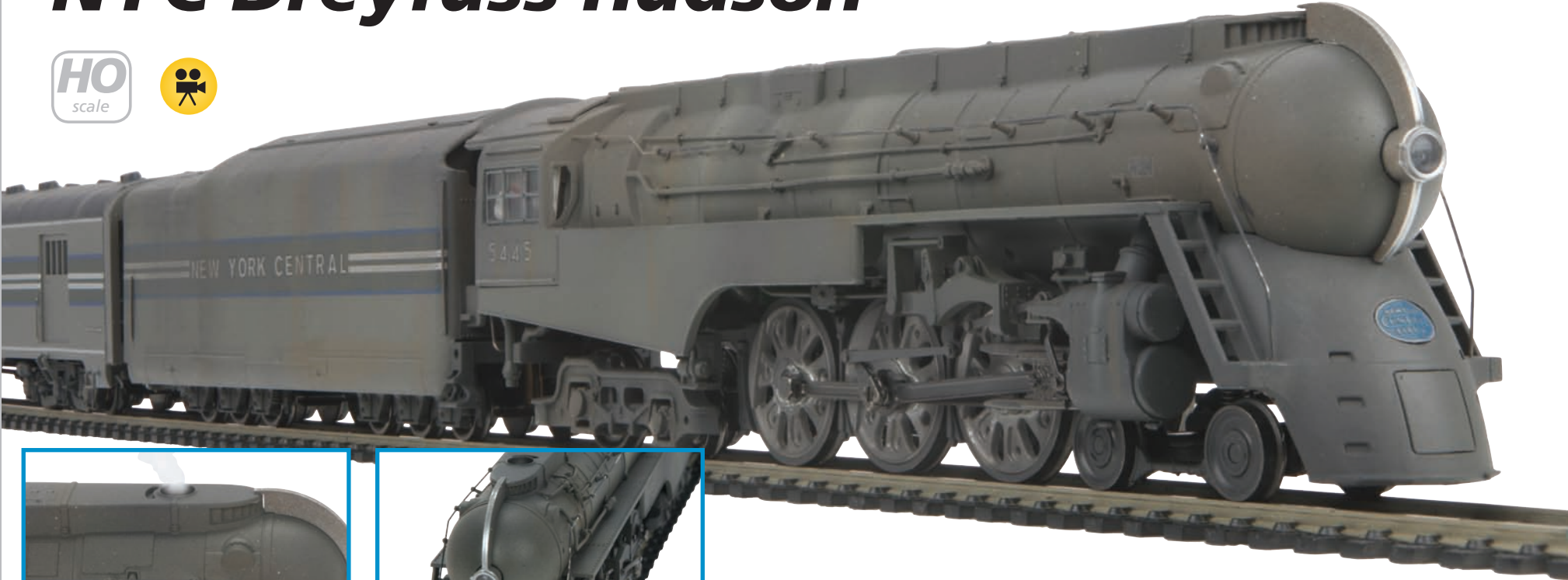
Sprung Drive Wheels

Operates on Code 70, 83 & 100 Rail 18" Radius Curves



NYC Dreyfuss Hudson

HO
scale

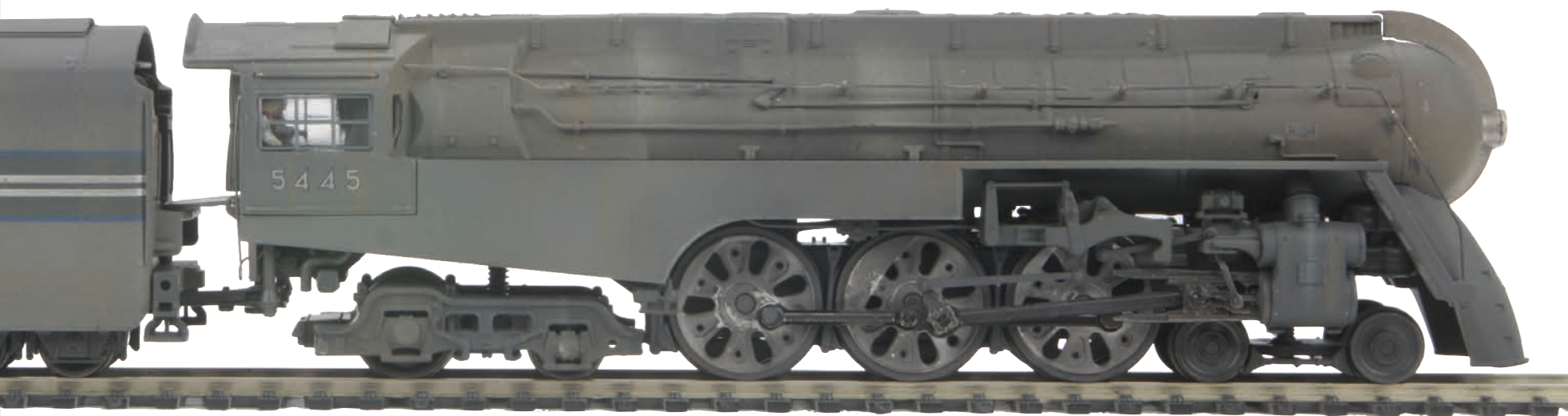


The 1938 edition of the *Twentieth Century Limited* is often regarded as the high water mark of the American passenger train. Thirty-six years to the day after passengers strode down a red plush carpet to the first run of the *Century* — inspiring the phrase “red carpet treatment” — the new incarnation of America’s most famous train pulled out of Grand Central Station behind a homely boxcab electric. Thirty-three miles later, at Harmon, New York, the train was turned over to a streamlined Hudson with a prow reminiscent of a Roman gladiator’s helmet, and the effect was complete. From engine to observation car, in every detail down to the dining car china and matchbook covers, the train had been styled by Henry Dreyfuss, a giant in the then-new profession of industrial design. The design was so handsome and striking that it became a symbol of the New York Central railroad and, later, of the entire Art Deco era. Decades later, *Time* magazine selected the locomotive as its single symbol of the twentieth century.

Advertised as “the first all-room train in America, 16 hours between New York and Chicago,” the 1938 *Century* was the last word in luxury travel. Every afternoon the famous red carpet was unfurled in Grand Central Station, welcoming passengers aboard. Taking aim at Pennsy’s rival *Broadway Limited*, which had to cross the Allegheny Mountains to make the same trip, the New York Central promoted itself as “The Water Level Route... You Can Sleep.”

Leading the train was one of the best examples of streamlining ever applied to a locomotive. Unlike Raymond Loewy’s design for the *Broadway Limited’s* Pacifics, which largely hid the engine under a streamlined shroud, Dreyfuss’ styling clung tightly to the locomotive, glorifying rather than hiding its shape and boldly displaying the wheel and rod motion that make a steam engine so exciting. No wonder the Dreyfuss Hudson has been a favorite image of graphic artists ever since.

Returning to the M.T.H. lineup for 2014 is the most fun-to-operate HO model of this landmark locomotive ever made. Our Dreyfus Hudson is offered in several prototypical versions with either the original 1938 paint scheme with blue edging on the stripes, or the cleaner, more simplified 1940 scheme. Play the departure announcements for the *Twentieth Century Limited* and begin your trip so smoothly that your passengers won’t realize they’re moving. Listen to the chuff sounds and synchronized puffs of smoke accelerate as your train picks up speed. If you’re operating with the M.T.H. DCS system, you can even make your own signature sounds with the quillable whistle feature. In model railroading, it doesn’t get any better than this.



4-6-4 Dreyfuss Steam Engine w/Proto-Sound 3.0, Cab No. 5445
80-80004-1 (Boxpok drivers/plain bearings on side rods) \$569.95

NYC Dreyfuss Hudson



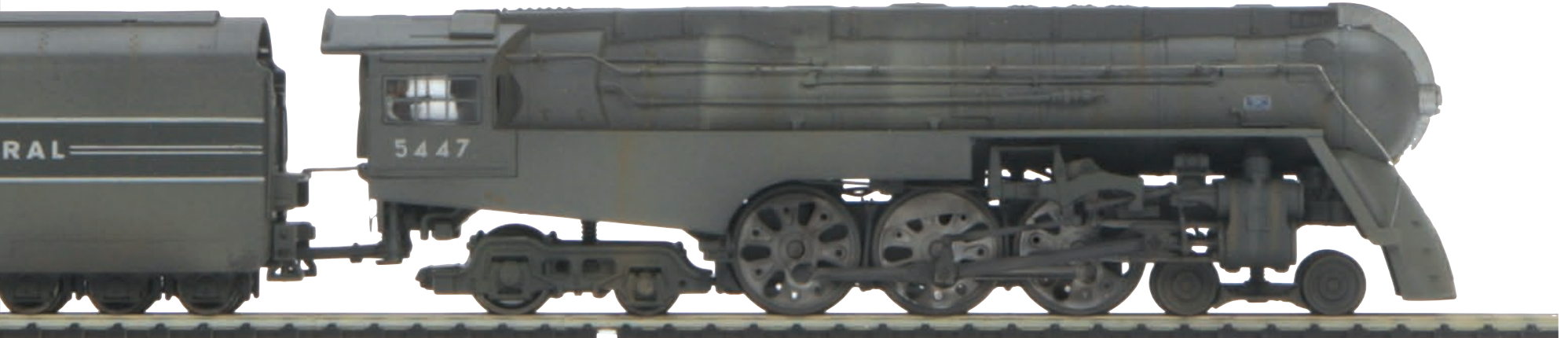
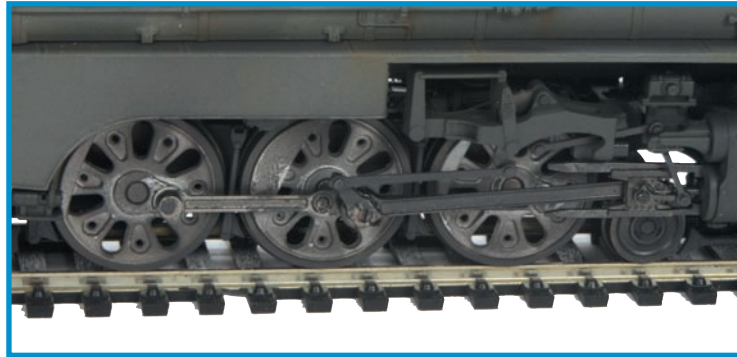
Features Include

- Die-Cast Boiler and Chassis
- Die-Cast Tender Body
- Authentic Paint Scheme
- Real Tender Coal Load
- Engineer and Fireman Figures
- Metal Handrails and Whistle
- RP25 Metal Wheels
- Interchangeable RP25 Metal Drive Wheels w/o Traction Tires
- Sprung Drivers
- (2) #158 Scale Kadee Whisker Couplers
- Prototypical Rule 17 Lighting
- Constant Voltage Headlight
- Lighted Cab Interior
- Operating Tender Back-up Light
- Powerful 5-Pole Precision Flywheel-Equipped Skew-Wound Motor
- Synchronized Puffing ProtoSmoke™ System
- Locomotive Speed Control In Scale MPH Increments
- Wireless Drawbar
- 1:87 Scale Proportions
- Operates On Code 70, 83 and 100 Track
- Proto-Sound 3.0 With The Digital Command System Featuring Quillable Whistle And Passenger Station Proto-Effects
- Unit Measures: 13 1/2" x 1 1/2" x 2 1/8"
- Operates On 18" Radius Curves





4-6-4 Dreyfuss Steam Engine w/Proto-Sound 3.0, Cab No. 5450
80-80005-1 (Scullin drivers/roller bearings on side rods) \$569.95



New York Central - 4-6-4 Dreyfuss Steam Engine with Proto-Sound 3.0, Cab No. 5447
80-80003-1 (Boxpok drivers/plain bearings on side rods) \$569.95

Twentieth Century Limited Passenger Sets

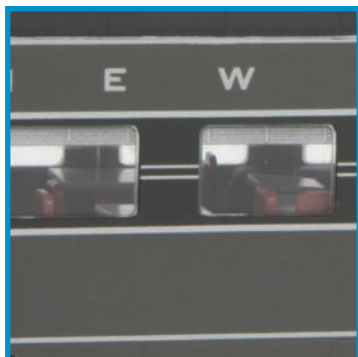
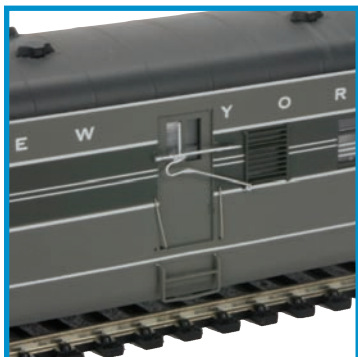
HO
scale



New York Central - 5-Car Passenger Set (1940 Twentieth Century Limited)
80-80016 \$599.95



New York Central - 5-Car Passenger Set (1938 Twentieth Century Limited)
80-80015 \$599.95



While the Pennsy's rival *Broadway Limited* equaled the *Twentieth Century's* speed and accommodations, the *Century* was the clear winner in the public's eye, usually running in two sections to meet demand while the *Broadway* ran with empty seats. In styling the interiors for the 1938 *Century*, Henry Dreyfuss made frequent use of subdued blues and grays and leather seating — creating an elegant setting to complement the exciting clientele that frequented the *Century*, a favorite of movie and theatre people and businessmen on the rise. One highlight was the dual-purpose dining cars, whose white linens were replaced with rust-colored table cloths when the cars became the "Café Century" night club after dinner.

The exterior styling of the cars, however, with blue, white, and gray striping, was soon perceived as too "busy." By 1940, the train had been repainted in an improved, slightly simpler scheme that eliminated the blue accents. Complement your Dreyfuss Hudson with these accurate models of the last steam-hauled Centuries, in both the original 1938 and revised 1940 paint schemes.

Features Include

- Intricately Detailed, Durable ABS Bodies
- Metal Wheels and Axles
- Overhead Interior Lighting
- Detailed 4-Wheel and 6-Wheel Trucks
- Authentic Paint Scheme
- End-of-Car Diaphragms
- Separate Metal Handrails
- Detailed Car Interiors
- Kadee-Compatible Couplers
- Detailed Car Undercarriages
- 5-Car Sets Feature: (1) RPO, (1) Dormitory-Lounge Coach, (1) 17 Roomette Sleeper, (1) Diner Car, (1) Observation Car
- Each Car Measures: 11 1/2" x 1 7/16" x 1 7/8"
- Operates On 22" Radius Curves



Empire State Express

HO
scale



Before it was eclipsed by the *Twentieth Century Limited*, the *Empire State Express* was the New York Central's flagship passenger run. In 1893, it was the *Empire State Express*, led by a hot-rod 4-4-0 with outlandishly large drivers, that became the first man-made vehicle to exceed 100 mph and made the New York Central famous around the world. Beyond the record-setting run, the *Empire State Express* gained recognition as a pioneer in high-speed rail service on its New York-Buffalo-Cleveland route. *Scientific American* noted in 1898 that the *Empire State Express* "opened the present remarkable era of fast, long distance express trains. [It] will always figure conspicuously in the annals of the world's railroads as being the first to maintain a regular schedule speed of over 52 miles an hour for an unprecedented distance and for runs of unprecedented length between stops."

But by the Roaring Twenties, most high-class rail travel was by Pullman, and coach trains on daytime

runs, like the *Empire State Express*, were often seen as a less desirable way to travel. High-quality coach travel made a comeback during the Depression, however, as railroads sought to attract customers by offering less-expensive fares combined with upgraded amenities. So it was that on December 7, 1941, with much fanfare, the New York Central launched a newly equipped *Empire State Express* with two Henry-Dreyfus-styled Hudsons and gleaming, streamlined Budd-built train sets. Passengers on the inaugural run were surprised at the scarcity of trackside observers — until they heard about the event halfway around the world that had overshadowed all other news that December Sunday.

The 1941 *ESE* was a train with one foot in the past and the other in the future. Its reserved-seat, stainless steel Budd coaches and parlor cars presaged the postwar streamliners, America's last hurrah of luxury passenger travel. But its two specially styled Hud-

sons, Nos. 5426 and 5429, were clearly a bridge — albeit a beautiful one — between a dying technology and cars that belonged behind a diesel. Designer Henry Dreyfus blended the stainless fluting of Budd's streamliners with his design for the 1938 *Twentieth Century* Hudsons, arguably among the best-looking streamlined steamers ever built. After the war, however, more powerful Niagaras bumped the *ESE* Hudsons to lesser trains, and by 1949 their streamlining had been removed.

Relive the brief but glorious era of streamlined steam on the Water Level Route with this superbly detailed locomotive. With its fully featured sound system, *Empire State Express* passenger station announcements, details including the prototype's illuminated driver lights, and the ability to start your train so smoothly you won't spill a drop of water in the diner, this is surely the best HO model of the *ESE* Hudson ever built.



New York Central - 4-6-4 Empire State Express Steam Engine
80-80002-1 Proto-Sound 3.0 \$569.95



Features Include

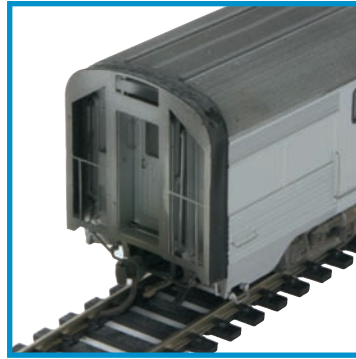
- Die-Cast Boiler and Chassis
- Die-Cast Tender Body
- Authentic Paint Scheme
- Real Tender Coal Load
- Engineer and Fireman Figures
- Metal Handrails and Whistle
- RP25 Metal Wheels
- Interchangeable RP25 Metal Drive Wheels with out Traction Tires
- Sprung Drivers
- (2) #158 Scale Kadee Whisker Couplers
- Prototypical Rule 17 Lighting
- Constant Voltage Headlight
- Illuminated Driver Lights
- Lighted Cab Interior
- Operating Tender Back-up Light
- Powerful 5-Pole Precision Flywheel-Equipped Skew-Wound Motor
- Synchronized Puffing ProtoSmoke™ System
- Locomotive Speed Control In Scale MPH Increments
- Wireless Drawbar
- 1:87 Scale Proportions
- Operates On Code 70, 83 and 100 Track
- Proto-Sound 3.0 With The Digital Command System Featuring Quillable Whistle And Passenger Station Proto-Effects
- Unit Measures: 13 1/2" x 1 1/2" x 2 1/8"
- Operates On 18" Radius Curves

Empire State Express Passenger Set



New York Central - 5-Car Passenger Set (Empire State Express)
80-80014 \$599.95

The re-equipped 1941 *Empire State Express* represented the finest in comfortable daytime travel at an affordable price. In addition to the conductor, a uniformed stewardess helped passengers to their reserved coach or parlor car seats. Dining car service was augmented by a tavern-lounge-baggage at the front of the train and a tavern-lounge-observation at the rear. Thirty-two brand-new, stainless steel Budd streamliners were purchased by the New York Central to cover the service; 26 of the cars were named for New York governors, four of whom later became President, and one of whom — John Jay — was the first Chief Justice of the United States. To further the sense of pride in the history of the New York Central's home state, the cars' coral peach walls and blue-green upholstery were complemented by nearly 40 original mural paintings of historical scenes along the railroad's route.



Features Include

- Intricately Detailed, Durable ABS Bodies
 - Metal Wheels and Axles
 - Overhead Interior Lighting
 - Detailed 4-Wheel Trucks
 - Authentic Paint Scheme
 - End-of-Car Diaphragms
 - Separate Metal Handrails
 - Detailed Car Interiors
 - Kadee-Compatible Couplers
 - Detailed Car Undercarriages
- 5-Car Sets Feature:
 - (1) Baggage Car,
 - (1) Parlor Car, (1) Coach,
 - (1) Diner,
 - (1) Observation Car
 - Each Car Measures: 11 1/2" x 1 7/16" x 1 7/8"
 - Operates On 22" Radius Curves



4-6-6-4 Challenger



Features Include

- Die-Cast Boiler and Chassis
- Die-Cast Tender Body
- Authentic Paint Scheme
- Engineer and Fireman Figures
- Metal Handrails, Bell and Whistle
- RP25 Metal Wheels
- Interchangeable RP25 Metal Drive Wheels w/o Traction Tires
- Sprung Drivers
- (2) #158 Scale Kadее Whisker Couplers
- Prototypical Rule 17 Lighting
- Constant Voltage Headlight
- Lighted Cab Interior
- Operating Tender Back-up Light
- Powerful 5-Pole Precision Flywheel-Equipped Skew-Wound Motor
- Synchronized Puffing ProtoSmoke System
- Locomotive Speed Control In Scale MPH Increments
- Wireless Drawbar
- 1:87 Scale Proportions
- Operates On Code 70, 83 and 100 Track
- Proto-Sound 3.0 With The Digital Command System Featuring Quillable Whistle And Passenger Station or Freight Yard Proto-Effects
- Unit Measures: 15 3/8" x 1 3/8" x 1 9/16"
- Operates On 18" Radius Curves

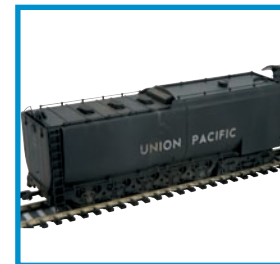


The first Challengers were conceived in 1936 to replace the Union Pacific's fleet of three-cylinder 4-12-2s. With a 50 mph top speed, the 4-12-2s had been the road's primary fast freight engines when built in 1926. But a decade later they were considered slow and difficult to maintain. So American Locomotive Works (Alco) was commissioned to build what became one of the most successful fleets of articulated engines on any railroad. Forty Challengers were built in the 1930s. The pressure of wartime traffic brought an order for 65 more of these 70 mph greyhounds in 1942-44, with improvements based on lessons learned from the UP's 4-8-8-4 Big Boys. In service, the Challengers often complemented the Big Boys, speeding traffic over less rugged territory and handing it over to the Big Boys for the passage over Utah's Wasatch Mountains.

The Challengers were steam power at its zenith. They incorporated all the technology that represented super-power steam — including roller bearings on all axles and drive rods — but none of the foolishness that characterized some of the desperate efforts to save steam in the post-war years. While most Challengers hauled freight, a number were assigned to passenger service in the Pacific Northwest, where they were converted to oil burners, equipped with smoke lifters ("wind wings" in UP parlance), and painted two-tone gray in 1946.

It was in a roundabout way that six Challengers ordered by the UP ended up hauling coal for the Clinchfield Railroad. In the midst of World War II, the War Production Board refused the Rio Grande's request to order new articulateds of its own design and instead diverted the last six Challengers in UP's order to the D&RGW — which turned up its nose at the locos and decided to lease them for the duration and return them after the war. In 1947, the War Assets Administration sold the orphan locos to the Atlantic Coast Line and Louisville & Nashville Railroads, which put the Challengers to work on their jointly-owned subsidiary, the Clinchfield, Carolina & Ohio. Thus six engines intended to speed over western deserts and mountains ended up thundering through Appalachia.

While ours is not the first HO model of this massive prototype, we believe it is certainly the best, equipped with authentic articulated sounds, including the front and rear engines going in and out of sync; actual UP whistle sounds, which can be "quilled," just as a real engineer "plays" the whistle control; die-cast construction and optional traction tires for pulling power to match the prototype; slow-speed capability down to a steady 3 scale miles per hour; and dozens of added-on metal detail parts.



Union Pacific - 4-6-6-4 Challenger (Oil Burner) Steam Engine
80-80006-1 Proto-Sound 3.0 \$749.95

4-8-4 GS-4



In 1937 the Southern Pacific trumpeted a new train in full-page magazine ads, describing their Daylight route that linked Los Angeles and San Francisco “in a glorious daylight trip, streaking along the Pacific Ocean for more than a hundred breathless miles.” Travelers were invited to “Step inside the Daylight and see the beauty and luxury that have already won the West.” Presenting a glorious streak of orange and red from locomotive to observation car, the Daylights were a sharp departure from the SP’s normal dark olive passenger cars.

Leading the trains were the Southern Pacific’s class GS Northern, arguably among the handsomest steam engines ever built. Constructed by Lima Locomotive Works, inventor of the super-power concept, the 4-8-4s had the combination of power and speed that characterized steam power at its zenith. Class GS-4 engines, delivered in 1941

and 1942, were among the last and best-looking of the breed, with tall 80” drivers and enclosed all-weather cabs. In addition to handling premier passenger trains, the 4-8-4s were regularly used in high-speed freight service on the San Francisco-Los Angeles Overnight.

In 1975-76, a proud exhibition of American historical and cultural artifacts toured the country. What made this Bicentennial celebration so special was where it was housed: in the 23-car-long American Freedom Train. The Freedom Train criss-crossed the U.S. with its patriotic cargo, letting Americans celebrate our heritage at every stop.

Southern Pacific’s repainted No. 4449 GS-4 Steam Engine, in the very livery sported on these pages, saw more time at the head of the Freedom Train than any other engine.



American Freedom - 4-8-4 GS-4 Steam Engine
80-80001-1 Proto-Sound 3.0 \$569.95
80-80001-5 Proto-Sound 3E+ \$569.95



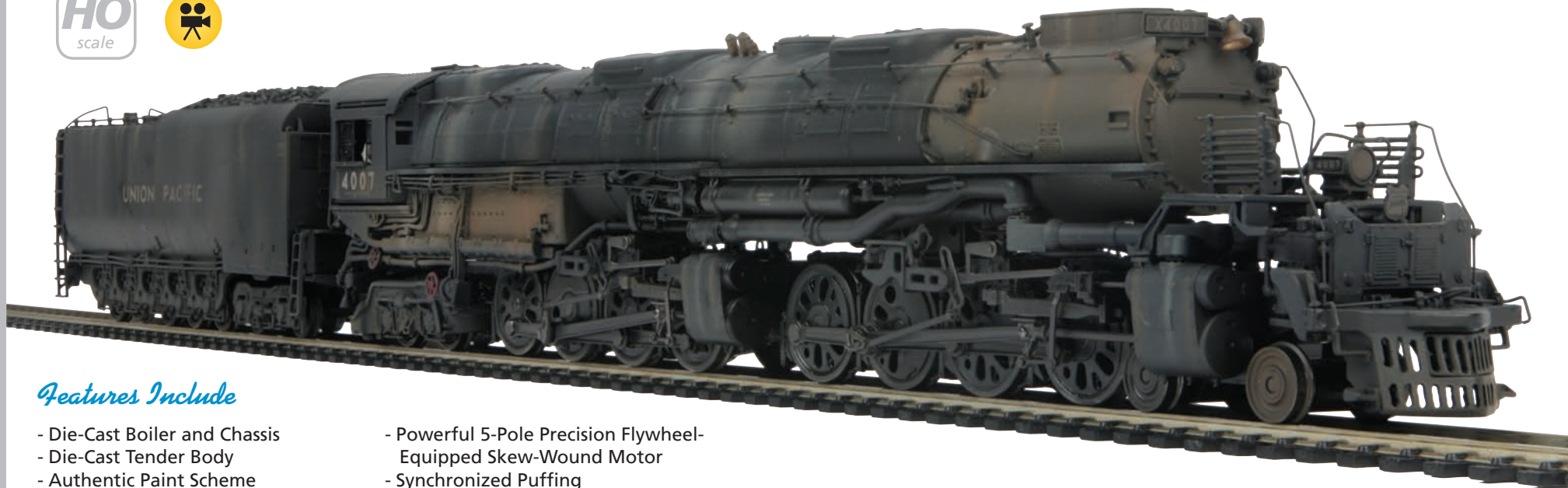
Features Include

- Die-Cast Boiler and Chassis
- Die-Cast Tender Body
- Authentic Paint Scheme
- Engineer and Fireman Figures
- Metal Handrails and Bell
- RP25 Metal Wheels
- Interchangeable RP25 Metal Drive Wheels w/o Traction Tires
- NEM 340 Metal Wheels*
- Sprung Drivers
- (2) #158 Scale Kadee Whisker Couplers
- NEM 360/362 Coupler and Pocket Assembly*
- #18 U.S. Kadee® Coupler Compatible*
- Prototypical Rule 17 Lighting
- Constant Voltage Headlight
- Operating Class Lights
- Operating Numberboard Lights
- Lighted Cab Interior
- Operating Tender Back-up Light
- Operating MARS Light
- Powerful 5-Pole Precision Flywheel-Equipped Skew-Wound Motor
- Synchronized Puffing Proto-Smoke™
- Locomotive Speed Control In Scale MPH Increments
- Wireless Drawbar
- 1:87 Scale Proportions
- Operates On Code 70, 83 and 100 Track
- Proto-Sound 3.0 With The Digital Command System Featuring Quillable Whistle with Passenger Station Proto-Effects
- Unit Measures: 15 3/4" x 2 1/4" x 1 1/2"
- Operates On 22" Radius Curves

* Available on Proto-Sound 3E+ Models



4-8-8-4 Big Boy

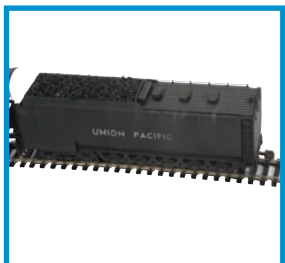
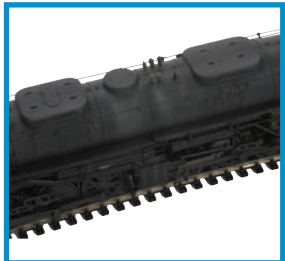
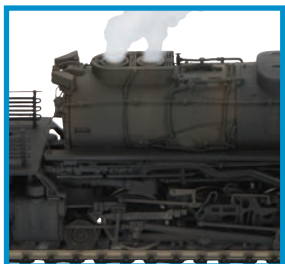


Features Include

- Die-Cast Boiler and Chassis
- Die-Cast Tender Body
- Authentic Paint Scheme
- Real Tender Coal Load
- Engineer and Fireman Figures
- Metal Handrails and Bell
- Metal Whistle
- RP25 Metal Wheels
- Interchangeable RP25 Metal Drive Wheels w/o Traction Tires
- NEM 340 Metal Wheels*
- Sprung Drivers
- (2) #158 Scale Kadee Whisker Couplers
- NEM 360/362 Coupler and Pocket Assembly*
- #18 U.S. Kadee® Coupler Compatible*
- Prototypical Rule 17 Lighting
- Constant Voltage Headlight
- Lighted Cab Interior
- Operating Tender Back-up Light
- Powerful 5-Pole Precision Flywheel-Equipped Skew-Wound Motor
- Synchronized Puffing ProtoSmoke™ System
- Locomotive Speed Control In Scale MPH Increments
- Wireless Drawbar
- 1:87 Scale Proportions
- Operates On Code 70, 83 and 100 Track
- Proto-Sound 3.0 With The Digital Command System Featuring Quillable Whistle With Freight Yard Proto-Effects
- Unit Measures: 18 11/16" X 1 9/16" X 2 1/4"
- Operates On 18" Radius Curves



* Available on Proto-Sound 3E+ Models



Just months before Pearl Harbor, the American Locomotive Company delivered the first Big Boy to the Union Pacific Railroad. The UP's Department of Research and Mechanical Standards had designed the locomotive for a specific task: to pull a 3600-ton train unassisted over the Wasatch Mountains in Utah. While the Big Boy is often cited as the biggest steam locomotive ever built, in fact it is not. The Norfolk & Western's Y6 and A, the Duluth Missabe & Iron Range's Yellowstones, and the Chesapeake and Ohio's Alleghenys were all in the same league, and some exceeded the Big Boy's weight and power.

But in the battle for hearts and minds, the Big Boy won. Perhaps it was the name, simple and direct, scrawled on a locomotive under construction by an Alco shop worker. Maybe it was timing, as the Big Boys hit the road just when America needed symbols to rally around. Maybe the UP's publicity department just did a better job of telling the world what great equipment they had. Whatever the reason, the Big Boy captured the imagination of railfans and the American public over the ensuing years, perhaps more than any other steam engine. In many ways it is the symbolic locomotive of the American West, as big and powerful as the country it sped through.

Writer Henry Comstock beautifully described the Big Boy's place at the apex of steam engine history: "A Union Pacific 'Big Boy' was 604 tons and 19,000 cubic feet of steel and coal and water, poised upon 36 wheels spaced no wider apart than those of an automobile. That it could thunder safely over undulating and curved track at speeds in excess of 70 miles an hour was due in large measure to the efforts of two long-forgotten pioneers. As early as 1836, the basic system that held its wheels in equalized contact with the rails was patented by a Philadelphian named Joseph Harrison; and a French technical writer, Anatole Mallet, first thought to couple two driving units heel to toe below one boiler in 1874."

This enduring symbol of American railroading returns to the rails, complete with the industry-leading speed control, smoke output, and range of accurate sounds that characterize all MTH locomotives. Our model features a precision 12 volt 5-pole skew wound motor and die-cast metal construction for pulling power and speed that rival the original Big Boy — as well as authentic articulated chuffing sounds with the two engines drifting in and out of sync.



Union Pacific - 4-8-8-4 Big Boy (Original) Steam Engine w/Proto-Sound 3.0

80-80007-1	Proto-Sound 3.0	\$749.95
80-80007-5	Proto-Sound 3E+ (3-Rail)	\$749.95

Alco PA A-B Set



The PA was Alco's glamour girl. While Electro-Motive's E-units easily outsold Alco's passenger engine, the PA is widely regarded as the most beautiful first-generation diesel — period. Perhaps no other locomotive looked so right at the head of the streamlined trains of the late forties and fifties that were the last hurrah of American long-distance passenger service. The 294 PA's and cabless PB's built between 1946 and 1953 powered some of America's most famous name trains, from the Southern Pacific's *Daylight* to the Pennsylvania's *Broadway Limited*.

The muscular PA profile and its elegant nose, with the characteristic grille around the headlight, were designed by Ray Patten, General Electric's head of industrial design. At the time, GE and Alco were partners in the locomotive business, with GE making the electrical equipment for all Alco diesels. Patten's design was described as "a locomotive so distinctive and so powerful looking that it actually helps railroads sell their services to passengers and shippers." While Alco would later fall by the wayside, GE went on to become America's largest locomotive builder by the early 1990's.

Under the hood of the PA beat a 16-cylinder model 244 prime mover that developed 2000 hp. Depending on their gearing, PA's could hustle a passenger consist along at up to 100 mph.

Long after all other PA's had gone to scrap, four restored ex-Santa Fe units remained in service on the Delaware & Hudson into the late 1970s. Sold to the Ferrocarriles Nacionales de Mexico (FNM) in 1978, most of the units eventually deteriorated to junk status, although one remained operational. But in April of 2000, Doyle McCormack — who also happens to be the engineer of No. 4449, the restored Southern Pacific *Daylight* — and the Smithsonian Institution repatriated two of the junked units for rebuilding. One of the units will be restored to Santa Fe livery for static display, while Doyle is bringing the other PA back to life in the Nickel Plate Road "Bluebird" scheme. You can follow the progress of Doyle's labor on the Web site www.nkp190.com.

Recreate the excitement of first-class passenger travel in the middle of the last century with these Alco PA locomotives. Our ProtoSound 3.0 sound and control system brings you the authentic sounds of an Alco

prime mover and station announcements for a Union Pacific name train — along with the ability to start your train so gently you won't spill the water in the diner, and then accelerate up to scale speeds of over 100 mph, just like the prototype.



Features Include

- Intricately Detailed, Durable ABS Bodies
- Metal Chassis
- Moveable Roof Fans
- Metal Body Side Grilles
- (2) Engineer Cab Figures
- Authentic Paint Scheme
- Metal Wheels and Axles
- RP25 Metal Wheels
- NEM 340 Metal Wheels*
- (2) Operating Kadee Compatible Remote Controlled Proto-Couplers
- (2) NEM 360/362 Coupler & Pocket Assemblies*
- #18 U.S. Kadee® Coupler Compatible*
- (2) #158 Scale Kadee Whisker Couplers
- Prototypical Rule 17 Lighting
- Directionally Controlled Constant Voltage LED Headlight
- Lighted Cab Interior
- Illuminated Number Boards
- Lighted Class Lights
- Operating MARS Light
- Powerful 5-Pole Precision Flywheel-Equipped Skew-Wound Balanced Motor
- Operating Smoke Unit in A-Unit
- Locomotive Speed Control In Scale MPH Increments
- Operates On Code 70, 83 and 100 Track
- 1:87 Scale Proportions
- Proto-Sound 3.0 With The Digital Command System
Featuring Passenger Station Proto-Effects
- A Unit Measures: 9 1/4" x 1 3/8" x 2 1/8"
- B Unit Measures: 8 3/4" x 1 3/8" x 2 1/8"
- Operates On 22" Radius Curves



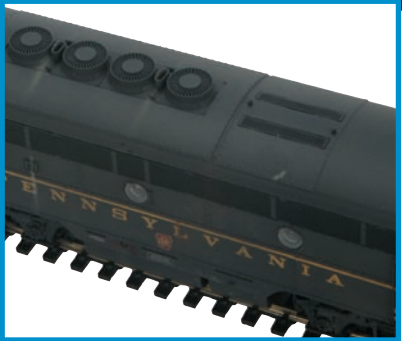
* Available on Proto-Sound 3E+ Models



Union Pacific - Alco PA A-B Set		
80-80013-1	Proto-Sound 3.0	\$629.95
80-80013-5	Proto-Sound 3E+ (3-Rail)	\$629.95

EMD F3 A-B Set

HO
scale





From 1942-1945, Electro Motive Division's F-unit was the only road freight diesel built in America. While the War Production Board limited competitors Alco and Baldwin to diesel switcher and steam locomotive production during World War II, EMD's 1,350 hp FT became a runaway best-seller. By war's end, Electro Motive had a lead over its competitors that would last until they closed their doors.

With production restrictions lifted and the U.S. economy humming with pent-up demand, railroads clamored for new diesels to replace a steam fleet exhausted by wartime traffic. In July 1946, EMD introduced a new model F-unit, the F3. Horsepower was upgraded to 1,500 and lessons learned on the FT gave the F3 better reliability and lower maintenance. Under the hood throbbed an improved 567-series V-12 engine. With 567 inches of displacement per cylinder, this same engine would power virtually the entire first generation of EMD diesel locomotives.

The F3 hit the market in an era when almost every boy in America wanted toy trains for Christmas, and F3 models quickly became a hot topic in letters to Santa. Such was the desire of railroads for publicity that model train manufacturer Lionel convinced the Santa Fe, the New York Central, and EMD to share the tooling costs for its top-of-the line F3. Even today, half a century later, the Santa Fe F-unit remains an icon of railroading to the American public.

M.T.H. is proud to offer the drama of this postwar locomotive in HO scale. The M.T.H. HO F3 Diesel Sets include Proto-Sound 3.0 offering authentic EMD 567 prime mover sounds, first generation diesel horn and bell, station sounds, brake sounds, and cab chatter. The F3 features superb detailing that characterizes all M.T.H. HO diesels, with added-on details that include legible builder's plates, grab irons, multiple-unit hoses, rooftop lift rings, see-through rooftop fans, steam generator exhaust stack (for passenger versions), windshield wipers, and trucks with separately-applied spring hangers, brake cylinders, and air pipes.



Pennsylvania	F-3 A/B Set	
80-80012-1	Proto-Sound 3.0	\$589.95
80-80012-5	Proto-Sound 3E+ (3-Rail)	\$589.95

EMD F3 A-B Set



HO
scale





Features Include

- Intricately Detailed, Durable ABS Bodies
- Metal Chassis
- Moveable Roof Fans
- Metal Body Side Grilles
- (2) Engineer Cab Figures In Each A Unit
- Authentic Paint Scheme
- Metal Wheels and Axles
- RP25 Metal Wheels
- (2) Operating Kadee Compatible Remote Controlled Proto-Couplers
- (2) #158 Scale Kadee Whisker Couplers
- #18 U.S. Kadee Coupler Compatible*
- Prototypical Rule 17 Lighting
- Directionally Controlled Constant Voltage LED Headlight
- Lighted Cab Interior
- Illuminated Number Boards
- Lighted Marker Lights
- Operating MARS Light (Southern Pacific version)
- Powerful 5-Pole Precision Flywheel-Equipped Skew-Wound Balanced Motor in Each Unit
- Locomotive Speed Control In Scale MPH Increments
- Operates On Code 70, 83 and 100 Track
- 1:87 Scale Proportions
- Proto-Sound 3.0 With The Digital Command System Featuring Passenger Station or Freight Yard Proto-Effects
- A Unit Measures: 7" x 1 7/16" x 2 3/8"
- B Unit Measures: 7" x 1 7/16" x 2 3/8"
- Operates On 18" Radius Curves

* Available on Proto-Sound 3E+ Models

Southern Pacific - F-3 A/B Set

80-80011-1	Proto-Sound 3.0	\$589.95
80-80011-5	Proto-Sound 3E+ (3-Rail)	\$589.95

EMD GP35

HO
scale



Produced from 1963 to 1966, the GP35, along with its six-axle SD35 sibling, marked both an end and a beginning. They were the last road diesels to use the EMD 567 motor that had powered switchers, F-units, and Geeps since 1939 (so named because each cylinder displaced 567 cubic inches). For the horsepower race of the 1960s, EMD tweaked the 567 to a turbocharged V-16 delivering 2500 hp. That was it for the 567, however, and in 1966 the baton was passed to the more powerful model 645. But while the “35 line” diesels ushered out an old motor, they inaugurated a new look. Their angled cab roofs and the clean, squared-off lines of their car bodies established the look of EMD power for the next three decades.

Introduced to compete with General Electric’s landmark U25B, which had ushered in the second generation of diesel power, the GP35 outsold the “U-Boat”

nearly three to one. There was a strong market for new power in the mid-1960s because the first-generation diesels that had vanquished steam were wearing out. While first-generation rosters had often been a hodgepodge of manufacturers and models as railroads experimented with the new technology, by 1960 Alco, EMD, and GE were the only manufacturers left standing - and Alco would soon throw in the towel. As a result, virtually every major U.S. railroad became a GP35 customer and over 1300 engines were sold in the United States, Canada, and Mexico.

In what we believe is the finest, ready-to-run HO GP-35 diesel to ever be produced, HO modelers will find the best combination of detail, realism, and performance of any 1/87 scale GP35. Added-on detail parts include windshield wipers, metal see-thru body grilles, lift rings, metal grab irons and handrails,

see-thru rooftop fan housings, and brake cylinders, air pipes, and swing hangers on our super-detailed Blomberg trucks.

Our highly detailed model includes a broader range of features than you’ll find on any other HO scale diesel, including lighted number boards; smooth performance from a three-scale-mile-per-hour crawl to full throttle; “cruise control” for steady speeds regardless of curves, switches and grades; built-in decoders for DCC and the M.T.H. DCS Digital Command System; and a full range of sounds recorded from a prototype GP35. If you’re looking for durable motive power that’s accurately detailed, smooth running, and a great deal of fun to operate, it doesn’t get any better than this.



Penn Central - GP35 Diesel
 80-80010-1 Proto-Sound 3.0 \$329.95
 80-80010-5 Proto-Sound 3E+ \$329.95



Chessie - GP35 Diesel
 80-80009-1 Proto-Sound 3.0 \$329.95
 80-80009-5 Proto-Sound 3E+ \$329.95

Features Include

- Intricately Detailed, Durable ABS Body
- Metal Chassis
- Moveable Roof Fans
- Metal Handrails and Horn
- Metal Body Side Grilles
- (2) Engineer Cab Figures
- Authentic Paint Scheme
- Metal Wheels and Axles
- RP25 Metal Wheels
- NEM 340 Metal Wheels*
- (2) #158 Scale Kadee Whisker Couplers
- (2) Operating Kadee Compatible Remote Controlled Proto-Couplers
- (2) NEM 360/362 Coupler & Pocket Assemblies*
- #18 U.S. Kadee® Coupler Compatible*
- Prototypical Rule 17 Lighting
- Lighted Cab Interior
- Directionally Controlled Constant Voltage LED Headlights
- Illuminated Number Boards
- Lighted Class Lights
- Powerful 5-Pole Precision Flywheel-Equipped Skew-Wound Balanced Motor
- Locomotive Speed Control In Scale MPH Increments
- Operates On Code 70, 83 and 100 Track
- 1:87 Scale Proportions
- Proto-Sound 3.0 With The Digital Command System Featuring Freight Yard Proto-Effects
- Unit Measures: 8 1/8" x 1 3/4" x 2 1/8"
- Operates On 18" Radius Curves

* Available on Proto-Sound 3E+ Models



Pennsylvania GG1 Electric



Features Include

- Intricately Detailed Die-Cast Body
 - Metal Chassis
 - Metal Handrails and Horn
 - Metal Body Side Grilles
 - (2) Engineer Cab Figures
 - Authentic Paint Scheme
 - Metal Wheels and Axles
 - RP25 Metal Wheels
 - NEM 340 Metal Wheels*
 - (2) Operating Kadee-Compatible Remote Controlled Proto-Couplers
 - (2) #158 Scale Kadee Whisker Couplers
 - (2) NEM 360/362 Coupler & Pocket Assemblies*
 - #18 U.S. Kadee® Coupler Compatible*
 - Prototypical Rule 17 Lighting
 - Directionally Controlled Constant Voltage LED Headlights
 - Lighted Cab Interior
 - Lighted Number Boards
 - Lighted Class Lights
 - Powerful 5-Pole Precision Flywheel-Equipped Skew-Wound Balanced Motor
 - Operating Pantographs
 - Locomotive Speed Control In Scale MPH Increments
 - Operates On Code 70, 83 and 100 Track
 - 1:87 Scale Proportions
 - Proto-Sound 3.0 With The Digital Command System Featuring Passenger Station Proto-Effects
 - Measures: 11 5/16" x 1 3/8" x 2 7/16"
 - 3E+ Model Operates On R2 (437.5mm) Radius Curves
- * Available on Proto-Sound 3E+ Models

For more than two decades, the Pennsylvania Railroad experimented with locomotive designs in search of a high-speed, mainline passenger electric. That search ended in 1934 with the GG1, a cooperative effort by the PRR, Baldwin, Westinghouse, and General Electric, based largely on neighbor New Haven's successful EP3 juice jack. Industrial designer Raymond Loewy cleaned up the original riveted body to create a design that looked contemporary for half a century.

The GG1 fleet hustled passenger traffic of all types along the Pennsy's multi-track raceway from New York to Washington and west to Harrisburg, including the famed *Congressional* and *Broadway Limited*. With 18 Pullmans in tow, a GG1 could hit 100 mph. Regearred for freight service and run as double-headers, a pair of GG1s delivered about the same tractive effort as a Union Pacific Big Boy, with virtually no noise,

no smoke, much less wear on the track, and significantly less maintenance. Many GG1s racked up more than five million miles of service, outlasting the railroad that built them and serving its two successors, the Penn Central and Conrail. If there were a Locomotive Hall of Fame, the Pennsylvania Railroad GG1 would surely be one of the first inductees.

Add this fully die-cast Hall of Famer to your layout, featuring station sounds for a Pennsy name train, smooth performance at any speed from a crawl to full throttle, a powerful 12-Volt 5-Pole precision skew-wound flywheel-equipped motor and pantographs that automatically raise and lower according to the direction of travel.

For those who have operated Marklin HO AC 3-rail trains in the past, choosing a Proto-Sound 3E+ equipped model will give you an opportunity to run sound-equipped North American prototypes on your railroad with your Marklin DCC command control system.

Outfitted with NEM 311 wheels and NEM 365 couplers, these engines feature an all-new version of Proto-Sound 3.0, contain a third rail sliding shoe for use with Marklin HO stud rail and can operate on AC or DC power. Like their 3.0 counterparts, Proto-Sound 3E+ locomotives feature full digital sound, speed control, 28 DCC functions, hundreds of DCS sounds and features

and a command control receiver for use with Marklin DCC control systems. Unlike their 3.0 counterparts, Proto-Sound 3E+ locomotives cannot operate on standard 2-rail track. They only operate on HO (3-Rail) Stud Rail track (ie: Marklin C or K track).

Automatic Pantograph Operation Explained

Users operating the GG1 in conventional mode will find that by depressing the transformer's direction button to stop the locomotive, the rear pantograph will remain in the up position while the lead pantograph slowly rises up. Once the lead pantograph is in its up position, the rear pantograph will slowly lower into the down position. At this point another press of the direction button will cause the locomotive to reverse making the lead pantograph now the rear pantograph and in the up position.

In command operation two operating modes are offered; auto and manual. Auto mode behaves similar to conventional mode, with the rear pantograph in the up position when moving. The up and down movement of the pantograph is direction controlled using the DCS Digital Command Control System. In Manual mode, the user can raise and lower both pantographs via the DCS System or any 28-Function DCC controller.



Pennsylvania (Tuscan 5-Stripe) - GG-1 Electric
80-80008-1 Proto-Sound 3E+ (3-Rail) \$549.95



M.T.H. Electric Trains
Signature Series

www.mthtrains.com

