

EMT
ELECTRIC TRAINS®
HO TRAINS THAT DO MORE

2014
HO MODEL TRAINS



Proto-Sound® 3.0...

THE RICHEST SET OF FEATURES IN MODEL RAILROADING!

Whether you operate with a conventional transformer or in command mode with DCC or DCS™ (M.T.H.'s Digital Command System), the Proto-Sound 3.0 system available in every locomotive in this catalog offers more realism, more fun, and more variety than any other locomotive control system in any scale.

VIVID ENGINE SOUNDS

Proto-Sound features crystal-clear digital sounds. We strive to make our sounds as authentic as possible, using the characteristic whistle for a particular steam engine, for example. With the optional DCS system, you can tune each engine to your preference by individually adjusting bell, horn or whistle, and chuff volume. And all steam engines have quillable whistles, which can be "played" like a real engineer does with the whistle cord.

STATION SOUNDS

Proto-Sound passenger engines offer Passenger Station Proto-Effects™, a complete arrival and departure sequence that you can activate from your DCC or DCS controller. In most cases, the station sequence features an actual name train pulled by that particular engine. Freight engines include Freight Yard Proto-Effects, a symphony of freight terminal sounds.

ATMOSPHERIC SOUNDS

Crew conversations, the whoosh of a steam engine opening its cylinder cocks, and a host of other atmospheric sounds play automatically at random when using a conventional transformer — or can be activated manually from a DCC controller or the DCS handheld.

EXTRAORDINARY SLOW SPEED CAPABILITY

Proto-Sound engines can throttle down as slow as three scale miles per hour, highball down the main line, and maintain any speed in between. With certain DCC controllers, and any DCS controller, you can set engine speed in one-scale-mile-per-hour increments up to 120 smph. Go ahead, get out your stop watch and ruler and see how accurate our scale speeds are.

UNMATCHED SPEED CONTROL

The Proto-Speed Control™ built into Proto-Sound 3.0 acts like the cruise control on a car, keeping your train moving at the speed you select, regardless of hills and curves. You can even switch off the speed control if you prefer.

LIGHTING EFFECTS

Proto-Sound locomotives feature prototypical Rule 17 lighting, including a variety of realistic lighting effects. In addition to constant-brightness headlights, these may include illuminated number boards, lighted marker lamps, alternating ditch lights and more, depending on the locomotive. In DCS operation, many of these lighting effects can be individually controlled.

MULTIPLE UNIT CAPABILITY

In DCS command mode, all locomotives set to the same speed — 37 scale miles per hour, for example — will move at virtually the same speed. This makes it easy to double or even triple-head nearly any combination of Proto-Sound 3.0 locomotives.

GREAT SMOKE

Proto-Sound engines feature fan-driven ProtoSmoke™, the most powerful smoke system in the hobby. You can vary the intensity with the smoke "volume" control on the locomotive or remotely with any DCC or DCS controller.

SYNCHRONIZED CHUFF AND PUFF

Like a real steam engine, M.T.H. steamers feature puffs of smoke and steam chuff sounds synchronized with the drive wheels. Better than any other model train, an M.T.H. locomotive portrays the drama of a steam engine slowly chuffing and puffing as it pulls out of a station and gets up to speed.

BRAKE SOUNDS

Engine brakes squeal whenever you throttle back sharply or pull into a station. In DCS mode, you can trigger the brake sound with the Brake button on the DCS handheld.

FULL COMPATIBILITY WITH ALL HO OPERATING SYSTEMS

Right out of the box, every Proto-Sound 3.0 M.T.H. engine is compatible with all HO operating systems: conventional DC, DCC, and our own Digital Command System (DCS). No switches to flip or adjustments to make. Your Proto-Sound engine senses what kind of power is on the rails; just set it on the track and run it.

BI-DIRECTIONAL COMMUNICATION

Proto-Sound 3.0 engines not only receive commands from the DCS system, they can report back vital information, trigger other devices to operate, and diagnose your layout's wiring and signal quality. Query a Proto-Sound 3.0 locomotive to find out how many scale miles it's run or how many hours it's been powered up. Check out the strength of the DCS signal on the track or measure the track voltage at a trouble spot. Measure the length of your track in scale miles. All of this is possible today, but only with a Proto-Sound 3.0-equipped locomotive when operated using the DCS Digital Command System.

OPERATE 'EM ALL

In DCS command mode, unlike any other command system available today, you'll have one-touch control over every Proto-Sound 3.0-equipped locomotive at the same time. Imagine, with the ALL command, your DCS system will start-up every locomotive at the same time! Almost every DCS feature can be sent to all the active engines at once. Tell 'em to run at 10 scale miles per hour and they'll all start moving at the same time and at the same speed. Blow all their whistles at once, turn on or off their smoke, stop and reverse every active engine — all at the same time.

EASY LASHUPS AND HELPER ENGINES

Want to run lashups of locomotives like the prototype, with double- or triple-headed diesels or steam engines — or even steamers and diesels working together? No other command control system does this as easily or reliably as the M.T.H. Digital Command System (DCS). With the DCS handheld controller, you can operate any combination of M.T.H. locomotives together as a lashup.

They'll run in perfect synchronization with each other at any speed. You can even set your lashup so only the lead engine's bell and whistle will sound, as in real life multiple-unit operation.

DCC Features

Proto-Sound 3.0-equipped locomotives can be controlled in command mode with any DCC-compliant command control system. While you won't have access to all of the incredible features of Proto-Sound 3.0, you will have full DCC command control. This means you can use your existing DCC controller to independently control your other DCC-equipped locomotives in addition to your Proto-Sound 3.0 locomotives on the same track at the same time.

When using a DCC controller, the following Proto-Sound 3.0 steam locomotive features are accessible:

Steam Features*

- Headlight/Backup light
- Bell
- Whistle
- Start-up/Shut-down
- Passenger Station/Freight Yard Sounds
- All Other Lights (On/Off)
- Master Volume
- Front Coupler
- Rear Coupler
- Forward Whistle Signal
- Reverse Whistle Signal
- Grade Crossing Signal
- Smoke On/Off
- Smoke Volume
- Idle Sequence 3
- Idle Sequence 2
- Idle Sequence 1
- Extended Start-up
- Extended Shut-down
- Labored Chuff¹
- Drift Chuff¹
- One Shot Doppler
- Coupler Slack
- Coupler Close
- Single Horn Blast
- Engine Sounds
- Brake Sounds
- Cab Chatter
- Feature Reset
- Train Marker²
- Train Operation²

¹ Not Included On European Steam Locomotives

² Found Only On European Steam Locomotives

Diesel/Electric Features*

- Head Light/Backup Light
- Bell
- Horn
- Start-up/Shut-down
- Passenger Station/Freight Yard Sounds
- All Other Lights (On/Off)
- Master Volume
- Front Coupler
- Rear Coupler
- Forward Horn Signal
- Reverse Horn Signal
- Grade Crossing Signal
- Clickety Clack (On/Off)
- Idle Sequence 4¹
- Idle Sequence 3²
- Idle Sequence 2
- Idle Sequence 1
- Extended Start-up
- Extended Shut-down
- Rev Up
- Rev Down
- One Shot Doppler
- Coupler Slack
- Coupler Close
- Single Horn Blast
- Engine Sounds
- Brake Sounds
- Cab Chatter
- Feature Reset
- Smoke On/Off³
- Smoke Volume³
- Pantograph Auto/Manual⁴
- Front Pantograph Up/Down⁴
- Rear Pantograph Up/Down⁴

¹ Found Only On Diesel Locomotives w/o Smoke

² Not Included On Electrics

³ Found Only On Diesel Locomotives w/Smoke

⁴ Found Only On Electric Locomotives

* Check your DCC Controller's manual to see how many features it can access.

As the preceding page details, our Proto-Sound 3.0 locomotives possess the richest set of features in model railroading, and we've taken the same approach with our freight and passenger rolling stock.

Many of our passenger cars possess railroad specific details and are unique in appearance from each other. Our *Daylight* cars, for example, have some of the best operating end-of-car diaphragms found in any scale, and we've recreated ten cars from the 1938 *Twentieth Century Limited*. All of our passenger cars feature the smoothest rolling passenger trucks available today, and all are outfitted with flicker-free, constant voltage lighting. You won't find better looking and operating HO passenger cars than those from M.T.H.

M.T.H. HO freight cars come in two varieties; our top-of-the-line models that feature industry-leading details like separate grab irons, intricate undercarriage detail and crisp graphics or the Ready-2-Rail series, our durable and value-packed freight car line with opening box car doors, smooth-rolling trucks and equally crisp and colorful graphics.

Regardless of your choice, all M.T.H. HO freight and passenger car rolling stock comes ready-to-run and features industry-leading Kadee® couplers.



HO TRAINS THAT DO MORE

www.mthHOtrains.com



See and hear 'em in action: Visit our site to see videos of M.T.H. locomotives in action, locate your nearest dealer, or learn more about our products.

Proto-Sound 3.0 Advancements and Improvements

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.

Operators will find these new features on all of our 2014 diesels, including the ES44AC, Dash-9 and GP38-2 models featured in this catalog. Steam locomotives sporting the new features include the Allegheny, 2-8-0 H10, 4-6-2 K4s and the German S3/6. Owners of earlier diesel models can upgrade their software using a DCS Digital Command System.

Proto-Sound 3E+ Explained

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 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.

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 3E+ is easily the most sophisticated, smoothest running, best sounding locomotive you can buy.

C&O Class H-8 2-6-6-6 Allegheny



NEW TOOLING!

The biggest engines east of the Mississippi were not rostered by the biggest railroads. There were no legendary articulateds racing along the NYC's Water Level Route or charging over the Pennsy's Horseshoe Curve. It was the smaller, scrappier eastern roads dedicated to wrestling coal out of Appalachia — the C&O, N&W, Virginian, Clinchfield, Western Maryland — that owned articulateds rivaling anything in the West. And the king of them all was the Chesapeake & Ohio's Class H-8 Allegheny.

With four fewer drivers than a Union Pacific Big Boy, an Allegheny could deliver nearly a thousand more horsepower to the rails. Its massive firebox was big enough to host a board meeting — so big it required a unique 6-wheel trailing truck to support it. Its drivers carried the highest axle load of any steam engine, ever. To make the Allegheny fit the C&O's existing 115-foot turntables, its tender was made taller at the rear, to accommodate 25 tons of coal and 25,000 gallons of water. This required a unique 4-wheel rear truck on the tender.

The Allegheny was the brainchild of Lima Locomotive Works, where the superpower steam concept had been invented in the

1920s. Like the Big Boy, it was designed to lift monstrous loads over one specific piece of railroad: the 80 miles between Hinton, West Virginia and Clifton Forge, Virginia, a coal route from the mines over the summit of the Allegheny Mountains toward tide-water ports. The engine took its name from the mountain range it traversed. Delivery of the initial order of 10 locomotives began just days after Pearl Harbor and a few months after the first Big Boy; the C&O was so pleased with the giant engines that it ordered 50 more over the next seven years. Fellow coal hauler Virginian took delivery of eight copies in early 1945, naming them Class AG Blue Ridge types.

Typical service on the C&O was lifting 140 loaded hoppers out of Hinton with one H-8 on the point, and another pushing at the rear and cutting off after the mountain summit was reached. About a third of the engines were equipped with steam heat and signal lines for wartime passenger and mail service, where they could reach their maximum speed of 60 mph. Later in their careers, some H-8s were assigned to flatter territory in Ohio and Kentucky, where a single Allegheny could walk away with a 160-car freight. When the final H-8s were retired in 1956, No.

1601 steamed under its own power to Dearborn, Michigan, to become a permanent exhibit in the Henry Ford Museum. The one other surviving Allegheny, No. 1604, resides today in the B&O Railroad Museum in Baltimore, Maryland.

New for 2014, our die-cast model replicates all the features that made the prototype Allegheny as powerful visually as it was physically: high pilot deck for access to its smokebox-mounted air pumps; huge twin sandboxes located fore and aft of the steam dome; massive steam delivery pipes for both front and rear engines; torpedo-like air tanks ahead of the cab; and more. Like all M.T.H. articulateds, our Allegheny features puffing smoke and authentic articulated chuff sounds, with the front and rear engines going in and out of sync. It senses what type of power is on the rails and automatically adjusts to operate on analog DC, DCC command control, our own DCS digital command system, or (in the 3E+ version), Märklin command control. And when operating with DCS, just a few keystrokes will setup two H-8s to operate together as a lashup, with one at the head of your train and one at the rear, just like the prototype heading east over the Alleghenies.

1941 Version



Chesapeake & Ohio - 2-6-6-6 Allegheny Steam Engine, Cab No. 1601
 80-3249-1 DCC/DCS Proto-Sound 3.0 \$649.95
 80-3249-5 DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail) \$679.95



Chesapeake & Ohio - 2-6-6-6 Allegheny Steam Engine, Cab No. 1604
 80-3250-1 DCC/DCS Proto-Sound 3.0 \$649.95
 80-3250-5 DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail) \$679.95



1942 Version



Chesapeake & Ohio - 2-6-6-6 Allegheny Steam Engine, Cab No. 1610
 80-3251-1 DCC/DCS Proto-Sound 3.0 \$649.95
 80-3251-5 DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail) \$679.95

Chesapeake & Ohio - 2-6-6-6 Allegheny Steam Engine, Cab No. 1618
 80-3252-1 DCC/DCS Proto-Sound 3.0 \$649.95
 80-3252-5 DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail) \$679.95



Add A Six-Car Hopper Set — See Page 80

Features

- Die-Cast Boiler and Chassis
- Die-Cast Tender Body
- Authentic Paint Scheme
- Real Tender Coal Load
- Die-Cast Locomotive and Tender Trucks
- Engineer and Fireman Figures
- Metal Handrails, Bell and Whistle
- RP25 Metal Wheels
- Interchangeable RP25 Metal Drive Wheels without Traction Tires
- NEM 340 Metal Wheels*
- Sprung Drivers
- (2) #158 Scale Kadee Whisker Couplers
- Operating Kadee®-Compatible Remote Controlled Proto-Coupler on Tender
- 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
- Proto-Sound 3.0 With The Digital Command System Featuring Quillable Whistle And Freight Yard Proto-Effects
- Unit Measures: 18" x 1 5/8" x 2 1/4"
- Operates On Code 70, 83 and 100 Track
- Operates On 22" Radius Curves
- 3E+ Model Operates On R2 (437.5 mm) Radius Curves

*Featured on Proto-Sound 3E+ Models



Pennsylvania H10 2-8-0 Consolidation

NEW TOOLING!



The H10 was the last and largest in a line of Pennsy Consolidations that stretched back to 1875. Nearly 500 H10s constructed by Alco, Baldwin, Lima, and the railroad's own shops represented Pennsy's premier fast freight power in the era just before World War I. With a good engine crew, an H10 could hustle about 50 cars along level track, or considerably more cars in drag service hauling coal or iron ore.

When the H10 engines were constructed, the Pennsy was still divided into Lines West — all of its affiliated railroads west of Pittsburgh — and Lines East. The H10 was strictly a Lines West phenomenon, built from a standard boiler common to the H8, H9, and H10 classes, but possessing the largest cylinders of any Pennsy "Consol." When a 1920 reorganization abolished the division between Lines East and West, the railroad owned over three thousand 2-8-0's, a majority of them having a

common boiler design. It was a measure of the Pennsylvania Railroad's conservative management that in the early 1920s, its entire front line freight fleet consisted of a wheel arrangement deemed obsolete by other railroads. By the mid- and late-1920s, however, the H10s and their older siblings were pushed into secondary and branch line service by the arrival of larger, more modern power: Mikados, Decapods, and Mountains. Many Consolidations sat out the Depression years in storage, until recalled to service by the crush of World War II traffic. From the war years through the end of steam, H10s could be found all over the Pennsy, the Long Island Railroad, and the Pennsylvania Reading Seashore Lines in switching, work train, branch line, and occasionally main line service.

Our die-cast H-10 features the extraordinary level of detail you've come to expect in an M.T.H. HO steamer. Virtually all

pipng and boiler appliances are separate, added-on parts. Rods and valve gear have a prototypically darkened, grimy appearance, and the ProtoSound 3.0 sound and control system features an accurate Pennsy whistle. If you model any period from the Woodrow Wilson era to the Eisenhower years, there's an appropriate chore on your railroad for this rugged, muscular-looking steamer.

Did You Know?

H10s No. 7688 was preserved by the Pennsy as part of its historical collection in Northumberland, PA. It resides today in the main exhibition hall of the Railroad Museum of Pennsylvania along with two earlier Consolidations: H3 No. 1187 and an H6sb.



Pennsylvania - H10 2-8-0 Steam Engine, Cab No. 7103
 80-3240-1 DCC/DCS Proto-Sound 3.0 \$399.95
 80-3240-5 DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail) \$429.95

Pennsylvania - H10 2-8-0 Steam Engine, Cab No. 7099
 80-3241-1 DCC/DCS Proto-Sound 3.0 \$399.95
 80-3241-5 DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail) \$429.95

Pennsylvania - H10 2-8-0 Steam Engine, Cab No. 7122
 80-3242-1 DCC/DCS Proto-Sound 3.0 \$399.95
 80-3242-5 DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail) \$429.95

Add Matching Six-Car Hopper Sets — See Page 80



Long Island - H10 2-8-0 Steam Engine, Cab No. 103
 80-3243-1 DCC/DCS Proto-Sound 3.0 \$399.95
 80-3243-5 DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail) \$429.95

Long Island - H10 2-8-0 Steam Engine, Cab No. 107
 80-3244-1 DCC/DCS Proto-Sound 3.0 \$399.95
 80-3244-5 DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail) \$429.95

All Models Include Onboard DCC Receiver

Features

- 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
- Operating Kadee-Compatible Remote Controlled Proto-Coupler

- (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 Marker Lights
- Operating Numberboard 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 w/Close Coupling Option
- 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 Freight Yard Proto-Effects
- Unit Measures: 9 1/16" x 1 1/2" x 2"
- Operates On 18" Radius Curves
- 3E+ Model Operates On R1 (360mm) Radius Curves

*Featured on Proto-Sound 3E+ Models



Pennsylvania K4s

4-6-2 Pacific



On perhaps the greatest railroad ever, no steam locomotive was more revered than the legendary Pennsylvania K4s Pacific. Evolving from a program begun in 1914 to develop heavy freight and passenger classes utilizing common boiler designs, the K4s was an instant success. From 1917 to 1928, a total of 425 units were built at the Pennsy's Juniata shops and Baldwin Locomotive Works.

The 4-6-2 K4s 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 K4s was a common and beautiful sight on

the Pennsylvania's rails, and became synonymous with that railroad's steam power.

Later, after World War II concluded, the Pennsy's needs changed and the K4'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 K4s and included a solid drop-coupler pilot, repositioned boiler-top headlight, and moving the steam generator below the headlight.

M.T.H. Electric Trains is proud to offer both prewar and modern versions of the signature locomotive of the Standard Railroad of the World, in all die-cast construction. Featuring all of the craftsmanship and detail that make an M.T.H. steam locomotive the industry's best value, this K4s will be the pride of your layout or your collection for years to come.

Did You Know?

No. 1737 was the first K4s produced for the Pennsylvania Railroad. No. 1361, formerly displayed at Horseshoe Curve currently resides in Scranton, Pennsylvania at Steamtown, awaiting a hoped-for restoration to operating condition.



Pennsylvania 4-6-2 K4s Steam Locomotive with DCC/DCS Proto-Sound 3.0, Cab No. 719
 80-3236-1 DCC/DCS Proto-Sound 3.0 \$499.95
 80-3236-5 DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail) \$529.95

**All Models
 Include
 Onboard DCC
 Receiver**



Pennsylvania 4-6-2 K4s Steam Locomotive with DCC/DCS Proto-Sound 3.0, Cab No. 5497
 80-3237-1 DCC/DCS Proto-Sound 3.0 \$499.95
 80-3237-5 DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail) \$529.95



Pennsylvania 4-6-2 K4s Modern Steam Locomotive with DCC/DCS Proto-Sound 3.0, Cab No. 3681
 80-3238-1 DCC/DCS Proto-Sound 3.0 \$499.95
 80-3238-5 DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail) \$529.95

**Add Matching
 Passenger Sets
 See Page 82**



Pennsylvania 4-6-2 K4s Modern Steam Locomotive with DCC/DCS Proto-Sound 3.0, Cab No. 3752
 80-3239-1 DCC/DCS Proto-Sound 3.0 \$499.95
 80-3239-5 DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail) \$529.95

Features

- Die-Cast Boiler and Chassis
- Die-Cast Tender Body
- Authentic Paint Scheme
- Real Tender Coal Load
- Engineer and Fireman Figures
- Metal Handrails, Whistle and Bell
- RP25 Metal Wheels
- NEM 340 Metal Wheels*
- Interchangeable RP25 Metal Drive Wheels w/o Traction Tires
- Sprung Drivers
- (2) #158 Scale Kadee Whisker Couplers
- Operating Kadee-Compatible Remote Controlled Proto-Coupler On Tender
- NEM 360/362 Coupler and Pocket Assembly*
- #18 U.S. Kadee® Coupler Compatible*
- Prototypical Rule 17 Lighting
- Constant Voltage Headlight
- Operating Firebox Glow
- 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 w/Close Coupling Option
- Operates On Code 70, 83 and 100 Track
- 1:87 Scale Proportions
- Proto-Sound 3.0 With The Digital Command System Featuring Quillable Whistle And Passenger Station Proto-Effects
- Unit Measures: 11 1/2" x 1 3/8" x 2 1/8"
- Operates On 18" Radius Curves
- 3E+ Model Operates On R1 (360 mm) Radius Curves

*Featured on Proto-Sound 3E+ Models



2-8-8-8-2 Triplex



P. T. Barnum would have loved the Triplex. It was an engine of superlatives: more drivers than anything before or since, too big for the shops of its owner, the Erie Railroad, powerful enough to pull a train nearly five miles long. Nearly a century ago, in the days before multiple-unit control allowed one throttle to control several locomotives, the Triplex was the ultimate attempt to put as much power as possible in the hands of a single engineer. In the end, it proved a noble, flamboyant, but less-than-successful experiment.

Baldwin Locomotive Works built three Triplexes between 1914 and 1916 for pusher service on the Erie Railroad's daunting Susquehanna Hill (also known as Gulf Summit) near Deposit, N.Y. The cylinders of the Triplex's middle engine were powered by high pressure steam direct from the boiler, while the front and rear engines used low pressure steam exhausted from the middle cylinders.

Each Triplex replaced three ordinary helper engines, and the new locomotives worked well enough to stay on the Erie roster for more than a decade. But the design proved a bit over the top and only one more Triplex was ever built, for the Virginian Railway. Even with their huge boilers, the locomotives could only make enough steam to go 10 mph. One reason was poor draft in the firebox, because only the front cylinders exhausted through the smokebox and created draft; the rear cylinders exhausted through a separate smokestack on the tender. Another inherent problem with the design was that traction from the rear engine decreased as the boiler used coal and water and the tender got lighter.

The M.T.H. Triplex recreates the flamboyance of the original design but runs much better than the prototype ever did. Only MTH engineering could make such a complex model run smoothly and steadily at speeds from a barely perceptible crawl to wide-open throttle — just ask any modeler who owns an

M.T.H. O scale, HO scale, or One Gauge Triplex. For 2014 the Triplex returns to our HO lineup, complete with a full range of engine sounds, puffing smoke, speed control, full Rule 17 lighting, and ready to run under conventional, DCC, M.T.H. Digital Command System (DCS), Märklin DCC Command, or Motorola 1 and 2 Command control.

Did You Know?

The Triplex was engineered to haul 640 fifty-ton cars in a train almost five miles long. But the couplers and draft gear of the early twentieth century could not have handled such a load, so the 2-8-8-2 was used as a pusher and never put to a full test.

See it in action at
mthHOtrains.com





Erie (Russian Iron) - 2-8-8-2 Triplex Steam Engine with DCC/DCS Proto-Sound 3.0

80-3194-1	Cab No. 5015	\$649.95
80-3195-1	Cab No. 5016	\$649.95
80-3196-1	Cab No. 5014	\$649.95

Erie (Russian Iron) - 2-8-8-2 Triplex Steam Engine with DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail)

80-3194-5	Cab No. 5015	\$679.95
80-3195-5	Cab No. 5016	\$679.95
80-3196-5	Cab No. 5014	\$679.95



Erie (Black) - 2-8-8-2 Triplex Steam Engine with DCC/DCS Proto-Sound 3.0

80-3197-1	Cab No. 5015	\$649.95
80-3198-1	Cab No. 5016	\$649.95
80-3199-1	Cab No. 5014	\$649.95

Erie (Black) - 2-8-8-2 Triplex Steam Engine with DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail)

80-3197-5	Cab No. 5015	\$679.95
80-3198-5	Cab No. 5016	\$679.95
80-3199-5	Cab No. 5014	\$679.95

**All Models
Include
Onboard
DCC Receiver**



Virginian 2-8-8-2 Triplex Steam Engine, Cab No. 700

80-3235-1	DCC/DCS Proto-Sound 3.0	\$649.95
80-3235-5	DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail)	\$679.95

**Add Matching Six-Car Hopper Sets
See Page 81**

Features

- Die-Cast Boiler and Chassis
- Die-Cast Tender Body
- Authentic Paint Scheme
- Real Tender Coal Load
- Die-Cast Locomotive Trucks
- Engineer and Fireman Figures
- Metal Handrails, Whistle 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
- Lighted Cab Interior
- 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
- Proto-Sound 3.0 With The Digital Command System Featuring Quillable Whistle And Freight Yard Proto-Effects
- Operates On Code 70, 83 and 100 Track
- Unit Measures: 15 1/4" x 1 9/16" x 2 1/4"
- Operates On 18" Radius Curves
- 3E+ Model Operates On R2 (437.5 mm) Radius Curves

*Featured on Proto-Sound 3E+ Models

Union Pacific 4-6-6-4 Challenger



**All Models Include
Onboard DCC Receiver**

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.

The Challenger returns to the M.T.H. lineup for 2014 in both coal and oil burning versions and a technology package offering for those who prefer the AC 3-Rail Märklin standard. 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.

See it in action at
mthHOtrains.com





Union Pacific (Two-Tone Gray w/Silver Stripes) - 4-6-6-4 Challenger (Oil Burner) Steam Engine, Cab No. 3978
 80-3200-1 DCC/DCS Proto-Sound 3.0 \$649.95
 80-3200-5 DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail) \$679.95



Union Pacific (Two-Tone Gray w/Yellow Stripes) - 4-6-6-4 Challenger (Oil Burner) Steam Engine, Cab No. 3979
 80-3201-1 DCC/DCS Proto-Sound 3.0 \$649.95



Union Pacific (Black) - 4-6-6-4 Challenger (Oil Burner) Steam Engine, Cab No. 3975 \$649.95
 80-3247-1 DCC/DCS Proto-Sound 3.0 \$649.95
 Union Pacific (Black) - 4-6-6-4 Challenger (Oil Burner) Steam Engine, Cab No. 3976
 80-3248-1 DCC/DCS Proto-Sound 3.0 \$649.95



Clinchfield (Black) - 4-6-6-4 Challenger Steam Engine, Cab No. 674
 80-3204-1 DCC/DCS Proto-Sound 3.0 \$649.95
 80-3204-5 DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail) \$679.95



Denver & Rio Grande (Black) - 4-6-6-4 Challenger Steam Engine, Cab No. 3804
 80-3205-1 DCC/DCS Proto-Sound 3.0 \$649.95
 80-3205-5 DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail) \$679.95

Add Matching Six-Car Hopper Sets — See Page 81



Features

- Die-Cast Boiler and Chassis
- Die-Cast Tender Body
- Authentic Paint Scheme
- Real Tender Coal Load**
- Engineer and Fireman Figures
- Metal Handrails, Bell and 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 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
- 3E+ Model Operates On R2 (437.5 mm) Radius Curves

*Available on Proto-Sound 3E+ Models
 **Where prototypical

Union Pacific 4-8-8-4 Big Boy



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. An AC 3-Rail Märklin system version is also available for those who prefer to run their HO locomotives under the Märklin operating system.

See it in action at
mthHOtrains.com





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

80-3206-1	Cab No. 4007	\$649.95
80-3207-1	Cab No. 4005	\$649.95
80-3208-1	Cab No. 4013	\$649.95
80-3209-1	Cab No. 4016	\$649.95
80-3210-1	Cab No. 4018	\$649.95

Union Pacific - 4-8-8-4 Big Boy (Original) Steam Engine with DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail)

80-3206-5	Cab No. 4007	\$679.95
80-3207-5	Cab No. 4005	\$679.95
80-3208-5	Cab No. 4013	\$679.95
80-3209-5	Cab No. 4016	\$679.95
80-3210-5	Cab No. 4018	\$679.95

Add Matching Six-Car Hopper Sets — See Page 81

Features **All Models Include Onboard DCC Receiver**

- 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
 - 3E+ Model Operates On R2 (437.5mm) Radius Curves

**Available on Proto-Sound 3E+ Models*

Proto-Sound 3E+

The Proto-Sound 3E+ models featured in this catalog come outfitted with NEM 340 Wheels and NEM 360/362 Coupler & Pocket Assemblies. They are equipped with a 3rd rail slide shoe for use with Märklin HO stud rail and can operate on AC power.

This 3-rail version of Proto-Sound 3.0 can be operated in six different modes: AC or DC Powered Analog/Conventional, DCC Command Mode with any DCC Controller, DCS Digital Command System mode, Märklin DCC Command Mode, and Motorola 1 and 2 Command Modes.



SP Class GS-4/GS-6 4-8-4 Northern



In 1937 the Southern Pacific trumpeted a new train in full-page magazine ads:

Let us stand by the tracks of Southern Pacific's Coast Line, as thousands now do every day and listen... Suddenly from far off comes a musical note, rising. Round a curve flashes a streak of color. Here comes the Daylight, the most beautiful train in the West!

The *Daylights* 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. Notice the wide, soft seats in the coaches. They are cushioned with sponge rubber and turn to face the extraordinarily large windows." 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 (for "Golden State") Northern, arguably among the handsomest steam engines ever built. Constructed by Lima Locomotive Works, inventor of the super-power concept, the *Daylight* 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 Golden State 4-8-4s were regularly used in high-speed freight service on the San Francisco-Los Angeles *Overnight*.

Features

- 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 on GS-4
- Powerful 5-Pole Precision Flywheel-Equipped Skew-Wound Motor
- Synchronized Puffing ProtoSmoke™
- 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 Or Freight Yard Proto-Effects
- Unit Measures: 15 3/4" x 2 1/4" x 1 1/2"
- Operates On 18" Radius Curves
- 3E+ Model Operates On R2 (437.5 mm) Radius Curves

*Available on Proto-Sound 3E+ Models

See it in action at mthHOtrains.com





Southern Pacific (Daylight Colors, Large Lettering) - 4-8-4 GS-4 Steam Engine with DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail)
 80-3213-5 Cab No. 4444 \$529.95
 80-3214-5 Cab No. 4449 \$529.95

All Models Include Onboard DCC Receiver



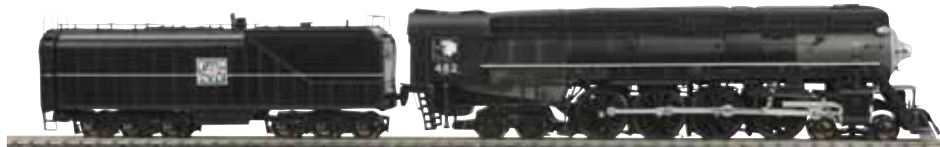
Southern Pacific Lines (Daylight Colors, Small Lettering) - 4-8-4 GS-4 Steam Engine with DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail)
 80-3211-5 Cab No. 4434 \$529.95
 80-3212-5 Cab No. 4449 \$529.95



Add a Matching Passenger Set — See Page 88



American Freedom - 4-8-4 GS-4 Steam Engine with DCC/DCS Proto-Sound 3.0
 80-3229-1 Cab No. 4449 \$499.95
 American Freedom - 4-8-4 GS-4 Steam Engine with DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail)
 80-3229-5 Cab No. 4449 \$529.95



Western Pacific - 4-8-4 GS-6 Steam Engine with DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail)
 80-3228-5 Cab No. 483 \$529.95

To get around WWII restrictions on building passenger power, the SP changed the definition of “GS” from “Golden State” to “General Service” and ordered the last 10 GS Northern as Class GS-6, without streamlined skirting and classified as dual service engines.



Southern Pacific (Black, Large Letters) - 4-8-4 GS-4 Steam Engine with DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail)
 80-3226-5 Cab No. 4452 \$529.95



Southern Pacific (Black, Large Letters) - 4-8-4 GS-6 Steam Engine with DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail)
 80-3227-5 Cab No. 4461 \$529.95

NYC Empire State Express

4-6-4 Hudson



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 Hudsons, 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 these superbly detailed locomotives. With their fully featured sound systems, *Empire State Express* passenger station announcements, and ability to start your train so smoothly you won't spill a drop of water in the diner, these are surely the best HO models of these Hudsons ever built.

See it in action at
mthHOtrains.com





New York Central - 4-6-4 Empire State Express Steam Engine with Proto-Sound 3.0

80-3230-1 Cab No. 5426 \$499.95

80-3231-1 Cab No. 5429 \$499.95

Add Matching Passenger Cars — See Page 86



Features

- 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
- 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

**All Models
Include
Onboard DCC
Receiver**

NYC 4-6-4 Dreyfuss Hudson



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.

See it in action at mthHOtrains.com





New York Central - 4-6-4 Dreyfuss Steam Engine
(1940 - Scullin drivers/roller bearings on side rods), Cab No. 5450
80-3232-1 DCC/DCS Proto-Sound 3.0 \$499.95

New York Central - 4-6-4 Dreyfuss Steam Engine
(1940 - Scullin drivers/roller bearings on side rods), Cab No. 5451
80-3245-1 DCC/DCS Proto-Sound 3.0 \$499.95



New York Central - 4-6-4 Dreyfuss Steam Engine (1938 - Boxpok drivers/plain bearings on side rods), Cab No. 5446
80-3233-1 DCC/DCS Proto-Sound 3.0 \$499.95
New York Central - 4-6-4 Dreyfuss Steam Engine (1938 - Boxpok drivers/plain bearings on side rods), Cab No. 5445
80-3246-1 DCC/DCS Proto-Sound 3.0 \$499.95

Add a Matching Passenger Set - See Page 86



New York Central - 4-6-4 Dreyfuss Steam Engine (1940 - Boxpok drivers/plain bearings on side rods), Cab No. 5447
80-3234-1 DCC/DCS Proto-Sound 3.0 \$499.95

All Models Include Onboard DCC Receiver

Features

- 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

Norfolk & Western Class J 4-8-4 Northern



**All Models Include
Onboard DCC Receiver**

A visit to the Norfolk & Western in the early 1950s was like a scene from *Jurassic Park*: prehistoric beasts romping in their natural mountain habitat. At a time when other roads were letting their remaining steam engines rot away and giving them minimal service in dirty, dingy, soon-to-close facilities, the N&W was still running a first-class steam operation and even building new power. With its main line through some of the nation's richest coalfields, it was still betting on the future of steam; as late as 1955, the N&W didn't roster a single diesel. The majority of traffic was handled by what N&W fans call the "holy trinity of steam": the massive Y6 2-8-8-2; the articulated greyhound Class A; and the N&W's glamour girl, the streamlined Class J.

The Class J 4-8-4 was an engine of quiet superlatives. Handsome, powerful (5100 hp), and, as a test on the Pennsylvania Railroad proved, capable of hauling 15 passenger cars at 110 mph, it was designed and styled not by one of the big three

builders (ALCo, Baldwin, and Lima) or a famous designer like Raymond Loewy or Henry Dreyfuss, but by the N&W's home-grown team of designers and craftsmen at the road's Roanoke, Virginia shops. For power and quick acceleration through mountainous territory, and to make room for the largest possible boiler, they equipped the streamlined J with 70" drivers — unusually small for a 4-8-4 and fully 10" smaller than the Southern Pacific's *Daylight* GS-4 of the same wheel arrangement.

Built in several groups between 1941 and 1950, a mere fourteen J's were able to handle 80% of the N&W's passenger traffic, because their designers addressed one of steam power's key weaknesses: down time for maintenance and repairs. Equipped with Timken roller bearings on all axles and rods, Timken-designed lightweight pistons and rods, and an automatic lubrication system that reached more than 200 points including the bell bearings, the Js were designed to go a quarter-million

miles between scheduled shop visits. Like a race car, they were engineered for quick pit stops: in less than an hour, a J could be fully serviced, lubricated, filled with coal and water and ready for its next dash over the road's 676-mile main line between Norfolk and Cincinnati, hauling the deluxe daylight *Powhatan Arrow* or the overnight *Pocahontas*.

Our N&W J is more fun to operate than any previous version of this magnificent locomotive, with its N&W whistle, passenger station announcements, synchronized chuff and puffing smoke, and speed control so smooth you won't spill the water in the diner.

**See it in action at
mthHOTrains.com**





Norfolk & Western - 4-8-4 Class J Steam Locomotive, Cab Number 603
80-3149-1 DCC/DCS Proto-Sound 3.0 \$499.95

Add A Six-Car Hopper Set — See Page 81



Norfolk & Western - 4-8-4 Class J Steam Locomotive, Cab Number 604
80-3150-1 DCC/DCS Proto-Sound 3.0 \$499.95

Add a Matching Passenger Set — See Page 90



Features

- 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
- Operating Class Lights
- Operating Numberboard 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: 15 3/8" x 1 1/2" x 2 1/4"
- Operates On 18" Radius Curves

Bavarian Class S 3/6 Express



NEW TOOLING!

In 1871, Germany became the last major European country to unify, combining a hodgepodge of kingdoms and duchies. But it would be another 50 years before the 11 provincial railroads were nationalized into the German Imperial Railway Company (DRG, with the logo DR). In the meantime, each road continued to develop its own locomotive designs. One of the best was the Class S 3/6 of the Royal Bavarian State Railways (abbreviated K. Bay. Sts. B. in German).

Regarded by European enthusiasts as one of the most beautiful and successful of all steam locomotives, the Class S 3/6 ("S" for schnellzuglok, indicating an express passenger engine, and 3/6 to indicate 3 powered axles, 6 axles total) was built by A G Maffei beginning in 1908 and showcased the talent of that firm's chief designer, Heinrich Leppla. The stylish conical smokebox front of the S 3/6 was complemented by a handsome holly green paint scheme. Two inboard high pressure cylinders and two outboard low pressure cylinders drove the center axle. The S 3/6 was one of the first European engines to follow the American practice of casting the cylinders and smoke box saddle as one huge casting, which gave the engine a distinctive look. The majority of the class were fitted with 74" drivers to conquer Bavaria's mountainous terrain. A smaller group of S 3/6 engines, however, was built with 79" drivers for high-speed service on flatter routes and acquired the nickname "High Steppers."

After nationalization in 1920, the engines were painted in the black and red Deutsche Reichsbahn (DR) scheme and became classes 18.3 through 18.5. While the DR intended to develop new standard engines of its own, the S 3/6 was deemed so good that the DR continued to order new engines of this 1908 design through 1931. The relatively light axle loading of the S 3/6, 18 tons, was also a plus, as the DR was behind schedule in upgrading main lines to its new 20-ton standard. So successful were the Bavarian Pacifics that they were chosen over more modern power to lead the glorious cream and blue Rheingold Express on part of its scenic route down the Rhine Valley, both before and after WWII. An S 3/6 could also be seen often on the point of the Orient Express.

Even after World War II, the aging engines continued to be great performers. A large number were modernized with new boilers and became the most economical steamers on the Deutsche Bundesbahn (DB), the new name for West Germany's railroad system. By the 1960s however, the S 3/6 class, which originally numbered 159 locomotives, had been retired, with a number of engines preserved in museums or in operating condition. M.T.H. is proud to introduce this superbly detailed, smooth running model of one of Europe's favorite steam engines, offered in original Royal Bavarian paint schemes and post-nationalization black and red.

Each of these locomotives is available in DC powered 2-rail or AC powered 3-rail versions. Two-rail versions come equipped with Proto-Sound 3.0, M.T.H.'s full digital sound and command control onboard system capable of operating in analog conventional mode, under DCS command control, or under DCC command control using any DCC controller. The 3-rail versions add additional command control capability under Motorola 1 and 2 command protocols and, like their 2-rail counterparts, can also run conventionally or under DCC or DCS command modes.

Sophisticated sound effects, recorded from the real-life S 3/6 prototype and accented with incredible lighting effects — including bi-directional running lights — ensure that the M.T.H. HO S 3/6 will provide owners with an operating experience unmatched in any model railroad scale.

Did You Know?

As reparations after World War I, three S 3/6 steamers went to Belgium and 16 were given to France.



NEW TOOLING! K. Bay. Sts. B. - Bavarian S 3/6 Express Steam Locomotive (Era I; Blue with Black Wheels), Cab # 3632
 80-3215-1 DCC/DCS Proto-Sound 3.0 \$529.95
 80-3215-5 DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail) \$529.95



NEW TOOLING! K. Bay. Sts. B. - Bavarian S 3/6 Express Steam Locomotive (Era I; Green with Red Wheels), Cab # 3641
 80-3216-1 DCC/DCS Proto-Sound 3.0 \$529.95
 80-3216-5 DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail) \$529.95



NEW TOOLING! Deutsche Bundesbahn - Class 18.4 Steam Locomotive (Era III; Black with Red Wheels), Cab # 18451
 80-3217-1 DCC/DCS Proto-Sound 3.0 \$529.95
 80-3217-5 DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail) \$529.95



NEW TOOLING! Deutsche Reichsbahn Class 18.4 Steam Locomotive (Era II; Black with Red Wheels)
 80-3218-1 DCC/DCS Proto-Sound 3.0 \$529.95
 80-3218-5 DCC/DCS/Motorola 1/2 Proto-Sound 3E+ (3-Rail) \$529.95



Features

- Die-Cast Boiler and Chassis
- Die-Cast Tender Body
- Authentic Paint Scheme
- Real Tender Coal Load
- Metal Handrails and Whistle
- Sprung Buffers
- NEM 340 Metal Wheels*
- #18 U.S. Kadee® Coupler Compatible
- (2) NEM 360/362 Coupler & Pocket Assemblies
- (2) Hook & Chain Coupler Assemblies
- Constant Voltage Headlight
- Operating Running Lights
- Lighted Cab Interior
- Powerful 5-Pole Precision Flywheel-Equipped Skew-Wound Motor
- Operating Tender Back-up Light
- Synchronized Puffing ProtoSmoke™ System
- Locomotive Speed Control
- Wireless Drawbar w/Close Coupling Option
- 1:87 Scale Proportions
- CE Rated
- Proto-Sound 3.0 With The Digital Command System Featuring Quillable Whistle With Passenger Station Proto-Effects
- Unit Measures: 264.2mm x 38.2mm x 52.7mm
- Operates On 18" Radius Curves
- 3E+ Model Operates On R1 (360mm) Radius Curves

*Available on Proto-Sound 3E+ Models

General Electric ES44AC



NEW TOOLING!

Flexible mold design allows for 4 different road-specific body configurations

With a wave of consolidation behind it, North American railroading is once again a good business to be in. Freight traffic is booming. Locomotive orders are coming in at a solid pace from the Big Six roads that dominate rail transportation on the continent: Union Pacific, BNSF, CSX, Norfolk Southern, Canadian National, and Canadian Pacific. And the two remaining diesel builders are locked in a battle to become *the* locomotive supplier for the 21st century. Caterpillar®-owned EMD, no longer a division of General Motors, is represented by the AC-traction-motored SD70ACe and its DC-traction sibling, the SD70M-2. General Electric's standard bearers are the EVOs, the Evolution Series ES44AC and ES44DC.

GE claims the EVOs are "the most fuel-efficient, most environmentally friendly diesel locomotives in history... If every freight train in North America were pulled by an Evolution Series Locomotive, the reduction of smog-producing pollutants would be like removing 48 million cars from the road each year." Everything about these locomotives has been examined, questioned, and re-thought, generating 25 new U.S. patents in the process. Before they went on sale in 2005, 52 preproduction units were tested in revenue service across the continent for more than a year. Every Big Six railroad has ponied up to buy the ES44, with the BNSF currently rostering the largest EVO fleet. Around the world, over 3,700 Evolution Series diesels are operating in 10 countries.

Like all M.T.H. locomotives, our new ES44AC offers HO scale's finest combination of detail, realism, and performance. Listen to the chant of an authentic GEVO-12 motor in the Proto-Sound 3 versions, and throttle down as low as three scale miles per hour so you can admire the details as the Evolution Series glides by: see-through fans and grilles, walkways with safety tread, flashing ditch lights, windshield wipers, body and truck air brake piping, and a host of other separately

applied details. Activate the couplers from anywhere on the layout using any DCC controller or the DCS Digital Command System. For the ultimate in power and sound, operate these diesels in multiple-unit lashups under DCC or DCS digital command control. If you're running under the M.T.H. DCS system, you can double- or even triple-head the ES44AC with virtually any combination of 3.0 locomotives.

Features

- Intricately Detailed ABS Body
- Die-Cast Metal Chassis
- Metal Handrails and Horn
- Metal Body Side Grilles
- Detachable Snow Plow
- (2) Engineer Cab Figures
- Authentic Paint Scheme
- RP-25 Metal Wheels and Metal Axles
- (2) Operating Kadee-Compatible Remote Controlled Proto-Couplers****
- (2) #158 Scale Kadee Whisker Couplers
- Prototypical Rule 17 Lighting*
- Directionally Controlled Constant Voltage LED Headlights
- Lighted Cab Interior
- Illuminated Number Boards
- Operating Ditch Lights
- Flashing Underbody Charging Lights***
- Powerful 5-Pole Precision Flywheel-Equipped Skew-Wound Balanced Motor
- Locomotive Speed Control In Scale MPH Increments*
- Onboard 28-Function DCC Receiver*
- NMRA Compliant 8-Pin DCC Decoder Plug**
- 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: 10 9/16" x 1 7/16" x 2 3/16"
- Operates On 18" Radius Curves



Evolution Hybrid - ES44AC Diesel Engine, Cab No. 2010
 80-2344-1 DCC/DCS Proto-Sound 3.0 \$319.95
 80-2344-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$339.95

Hybrid has flashing charging lights

* Proto-Sound 3 and 3E+ Models Only ** DCC-Ready Model Only *** Evolution Hybrid Model Only **** Proto-Sound 3.0 Models Only

BNSF - ES44AC Diesel Engine, Cab No. 7028
 80-2327-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2327-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2327-0 DCC Ready \$199.95
 BNSF - ES44AC Diesel Engine, Cab No. 7033
 80-2328-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2328-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2328-0 DCC Ready \$199.95
 BNSF - ES44AC Diesel Engine, Cab No. 7036
 80-2329-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2329-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2329-0 DCC Ready \$199.95



Ferrosur - ES44AC Diesel Engine, Cab No. 4706
 80-2330-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2330-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2330-0 DCC Ready \$199.95
 Ferrosur - ES44AC Diesel Engine, Cab No. 4714
 80-2331-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2331-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2331-0 DCC Ready \$199.95
 Ferrosur - ES44AC Diesel Engine, Cab No. 4722
 80-2332-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2332-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2332-0 DCC Ready \$199.95



CSX - ES44AC Diesel Engine, Cab No. 3005
 80-2312-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2312-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2312-0 DCC Ready \$199.95
 CSX - ES44AC Diesel Engine, Cab No. 3018
 80-2313-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2313-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2313-0 DCC Ready \$199.95
 CSX - ES44AC Diesel Engine, Cab No. 3024
 80-2314-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2314-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2314-0 DCC Ready \$199.95



Canadian Pacific - ES44AC Diesel Engine, Cab No. 9362
 80-2324-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2324-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2324-0 DCC Ready \$199.95
 Canadian Pacific - ES44AC Diesel Engine, Cab No. 9366
 80-2325-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2325-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2325-0 DCC Ready \$199.95
 Canadian Pacific - ES44AC Diesel Engine, Cab No. 9372
 80-2326-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2326-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2326-0 DCC Ready \$199.95



Kansas City Southern - ES44AC Diesel Engine, Cab No. 4767
 80-2315-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2315-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2315-0 DCC Ready \$199.95
 Kansas City Southern - ES44AC Diesel Engine, Cab No. 4770
 80-2316-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2316-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2316-0 DCC Ready \$199.95
 Kansas City Southern - ES44AC Diesel Engine, Cab No. 4783
 80-2317-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2317-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2317-0 DCC Ready \$199.95



ES44AC



Rock Island (Iowa Interstate) - ES44AC Diesel Engine, Cab No. 513
 80-2333-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2333-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2333-0 DCC Ready \$199.95

Union Pacific - ES44AC Diesel Engine, Cab No. 7926
 80-2318-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2318-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2318-0 DCC Ready \$199.95
 Union Pacific - ES44AC Diesel Engine, Cab No. 7933
 80-2319-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2319-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2319-0 DCC Ready \$199.95
 Union Pacific - ES44AC Diesel Engine, Cab No. 7941
 80-2320-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2320-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2320-0 DCC Ready \$199.95



NORFOLK SOUTHERN HERITAGE SERIES

To celebrate its 30th anniversary in 2012, the Norfolk Southern Railway painted 20 freight diesels in paint schemes honoring its predecessor railroads. Half of the prototype schemes were applied to General Electric ES44AC diesels by Norfolk Southern employees at its Chattanooga, TN and Altoona, PA shops, and are replicated by the models on these pages. The remaining heritage schemes were painted on EMD SD70ACe locomotives at Progress Rail Services' shops in Muncie, IN., as shown in the models on pages 52-55.



Southern - ES44AC Diesel Engine, Cab No. 8099
 80-2335-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2335-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2335-0 DCC Ready \$199.95

Conrail - ES44AC Diesel Engine, Cab No. 8098
 80-2336-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2336-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2336-0 DCC Ready \$199.95



Central of Georgia - ES44AC Diesel Engine, Cab No. 8101
 80-2337-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2337-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2337-0 DCC Ready \$199.95

Lehigh Valley - ES44AC Diesel Engine, Cab No. 8104
 80-2339-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2339-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2339-0 DCC Ready \$199.95





Interstate - ES44AC Diesel Engine, Cab No. 8105
 80-2338-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2338-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2338-0 DCC Ready \$199.95



Monongahela - ES44AC Diesel Engine, Cab No. 8025
 80-2340-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2340-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2340-0 DCC Ready \$199.95

Nickel Plate Road - ES44AC Diesel Engine, Cab No. 8100
 80-2341-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2341-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2341-0 DCC Ready \$199.95



Norfolk Southern - ES44AC Diesel Engine, Cab No. 8114
 80-2342-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2342-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2342-0 DCC Ready \$199.95

Norfolk & Western - ES44AC Diesel Engine, Cab No. 8103
 80-2343-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2343-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2343-0 DCC Ready \$199.95



Pennsylvania - ES44AC Diesel Engine, Cab No. 8102
 80-2334-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2334-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2334-0 DCC Ready \$199.95

Norfolk Southern - ES44AC Diesel Engine, Cab No. 8110
 80-2321-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2321-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2321-0 DCC Ready \$199.95
 Norfolk Southern - ES44AC Diesel Engine, Cab No. 8116
 80-2322-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2322-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2322-0 DCC Ready \$199.95
 Norfolk Southern - ES44AC Diesel Engine, Cab No. 8122
 80-2323-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2323-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2323-0 DCC Ready \$199.95



General Electric Dash 9-44CW



NEW TOOLING!

Flexible mold design allows for 10 different road-specific body configurations

For the first six decades of the diesel era, the main goal of locomotive design was higher horsepower. Introduced in 1993, GE's 4400 hp Dash 9 and its AC-motored sibling, the AC4400CW, were three times as powerful as a typical first-generation diesel and had 10% more horsepower than their immediate predecessor, the Dash 8. A couple years later, GE and then EMD introduced 6000 hp engines, the first single-unit diesels to equal the power of the last and best steamers.

But what was thought to be a breakthrough turned out to be a flop. By the late 1990s, North American railroads had rejected the 6000 hp concept and concluded that the 4300-4400 hp diesel was the Goldilocks locomotive — not too big, not too small, but a versatile, just-right building block for multiple-unit lashups. The horsepower race was over.

The Dash 9, accordingly, turned out to be a best-seller. More than 3600 engines were sold by the end of production in 2004, and most are still hauling freight today. The Dash 9 was the last and best of GE's third-generation diesels, the generation in which computers were integrated into

nearly every locomotive function, from engine management to traction control to spotting and reporting maintenance issues. Instead of looking at dials and gauges, a modern engineer monitors computer screens. The Dash 9's successor, today's GE Evolution Series, helped usher in the diesel era's fourth generation: still 4400 hp, but a 21st century "green machine" with a much smaller carbon footprint.

The Dash 9 exemplified the modern locomotive at the turn of the 20th century, with microprocessors ensuring that its 4400 horses were working as efficiently and as often as possible. It rode on GE's brand-new HiAd™ trucks (for high adhesion), with computerized wheelslip control. Also new was a split cooling system that reduced temperatures and prolonged engine life. The Dash 9's wide-nosed North American cab, an option on earlier diesels, was standard equipment, solidifying the new look in road diesels.

While this new model is not the first HO replica of the Dash 9, we believe it is the best. From the shock absorbers and brake lines on its HiAd trucks, to its windshield wipers, MU

hoses, and metal grilles, our Dash 9 is loaded with accurate, added-on detail parts. Proto-Sound 3 models include flashing ditch lights; 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. Digital Command System (DCS); remote uncoupling anywhere on the layout; and a full range of sounds recorded from actual prototype engines. Our Proto-Sound models are more fun to operate than any other HO locomotives.

Features

- Intricately Detailed ABS Body
- Die-Cast Metal Chassis
- Metal Handrails and Horn
- Metal Body Side Grilles
- Detachable Snow Plow
- (2) Engineer Cab Figures
- Authentic Paint Scheme
- Metal Wheels and Axles
- RP25 Metal Wheels
- (2) Operating Kadee-Compatible Remote Controlled Proto-Couplers***
- (2) #158 Scale Kadee Whisker Couplers
- Prototypical Rule 17 Lighting*
- Directionally Controlled Constant Voltage LED Headlights
- Lighted Cab Interior
- Illuminated Number Boards
- Operating Ditch Lights
- Powerful 5-Pole Precision Flywheel-Equipped Skew-Wound Balanced Motor
- Locomotive Speed Control In Scale MPH Increments*
- Onboard 28-Function DCC Receiver*
- 8-Pin DCC Decoder Plug**
- 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: 10 9/16" x 1 7/16" x 2 3/16"
- Operates On 18" Radius Curves

* Proto-Sound 3 and 3E+ Models Only

** DCC-Ready Model Only

*** Proto-Sound 3.0 Models Only



BNSF (Swoosh) - Dash 9 Diesel Engine, Cab No. 796*
 80-2286-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2286-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2286-0 DCC Ready \$199.95

* Before its merger into BNSF in 1995, the Santa Fe specified a unique notch on the side of its Dash 9 cab roofs for clearance reasons, particularly at its York Canyon, New Mexico coal loadout. Known as a gull wing cab roof, this feature was carried over into subsequent BNSF Dash 9 orders, and is accurately rendered on our Santa Fe, transition period, and BNSF models.



BNSF (Warbonnet) - Dash 9 Diesel Engine, Cab No. 4704*
 80-2287-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2287-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2287-0 DCC Ready \$199.95

BNSF (Warbonnet) - Dash 9 Diesel Engine, Cab No. 4719*
 80-2288-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2288-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2288-0 DCC Ready \$199.95

BNSF (Warbonnet) - Dash 9 Diesel Engine, Cab No. 4707*
 80-2289-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2289-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2289-0 DCC Ready \$199.95



Southern Pacific - Dash 9 Diesel Engine, Cab No. 8101
 80-2305-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2305-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2305-0 DCC Ready \$199.95

Southern Pacific - Dash 9 Diesel Engine, Cab No. 8116
 80-2306-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2306-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2306-0 DCC Ready \$199.95

Southern Pacific - Dash 9 Diesel Engine, Cab No. 8121
 80-2307-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2307-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2307-0 DCC Ready \$199.95



Dash 9-44CW



Canadian National - Dash 9 Diesel Engine, Cab No. 2604		
80-2290-1	DCC/DCS Proto-Sound 3.0	\$299.95
80-2290-5	DCC/DCS Proto-Sound 3E+ (3-Rail)	\$319.95
80-2290-0	DCC Ready	\$199.95
Canadian National - Dash 9 Diesel Engine, Cab No. 2610		
80-2291-1	DCC/DCS Proto-Sound 3.0	\$299.95
80-2291-5	DCC/DCS Proto-Sound 3E+ (3-Rail)	\$319.95
80-2291-0	DCC Ready	\$199.95
Canadian National - Dash 9 Diesel Engine, Cab No. 2617		
80-2292-1	DCC/DCS Proto-Sound 3.0	\$299.95
80-2292-5	DCC/DCS Proto-Sound 3E+ (3-Rail)	\$319.95
80-2292-0	DCC Ready	\$199.95

Chicago & North Western - Dash 9 Diesel Engine, Cab No. 8669		
80-2294-1	DCC/DCS Proto-Sound 3.0	\$299.95
80-2294-5	DCC/DCS Proto-Sound 3E+ (3-Rail)	\$319.95
80-2294-0	DCC Ready	\$199.95
Chicago & North Western - Dash 9 Diesel Engine, Cab No. 8672		
80-2295-1	DCC/DCS Proto-Sound 3.0	\$299.95
80-2295-5	DCC/DCS Proto-Sound 3E+ (3-Rail)	\$319.95
80-2295-0	DCC Ready	\$199.95
Chicago & North Western - Dash 9 Diesel Engine, Cab No. 8676		
80-2296-1	DCC/DCS Proto-Sound 3.0	\$299.95
80-2296-5	DCC/DCS Proto-Sound 3E+ (3-Rail)	\$319.95
80-2296-0	DCC Ready	\$199.95



Chicago & North Western (OPLS logo) - Dash 9 Diesel Engine, Cab No. 8727		
80-2293-1	DCC/DCS Proto-Sound 3.0	\$299.95
80-2293-5	DCC/DCS Proto-Sound 3E+ (3-Rail)	\$319.95
80-2293-0	DCC Ready	\$199.95

Santa Fe - Dash 9 Diesel Engine, Cab No. 620*		
80-2302-1	DCC/DCS Proto-Sound 3.0	\$299.95
80-2302-5	DCC/DCS Proto-Sound 3E+ (3-Rail)	\$319.95
80-2302-0	DCC Ready	\$199.95
Santa Fe - Dash 9 Diesel Engine, Cab No. 624*		
80-2303-1	DCC/DCS Proto-Sound 3.0	\$299.95
80-2303-5	DCC/DCS Proto-Sound 3E+ (3-Rail)	\$319.95
80-2303-0	DCC Ready	\$199.95
Santa Fe - Dash 9 Diesel Engine, Cab No. 629*		
80-2304-1	DCC/DCS Proto-Sound 3.0	\$299.95
80-2304-5	DCC/DCS Proto-Sound 3E+ (3-Rail)	\$319.95
80-2304-0	DCC Ready	\$199.95



*Features prototypical notched "gull wing" cab roof unique to Santa Fe and BNSF Dash 9s (See previous page for more detail.)



Union Pacific (Red Stripe) - Dash 9 Diesel Engine, Cab No. 9800
 80-2309-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2309-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2309-0 DCC Ready \$199.95
 Union Pacific (Red Stripe) - Dash 9 Diesel Engine, Cab No. 9812
 80-2310-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2310-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2310-0 DCC Ready \$199.95
 Union Pacific (Red Stripe) - Dash 9 Diesel Engine, Cab No. 9820
 80-2311-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2311-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2311-0 DCC Ready \$199.95

Union Pacific (CNW Flag logo) - Dash 9 Diesel Engine, Cab No. 9807
 80-2308-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2308-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2308-0 DCC Ready \$199.95

(Models an ex-Chicago & North Western unit acquired in the UP takeover.)



Norfolk Southern - Dash 9 Diesel Engine, Cab No. 9197
 80-2299-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2299-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2299-0 DCC Ready \$199.95
 Norfolk Southern - Dash 9 Diesel Engine, Cab No. 9156
 80-2300-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2300-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2300-0 DCC Ready \$199.95
 Norfolk Southern - Dash 9 Diesel Engine, Cab No. 9183
 80-2301-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2301-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2301-0 DCC Ready \$199.95

Norfolk Southern (Black Horse logo) - Dash 9 Diesel Engine, Cab No. 9171
 80-2298-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2298-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2298-0 DCC Ready \$199.95

Did You Know?

Norfolk Southern Dash 9s have software that downrates their motors to 4000 hp to reduce engine wear and fuel consumption. If needed, the extra 400 horses can be accessed with the flip of a key switch.



Norfolk Southern (Black OPLS logo) - Dash 9 Diesel Engine, Cab No. 9250
 80-2297-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2297-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2297-0 DCC Ready \$199.95

EMD GP35



Produced from 1963 to 1966, the EMD 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.

HO railroaders will find this model offers 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 model also offers a broader range of operating 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 mo-

tive power that's accurately detailed, smooth running, and a great deal of fun to operate, it doesn't get any better than this.

Proto-Sound 3E+

The Proto-Sound 3E+ models featured in this catalog come outfitted with NEM 340 Wheels and NEM 360/362 Coupler & Pocket Assemblies. They are equipped with a 3rd rail slide shoe for use with Märklin HO stud rail and can operate on AC power.

This 3-rail version of Proto-Sound 3.0 can be operated in six different modes: AC or DC powered Analog/Conventional, DCC Command Mode with any DCC Controller, DCS Digital Command System mode, Märklin DCC Command Mode, and Motorola 1 and 2 Command Modes.

Features

- Intricately Detailed 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
- 8-Pin DCC Decoder Plug on DCC Ready Models
- Lighted Cab Interior
- Directionally Controlled Constant Voltage LED Headlights
- Illuminated Number Boards
- Lighted Marker 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
- 3E+ Model Operates On R1 (360mm) Radius Curves

**Featured on Proto-Sound 3E+ Models*



Chessie - GP35 Diesel with DCC/DCS Proto-Sound 3.0	
80-2230-1 Cab No. 3545	\$279.95
80-2231-1 Cab No. 3546	\$279.95
80-2232-1 Cab No. 3551	\$279.95
Chessie - GP35 Diesel with DCC/DCS Proto-Sound 3E+ (3-Rail)	
80-2230-5 Cab No. 3545	\$299.95
80-2231-5 Cab No. 3546	\$299.95
80-2232-5 Cab No. 3551	\$299.95
Chessie - GP35 Diesel (DCC Ready)	
80-2230-0 Cab No. 3545	\$179.95
80-2231-0 Cab No. 3546	\$179.95
80-2232-0 Cab No. 3551	\$179.95



Penn Central - GP35 Diesel with DCC/DCS Proto-Sound 3.0	
80-2233-1 Cab No. 2372	\$279.95
80-2234-1 Cab No. 2382	\$279.95
80-2235-1 Cab No. 2387	\$279.95
Penn Central - GP35 Diesel with DCC/DCS Proto-Sound 3E+ (3-Rail)	
80-2233-5 Cab No. 2372	\$299.95
80-2234-5 Cab No. 2382	\$299.95
80-2235-5 Cab No. 2387	\$299.95
Penn Central - GP35 Diesel (DCC Ready)	
80-2233-0 Cab No. 2372	\$179.95
80-2234-0 Cab No. 2382	\$179.95
80-2235-0 Cab No. 2387	\$179.95



All Proto-Sound Models Include Onboard DCC Receiver



Chesapeake & Ohio - GP35 Diesel with DCC/DCS Proto-Sound 3.0	
80-2236-1 Cab No. 3520	\$279.95
80-2237-1 Cab No. 3534	\$279.95
80-2238-1 Cab No. 3536	\$279.95
Chesapeake & Ohio - GP35 Diesel with DCC/DCS Proto-Sound 3E+ (3-Rail)	
80-2236-5 Cab No. 3520	\$299.95
80-2237-5 Cab No. 3534	\$299.95
80-2238-5 Cab No. 3536	\$299.95
Chesapeake & Ohio - GP35 Diesel (DCC Ready)	
80-2236-0 Cab No. 3520	\$179.95
80-2237-0 Cab No. 3534	\$179.95
80-2238-0 Cab No. 3536	\$179.95



Conrail - GP35 Diesel with DCC/DCS Proto-Sound 3.0	
80-2239-1 Cab No. 2256	\$279.95
80-2240-1 Cab No. 2257	\$279.95
80-2241-1 Cab No. 2266	\$279.95
Conrail - GP35 Diesel with DCC/DCS Proto-Sound 3E+ (3-Rail)	
80-2239-5 Cab No. 2256	\$299.95
80-2240-5 Cab No. 2257	\$299.95
80-2241-5 Cab No. 2266	\$299.95
Conrail - GP35 Diesel (DCC Ready)	
80-2239-0 Cab No. 2256	\$179.95
80-2240-0 Cab No. 2257	\$179.95
80-2241-0 Cab No. 2266	\$179.95



EMD GP35

Pennsylvania GP35 Diesel with DCC/DCS Proto-Sound 3.0

80-2160-1	Cab No. 2258	\$279.95
80-2161-1	Cab No. 2268	\$279.95
80-2162-1	Cab No. 2273	\$279.95

Pennsylvania GP35 Diesel with DCC/DCS Proto-Sound 3E+ (3-Rail)

80-2160-5	Cab No. 2258	\$299.95
80-2161-5	Cab No. 2268	\$299.95



Union Pacific GP35 Diesel with DCC/DCS Proto-Sound 3.0

80-2172-1	Cab No. 750	\$279.95
80-2173-1	Cab No. 756	\$279.95

Union Pacific GP35 Diesel with DCC/DCS Proto-Sound 3E+ (3-Rail)

80-2172-5	Cab No. 750	\$299.95
80-2173-5	Cab No. 756	\$299.95
80-2174-5	Cab No. 759	\$299.95

Union Pacific GP35 Diesel DCC-Ready

80-2173-0	Cab No. 756	\$179.95
80-2174-0	Cab No. 759	\$179.95



Erie Lackawanna GP35 Diesel with DCC/DCS Proto-Sound 3.0

80-2169-1	Cab No. 2551	\$279.95
-----------	--------------	----------

Erie Lackawanna GP35 Diesel with DCC/DCS Proto-Sound 3E+ (3-Rail)

80-2170-5	Cab No. 2552	\$299.95
-----------	--------------	----------



Baltimore & Ohio GP35 Diesel with DCC/DCS Proto-Sound 3E+ (3-Rail)

80-2158-5	Cab No. 3544	\$299.95
-----------	--------------	----------

All Proto-Sound Models Include Onboard DCC Receiver



Southern Pacific GP35 Diesel with DCC/DCS Proto-Sound 3.0
80-2175-1 Cab No. 6580 \$279.95
Southern Pacific GP35 Diesel with DCC/DCS Proto-Sound 3E+ (3-Rail)
80-2175-5 Cab No. 6580 \$299.95

Norfolk & Western GP35 Diesel with DCC/DCS Proto-Sound 3.0
80-2166-1 Cab No. 1304 \$279.95
80-2167-1 Cab No. 1305 \$279.95



New York Central GP35 Diesel with DCC/DCS Proto-Sound 3.0
80-2164-1 Cab No. 6133 \$279.95

New York Central GP35 Diesel with DCC/DCS Proto-Sound 3E+ (3-Rail)
80-2163-5 Cab No. 6131 \$299.95

New York Central GP35 Diesel DCC-Ready
80-2164-0 Cab No. 6133 \$179.95

Alco FA-1



All Proto-Sound Models Include Onboard DCC Receiver

The American Locomotive Company, one of the nation's premier steam locomotive builders, joined forces with Schenectady, New York neighbor General Electric to build the first standardized diesel-electric locomotives in the 1920s. But when the diesel revolution began in earnest after World War II, dependability problems with Alco's model 244 prime mover doomed the company to forever playing second fiddle to industry leader EMD.

The brawny good looks of Alco's FA and PA cab units, however, have endeared them to railfans and modelers for more than half a century. Designed to compete with EMD's FT four axle freight locomotive, the FA-1 contained many of the same design elements but used a new 12-cylinder 244 engine. Many would argue that Alco's FA-1 and successor FA-2 diesels were both handsomer and more powerful looking than their major competitors, EMD's

F3 and F7 "covered wagons." A signature feature of Alco cab units was the striking ribbed grille surrounding the headlight. And while FAs were sold primarily as freight haulers, like EMD's F-units they had room for a passenger-service steam generator at the rear of the engine compartment.

M.T.H. is proud to present the HO FA-1 in classic first-generation diesel paint schemes. These streamlined diesels will bring beauty and power to any HO layout. Each Alco FA-1 A-B diesel set includes one powered A unit and powered B unit. The A unit has full directional lighting and both the A and B units feature two operating Kadee-compatible remote controlled couplers.

Proto-Sound 3E+

The Proto-Sound 3E+ models featured in this catalog come outfitted with NEM 340 Wheels and NEM 360/362 Coupler & Pocket Assemblies. They are equipped with a 3rd rail slide shoe for use with Märklin HO stud rail and can operate on AC power.

This 3-rail version of Proto-Sound 3.0 can be operated in six different modes: AC or DC powered Analog/Conventional, DCC Command Mode with any DCC Controller, DCS Digital Command System mode, Märklin DCC Command Mode, and Motorola 1 and 2 Command Modes.

Features

- Intricately Detailed 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*
- Prototypical Rule 17 Lighting
- Directionally Controlled Constant Voltage LED Headlights
- Lighted Cab Interior
- Illuminated Number Boards
- Lighted Marker Lights
- Operating MARS Light**
- 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: 14" x 1 3/8" x 2 1/16"
- Operates On 22" Radius Curves
- 3E+ Model Operates On R2 (437.5mm) Radius Curves

*Available on Proto-Sound 3E+ Models
** Where Prototypical





Soo Line - Alco FA-1 A/B Set, A Unit No. 2221A & 2221B
 80-2200-1 DCC/DCS Proto-Sound 3.0 \$489.95
 80-2200-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$529.95

Soo Line - Alco FA-1 A Unit, Cab No. 2222A
 80-2201-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2201-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$289.95
 80-2201-0 DCC Ready \$169.95

Soo Line - Alco FB-1 B Unit, Cab No. 2222B
 80-2202-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2202-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$289.95



Erie - Alco FA-1 A/B Set, A Unit No. 725A, B Unit No. 725B
 80-2212-1 DCC/DCS Proto-Sound 3.0 \$489.95
 80-2212-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$529.95
 80-2212-0 DCC Ready \$309.95

Erie - Alco FA-1 A Unit, Cab No. 729A
 80-2213-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2213-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$289.95
 80-2213-0 DCC Ready \$169.95

Erie - Alco FB-1 B Unit, Cab No. 729B
 80-2214-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2214-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$289.95
 80-2214-0 DCC Ready \$169.95



New Haven - Alco FA-1 A/B Set, A Unit No. 0419, B Unit No. 0459
 80-2203-1 DCC/DCS Proto-Sound 3.0 \$489.95
 80-2203-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$529.95
 80-2203-0 DCC Ready \$309.95

New Haven - Alco FA-1 A Unit, Cab No. 0424
 80-2204-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2204-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$289.95
 80-2204-0 DCC Ready \$169.95

New Haven - Alco FB-1 B Unit, Cab No. 0464
 80-2205-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2205-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$289.95



New York Central - Alco FA-1 A/B Set, A Unit No. 1030, B Unit No. 2320
 80-2209-1 DCC/DCS Proto-Sound 3.0 \$489.95
 80-2209-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$529.95
 80-2209-0 DCC Ready \$309.95

New York Central - Alco FA-1 A Unit, Cab No. 1010
 80-2210-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2210-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$289.95
 80-2210-0 DCC Ready \$169.95

New York Central - Alco FB-1 B Unit, Cab No. 2300
 80-2211-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2211-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$289.95



Alco FA-1



Pennsylvania- Alco FA-1 A/B Set

80-2277-1	DCC/DCS Proto-Sound 3.0	\$489.95
80-2092-0	DCC Ready	\$309.95

Pennsylvania - Alco FA-1 A Unit

80-2278-1	DCC/DCS Proto-Sound 3.0	\$269.95
80-2093-0	DCC Ready	\$169.95

Pennsylvania - Alco FB-1 B Unit

80-2094-1	DCC/DCS Proto-Sound 3.0	\$269.95
80-2094-0	DCC Ready	\$169.95



Union Pacific- Alco FA-1 A/B Set, Cab Numbers 1501A & 1525B

80-2103-1	DCC/DCS Proto-Sound 3.0	\$489.95
80-2103-0	DCC Ready	\$309.95

Union Pacific - Alco FB-1 B Unit, Cab Number 1524B

80-2105-1	DCC/DCS Proto-Sound 3.0	\$269.95
-----------	-------------------------	----------





Lehigh Valley - Alco FA-1 A/B Set, Cab Numbers 530 & 531
80-2098-1 DCC/DCS Proto-Sound 3.0 \$489.95

Lehigh Valley - Alco FA-1 A Unit, Cab Number 542
80-2099-1 DCC/DCS Proto-Sound 3.0 \$269.95

Lehigh Valley - Alco FB-1 B Unit, Cab Number 543
80-2100-1 DCC/DCS Proto-Sound 3.0 \$269.95
80-2100-0 DCC Ready \$169.95



Reading - Alco FA-1 A/B Set, Cab Numbers 300A & 300B
80-2095-1 DCC/DCS Proto-Sound 3.0 \$489.95

Reading - Alco FA-1 A Unit, Cab Number 301A
80-2096-1 DCC/DCS Proto-Sound 3.0 \$269.95
80-2096-0 DCC Ready \$169.95

Reading - Alco FB-1 B Unit, Cab Number 301B
80-2097-1 DCC/DCS Proto-Sound 3.0 \$269.95
80-2097-0 DCC Ready \$169.95



All Proto-Sound Models Include Onboard DCC Receiver

Canadian Pacific - Alco FA-1 A/B Set, A Unit No. 4025,
B Unit No. 4410
80-2206-1 DCC/DCS Proto-Sound 3.0 \$489.95
80-2206-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$529.95
80-2206-0 DCC Ready \$309.95
Canadian Pacific - Alco FA-1 A Unit, Cab No. 4016
80-2207-1 DCC/DCS Proto-Sound 3.0 \$269.95
80-2207-0 DCC Ready \$169.95
Canadian Pacific - Alco FB-1 B Unit, Cab No. 4406
80-2208-1 DCC/DCS Proto-Sound 3.0 \$269.95
80-2208-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$289.95

Alco PA



All Proto-Sound Models Include Onboard DCC Receiver

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 New York Central's Empire State Express.

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. Railfans gave the PAs and other Alcos the tongue-in-cheek title of "honorary steam locomotives" in recognition of the black smoke they produced when starting or accelerating, until the turbo-charger came up to speed.

Recreate the excitement of first-class passenger travel in the middle of the last century, with these Alco PA locomotives and matching passenger sets. Our ProtoSound 3.0 sound and control system brings you the authentic sounds of an Alco prime mover and station announcements for name trains of the 1940s and

'50s — 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.

Proto-Sound 3E+

The Proto-Sound 3E+ models featured in this catalog come outfitted with NEM 340 Wheels and NEM 360/362 Coupler & Pocket Assemblies. They are equipped with a 3rd rail slide shoe for use with Märklin HO stud rail and can operate on AC power.

This 3-rail version of Proto-Sound 3.0 can be operated in six different modes: AC or DC powered Analog/Conventional, DCC Command Mode with any DCC Controller, DCS Digital Command System mode, Märklin DCC Command Mode, and Motorola 1 and 2 Command Modes.

Features

- Intricately Detailed 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
- 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 Marker 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
- 3E+ Model Operates On R2 (437.5mm) Radius Curves

*Available on Proto-Sound 3E+ Models

** Where Prototypical

See it in action at
mthHOtrains.com





Pennsylvania - Alco PA A/B Set, A Unit No. 5756,
B Unit No. 5756B
80-2215-1 DCC/DCS Proto-Sound 3.0 \$529.95
80-2215-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$569.95
80-2215-0 DCC Ready \$349.95

Pennsylvania - Alco PA A Unit, Cab No. 5755
80-2216-1 DCC/DCS Proto-Sound 3.0 \$289.95
80-2216-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$309.95
80-2216-0 DCC Ready \$189.95

Pennsylvania - Alco PA B Unit, Cab No. 5752B
80-2217-1 DCC/DCS Proto-Sound 3.0 \$289.95
80-2217-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$309.95
80-2217-0 DCC Ready \$189.95



Missouri Pacific - Alco PA A Unit, Cab No. 8008
80-2225-1 DCC/DCS Proto-Sound 3.0 \$289.95



Union Pacific - Alco PA A/B Set, A Unit No. 600,
B Unit No. 600B
80-2218-1 DCC/DCS Proto-Sound 3.0 \$529.95
80-2218-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$569.95
80-2218-0 DCC Ready \$349.95

Union Pacific - Alco PA A Unit, Cab No. 602
80-2219-1 DCC/DCS Proto-Sound 3.0 \$289.95
80-2219-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$309.95
80-2219-0 DCC Ready \$189.95

Union Pacific - Alco PA B Unit, Cab No. 602B
80-2220-1 DCC/DCS Proto-Sound 3.0 \$289.95
80-2220-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$309.95



Lehigh Valley - Alco PA A Unit, Cab No. 610
80-2222-1 DCC/DCS Proto-Sound 3.0 \$289.95
80-2222-0 DCC Ready \$189.95



Nickel Plate Road - Alco PA A Unit, Cab No. 187
80-2228-1 DCC/DCS Proto-Sound 3.0 \$289.95
80-2228-0 DCC Ready \$189.95



Alco PA



New Haven - Alco PA A-A Set, Cab Number 0760 & 0767
80-2083-0 DCC Ready \$349.95

New Haven - Alco PA A Unit, Cab Number 0785
80-2084-0 DCC Ready \$189.95



Denver & Rio Grande - Alco PA A-B Set
80-2270-1 DCC/DCS Proto-Sound 3.0 \$529.95

Denver & Rio Grande - Alco PA A Unit
80-2271-1 DCC/DCS Proto-Sound 3.0 \$289.95

Denver & Rio Grande - Alco PA B Unit
80-2079-0 DCC Ready \$189.95



Santa Fe - Alco PA A-B Set, Cab Number 70 & 70A
80-2272-1 DCC/DCS Proto-Sound 3.0 \$529.95
80-2272-0 DCC Ready \$349.95

Santa Fe - Alco PA A Unit, Cab Number 62
80-2273-0 DCC Ready \$189.95

Featuring Stainless Steel Finish



Delaware & Hudson - Alco PA A-A Set, Cab Number 16 & 18
 80-2089-0 DCC Ready \$349.95

Delaware & Hudson - Alco PA A Unit, Cab Number 19
 80-2090-0 DCC Ready \$189.95

Featuring Stainless Steel Finish



Erie - Alco PA A-A Set, Cab Number 854 & 858
 80-2086-1 DCC/DCS Proto-Sound 3.0 \$529.95
 80-2086-0 DCC Ready \$349.95

Erie - Alco PA A Unit, Cab Number 856
 80-2087-1 DCC/DCS Proto-Sound 3.0 \$289.95
 80-2087-0 DCC Ready \$189.95

All Proto-Sound Models Include Onboard DCC Receiver



Southern Pacific - Alco PA A/B Set, A Unit No. 6008, B Unit No. 5914
 80-2274-1 DCC/DCS Proto-Sound 3.0 \$529.95

Southern Pacific - Alco PA A Unit, Cab No. 6013
 80-2275-1 DCC/DCS Proto-Sound 3.0 \$289.95

Southern Pacific - Alco PA B Unit, Cab No. 5912
 80-2276-1 DCC/DCS Proto-Sound 3.0 \$289.95

EMD F3



All Proto-Sound Models Include Onboard DCC Receiver

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.

M.T.H. is proud to offer the drama of this postwar locomotive in HO scale. Diesel sets with Proto-Sound 3.0 offer authentic EMD 567 prime mover sounds, first generation diesel horn and bell, crew station sounds, break sounds, and cab chatter. Our F3 features the 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.

Proto-Sound 3E+

The Proto-Sound 3E+ models featured in this catalog come outfitted with NEM 340 Wheels and NEM 360/362 Coupler & Pocket Assemblies. They are equipped with a 3rd rail slide shoe for use with Märklin HO stud rail and can operate on AC power.

This 3-rail version of Proto-Sound 3.0 can be operated in six different modes: AC or DC powered Analog/Conventional, DCC Command Mode with any DCC Controller, DCS Digital Command System mode, Märklin DCC Command Mode, and Motorola 1 and 2 Command Modes.

Features

- Intricately Detailed 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**
- 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 Passenger Station 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
- 3E+ Model Operates On R1 (360mm) Radius Curves

*Available on Proto-Sound 3E+ Models

** Where Prototypical



Denver & Rio Grande - F3 A/B Set, A Unit No. 5524, B Unit No. 5523
 80-2197-1 DCC/DCS Proto-Sound 3.0 \$489.95
 80-2197-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$529.95
 80-2197-0 DCC Ready \$309.95

Denver & Rio Grande - F3 A Unit, Cab No. 5531
 80-2198-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2198-5 DCC Proto-Sound 3E+ (3-Rail) \$289.95
 80-2198-0 DCC Ready \$169.95

Denver & Rio Grande - F3 B Unit, Cab No. 5532
 80-2199-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2199-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$289.95
 80-2199-0 DCC Ready \$169.95



Southern Pacific - F3 A/B Set, A Unit No. 6103, B Unit No. 8003
 80-2191-1 DCC/DCS Proto-Sound 3.0 \$489.95
 80-2191-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$529.95
 80-2191-0 DCC Ready \$309.95

Southern Pacific - F3 A Unit, Cab No. 6139
 80-2192-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2192-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$289.95
 80-2192-0 DCC Ready \$169.95

Southern Pacific - F3 B Unit, Cab No. 8039
 80-2193-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2193-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$289.95
 80-2193-0 DCC Ready \$169.95



Union Pacific - F3 A/B Set, A Unit No. 1404A, B Unit No. 1442B
 80-2188-1 DCC/DCS Proto-Sound 3.0 \$489.95
 80-2188-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$529.95
 80-2188-0 DCC Ready \$309.95

Union Pacific - F3 A Unit, Cab No. 1441A
 80-2189-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2189-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$289.95
 80-2189-0 DCC Ready \$169.95

Union Pacific - F3 B Unit, Cab No. 1471B
 80-2190-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2190-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$289.95
 80-2190-0 DCC Ready \$169.95



**Features
Plated
Stainless
Steel Finish**



Santa Fe - F3 A/B Set, A Unit No. 18, B Unit No. 18A
 80-2185-1 DCC/DCS Proto-Sound 3.0 \$489.95
 80-2185-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$529.95
 80-2185-0 DCC Ready \$309.95

Santa Fe - F3 A Unit, Cab No. 18C
 80-2186-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2186-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$289.95
 80-2186-0 DCC Ready \$169.95

Santa Fe - F3 B Unit, Cab No. 18B
 80-2187-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2187-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$289.95
 80-2187-0 DCC Ready \$169.95



Pennsylvania - F3 A/B Set, A Unit No. 9501, B Unit No. 9501B
 80-2194-1 DCC/DCS Proto-Sound 3.0 \$489.95
 80-2194-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$529.95
 80-2194-0 DCC Ready \$309.95

Pennsylvania - F3 A Unit, Cab No. 9505
 80-2195-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2195-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$289.95
 80-2195-0 DCC Ready \$169.95

Pennsylvania - F3 B Unit, Cab No. 9505B
 80-2196-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2196-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$289.95
 80-2196-0 DCC Ready \$169.95



EMD F7



All Proto-Sound Models Include Onboard DCC Receiver

The F7 was the zenith of the “covered wagon,” or carbody-style diesel. With 3,849 units built between 1949 and 1953, the F7 was both the most popular carbody diesel and its last hurrah. By 1954 U.S. railroads had virtually stopped ordering F-units in favor of hood units like EMD’s GP9 and Alco’s RS-3. The side walkways of hood units offered better access for maintenance and better visibility for backup moves, making them truly universal locomotives useful for both mainline runs and road switching.

Externally, the F7 was very similar to the earlier F3. The key spotting features that distinguished an F7 were its stainless steel upper body grilles that replaced the “chicken wire” worn by most F3s, and the rooftop dynamic brake fan that replaced the F3’s rectangular roof vents just behind the cab. Internally, the F7 was also an

evolution of the F3. While horsepower was the same, new D27 traction motors allowed the F7 to handle a heavier load.

Capture the excitement of the first-generation diesel era with our superbly detailed, smooth-running F7s. Throttle down as low as 3 scale miles per hour with any load or roll along at the prototype’s maximum speed of 102 mph with passenger gearing. Proto-Sound 3.0 offers authentic EMD 567 prime mover sounds, a first-generation diesel horn and bell, and crew and station sounds. Added-on details include legible builder’s plates, grab irons, multiple-unit hoses, rooftop lift rings, see-through side grilles and rooftop fan housings, steam generator exhaust stack (for passenger versions), windshield wipers, and our super-detailed Blomberg trucks.

Proto-Sound 3E+

The Proto-Sound 3E+ models featured in this catalog come outfitted with NEM 340 Wheels and NEM 360/362 Coupler & Pocket Assemblies. They are equipped with a 3rd rail slide shoe for use with Märklin HO stud rail and can operate on AC power.

This 3-rail version of Proto-Sound 3.0 can be operated in six different modes: AC or DC powered Analog/Conventional, DCC Command Mode with any DCC Controller, DCS Digital Command System mode, Märklin DCC Command Mode, and Motorola 1 and 2 Command Modes.

Features

- Intricately Detailed ABS Body
- Metal Chassis
- Metal Handrails and Horn
- 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) #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 Headlight
- Lighted Cab Interior
- Illuminated Number Boards
- Lighted Marker Lights
- Operating MARS Light**
- 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 Passenger Station or Freight Yard Proto-Effects
- A-Unit Measures: 7" x 1 7/16" x 2 3/8"
- B-Unit Measures: 6 7/8" x 1 7/16" x 2 3/8"
- Operates On 18" Radius Curves
- 3E+ Model Operates On R1 (360mm) Radius Curves

*Featured on Proto-Sound 3E+ Models
** Where Prototypical

See it in action at
mthHOtrains.com





Northern Pacific - F7 A/B Set, Cab Numbers 6511A & 6511B
 80-2120-1 DCC/DCS Proto-Sound 3.0 \$489.95
 Northern Pacific - F7 A Unit, Cab Number 6511C
 80-2121-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2121-0 DCC Ready \$169.95

Erie Lackawanna - F7 A/B Set, Cab Numbers 6111 & 6112

80-2123-1 DCC/DCS Proto-Sound 3.0 \$489.95
 Erie Lackawanna - F7 A Unit, Cab Number 6351
 80-2124-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2124-0 DCC Ready \$169.95
 Erie Lackawanna - F7 B Unit, Cab Number 6332
 80-2125-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2125-0 DCC Ready \$169.95



Western Maryland - F7 A/B Set, Cab Numbers 60 & 59B
 80-2111-1 DCC/DCS Proto-Sound 3.0 \$489.95
 80-2111-0 DCC Ready \$309.95
 Western Maryland - F7 A Unit, Cab Number 54
 80-2112-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2112-0 DCC Ready \$169.95
 Western Maryland - F7 B Unit, Cab Number 53B
 80-2113-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2113-0 DCC Ready \$169.95

Santa Fe - F7 A/B Set, Cab Numbers 304 & 342B

80-2114-1 DCC/DCS Proto-Sound 3.0 \$489.95
 Santa Fe - F7 A Unit, Cab Number 315
 80-2115-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2115-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$289.95
 80-2115-0 DCC Ready \$169.95
 Santa Fe - F7 B Unit, Cab Number 345B
 80-2116-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2116-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$289.95
 80-2116-0 DCC Ready \$169.95



Features Plated Stainless Steel Finish



Chesapeake & Ohio - F7 A/B Set, Cab Numbers 7016 & 7508
 80-2108-1 DCC/DCS Proto-Sound 3.0 \$489.95
 Chesapeake & Ohio - F7 A Unit, Cab Number 7017
 80-2109-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2109-0 DCC Ready \$169.95
 Chesapeake & Ohio - F7 B Unit, Cab Number 7509
 80-2110-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2110-0 DCC Ready \$169.95

Santa Fe - F7 A/B Set, Cab Numbers 39L & 39A

80-2117-0 DCC Ready \$309.95
 Santa Fe - F7 A Unit, Cab Number 39C
 80-2118-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2118-0 DCC Ready \$169.95
 Santa Fe - F7 B Unit, Cab Number 39B
 80-2119-1 DCC/DCS Proto-Sound 3.0 \$269.95
 80-2119-0 DCC Ready \$169.95



Features Plated Stainless Steel Finish

EMD SD70ACe



The SD70ACe is Electro-Motive Diesel's hope for the future. While designed to meet the Environmental Protection Agency's Tier-2 emissions requirements that took effect on January 1, 2005, this replacement for the SD70MAC also has a higher purpose: to recapture the lead in North American locomotive sales that EMD lost to General Electric in 1987.

Virtually every element of the SD70ACe has been re-thought to create a 21st century locomotive. Ergonomics were a prime consideration. The engine's angular nose offers the crew far better visibility than most other locomotives, and the cab is comfortable for engineers of almost any size. Digital screens provide a range of information on what is happening both inside the locomotive and out on the road. The cab easily accommodates a crew of three — an important factor in a modern world without cabooses. And there is, of course, a cupholder for the engineer.

The SD70ACe also offers, in EMD's words, "outstanding improvements in maintainability." All electrical wires are on the right side of the locomotive and all piping is on the left, with most pipes and wires routed under the frame so they can be serviced by a man standing outside the engine — rather than crawling around at the bottom of the engine room. And the time between service intervals has been doubled, from every three months to every six months.

After a year of testing on the road and at the Association of American Railroads' test track in Pueblo, CO, the first SD70ACe's ("e" stands for "enhanced") were delivered to CSX Transportation in 2004. Today they are rostered by nearly every North American Class 1 railroad. At the present time, mainline American railroads generally maintain dual fleets of locomotives. AC power is used for heavy coal hauling and hotshot intermodal traffic because AC traction motors offer higher starting tractive effort with the same horsepower. Less expensive, traditional DC power is used

for more mundane duties. But with the SD70ACe, Electro-Motive hopes it may have the 21st Century successor to its 1949 Geep — a locomotive that can be nearly all things to all railroads.

Proto-Sound 3E+

The Proto-Sound 3E+ models featured in this catalog come outfitted with NEM 340 Wheels and NEM 360/362 Coupler & Pocket Assemblies. They are equipped with a 3rd rail slide shoe for use with Märklin HO stud rail and can operate on AC power.

This 3-rail version of Proto-Sound 3.0 can be operated in six different modes: AC or DC powered Analog/Conventional, DCC Command Mode with any DCC Controller, DCS Digital Command System mode, Märklin DCC Command Mode, and Motorola 1 and 2 Command Modes.



Union Pacific - SD70ACe Diesel Engine (Comfort Cab),
Cab No. 8627
80-2250-1 DCC/DCS Proto-Sound 3.0 \$299.95

Union Pacific - SD70ACe Diesel Engine (Comfort Cab),
Cab No. 8634
80-2251-1 DCC/DCS Proto-Sound 3.0 \$299.95
80-2251-0 DCC Ready \$199.95

Union Pacific - SD70ACe Diesel Engine (Comfort Cab),
Cab No. 8640
80-2252-1 DCC/DCS Proto-Sound 3.0 \$299.95
80-2252-0 DCC Ready \$199.95



CSX - SD70ACe Diesel Engine, No. 4842
80-2256-1 DCC/DCS Proto-Sound 3.0 \$299.95
80-2256-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95

CSX - SD70ACe Diesel Engine, No. 4845
80-2257-1 DCC/DCS Proto-Sound 3.0 \$299.95
80-2257-0 DCC Ready \$199.95

CSX - SD70ACe Diesel Engine, No. 4847
80-2258-1 DCC/DCS Proto-Sound 3.0 \$299.95
80-2258-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95



BNSF - SD70ACe Diesel Engine (Comfort Cab), No. 9185
80-2253-1 DCC/DCS Proto-Sound 3.0 \$299.95
80-2253-0 DCC Ready \$199.95

BNSF - SD70ACe Diesel Engine (Comfort Cab), No. 9189
80-2254-1 DCC/DCS Proto-Sound 3.0 \$299.95
80-2254-0 DCC Ready \$199.95

BNSF - SD70ACe Diesel Engine (Comfort Cab), No. 9199
80-2255-1 DCC/DCS Proto-Sound 3.0 \$299.95
80-2255-0 DCC Ready \$199.95

Features

All Proto-Sound Models Include Onboard DCC Receiver

- Intricately Detailed ABS Body
- Die-Cast Metal Chassis
- Metal Handrails and Horn
- Moveable Roof Fans
- Metal Body Side Grilles
- Detachable Snow Plow
- (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
- Illuminated Number Boards
- Operating Ditch 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
- Measures: 10 9/16" x 1 7/16" x 2 3/16"
- Operates On 18" Radius Curves
- 3E+ Model Operates On R2 (437.5mm) Radius Curves

*Available on Proto-Sound 3E+ Models

SD70ACe

EMD Demonstrator - SD70ACe Diesel Engine, Cab No. GM70
 80-2259-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2259-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2259-0 DCC Ready \$199.95



EMD Demonstrator - SD70ACe Diesel Engine, Cab No. GM71
 80-2260-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2260-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2260-0 DCC Ready \$199.95
 EMD Demonstrator - SD70ACe Diesel Engine, Cab No. GM73
 80-2261-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2261-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2261-0 DCC Ready \$199.95

Western Pacific - SD70ACe Diesel Engine, Cab No. 1983
 80-2264-1 DCC/DCS Proto-Sound 3.0 \$299.95
Union Pacific Heritage Series Diesel



**All Proto-Sound
 Models Include
 Onboard DCC Receiver**

Denver & Rio Grande Western - SD70ACe Diesel Engine, Cab No. 1989
 80-2281-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2281-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2281-0 DCC Ready \$199.95
Union Pacific Heritage Series Diesel

George H.W. Bush - SD70ACe Diesel Engine, Cab No. 4141
 80-2282-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2282-0 DCC Ready \$199.95



Chicago & NorthWestern - SD70ACe Diesel Engine, Cab No. 1995
 80-2262-1 DCC/DCS Proto-Sound 3.0 \$299.95
Union Pacific Heritage Series Diesel



Missouri Pacific - SD70ACe Diesel Engine, Cab No. 1982
 80-2263-1 DCC/DCS Proto-Sound 3.0 \$299.95
Union Pacific Heritage Series Diesel

Katy - SD70ACe Diesel Engine, Cab No. 1988
 80-2280-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2280-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2280-0 DCC Ready \$199.95
Union Pacific Heritage Series Diesel



SD70M-2



Norfolk Southern - SD70M-2 Diesel Engine
 with DCC/DCS Proto-Sound 3.0
 80-2265-1 Cab No. 2657 \$299.95
 80-2266-1 Cab No. 2662 \$299.95
 80-2267-1 Cab No. 2668 \$299.95
 Norfolk Southern - SD70M-2 Diesel Engine
 with DCC/DCS Proto-Sound 3E+ (3-Rail)
 80-2267-5 Cab No. 2668 \$319.95

NORFOLK SOUTHERN



Celebrate Norfolk Southern's 30th Anniversary with your favorite heritage railroads in select HO SD70ACe models from M.T.H. Electric Trains. Each of the ten different railroads featured in the real-life series created by Norfolk Southern and used on their fleet of SD70ACe locomotives has been recreated in M.T.H.'s HO roster of our best selling diesel.

New slides have been developed for our SD70ACe tooling, allowing for needed modifications to the model so that the Heritage models will match the real-life appearance of Norfolk

Southern's latest roster additions. The modifications include new grills, nose detail changes, fuel tank filler modifications and a completely new GPS roof antenna.

Like our regular HO SD70ACe models, the Norfolk Southern Heritage units will be available in a variety of configurations, including DCC-Ready, Proto-Sound 3.0 equipped and Proto-Sound 3E+ equipped for 3-Rail HO enthusiasts. No HO manufacturer gives you as many options as those found in our Norfolk Southern Heritage series.

Proto-Sound 3E+

The Proto-Sound 3E+ models featured in this catalog come outfitted with NEM 340 Wheels and NEM 360/362 Coupler & Pocket Assemblies. They are equipped with a 3rd rail slide shoe for use with Märklin HO stud rail and can operate on AC power.

This 3-rail version of Proto-Sound 3.0 can be operated in six different modes: AC or DC powered Analog/Conventional, DCC Command Mode with any DCC Controller, DCS Digital Command System mode, Märklin DCC Command Mode, and Motorola 1 and 2 Command Modes.

HERITAGE SERIES



Virginian - SD70ACe Diesel Engine (Comfort Cab), Cab No. 1069
 80-2246-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2246-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2246-0 DCC Ready \$199.95



Illinois Terminal - SD70ACe Diesel Engine (Comfort Cab), Cab No. 1072
 80-2249-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2249-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95

**All Proto-Sound Models Include
Onboard DCC Receiver**

Features

- Intricately Detailed ABS Body
- Die-Cast Metal Chassis
- Metal Handrails and Horn
- Moveable Roof Fans
- Metal Body Side Grilles
- Detachable Snow Plow
- (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
- Directionally Controlled Constant Voltage LED Headlights
- Lighted Cab Interior
- Illuminated Number Boards
- 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
- Measures: 10 9/16" x 1 7/16" x 2 3/16"
- Operates On 18" Radius Curves
- 3E+ Model Operates On R2 (437.5mm) Radius Curves

**Available on Proto-Sound 3E+ Models*



NORFOLK SOUTHERN HERITAGE



Jersey Central - SD70ACe Diesel Engine (Comfort Cab), Cab No.
 80-2248-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2248-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95



Erie - SD70ACe Diesel Engine (Comfort Cab), Cab No. 1068
 80-2245-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2245-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2245-0 DCC Ready \$199.95



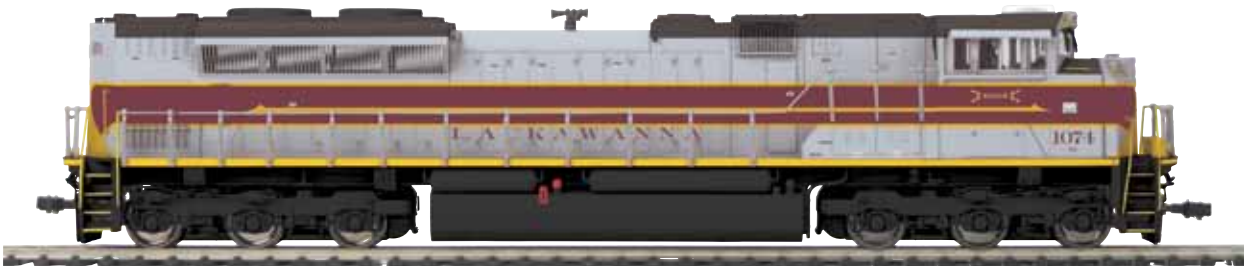
Savannah & Atlanta - SD70ACe Diesel Engine (Comfort Cab), Cab No. 1065
 80-2242-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2242-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2242-0 DCC Ready \$199.95

**All Proto-Sound
 Models Include
 Onboard DCC Receiver**



Reading - SD70ACe Diesel Engine (Comfort Cab), Cab No. 1067
 80-2244-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2244-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2244-0 DCC Ready \$199.95

SERIES SD70ACe



Lackawanna - SD70ACe Diesel Engine (Comfort Cab), Cab No.
 80-2269-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2269-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2269-0 DCC Ready \$199.95



New York Central - SD70ACe Diesel Engine (Comfort Cab), Cab No. 1066
 80-2243-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2243-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2243-0 DCC Ready \$199.95



Penn Central - SD70ACe Diesel Engine (Comfort Cab), Cab No.
 80-2268-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2268-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95
 80-2268-0 DCC Ready \$199.95



Wabash - SD70ACe Diesel Engine (Comfort Cab), Cab No.
 80-2247-1 DCC/DCS Proto-Sound 3.0 \$299.95
 80-2247-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$319.95

Pennsylvania GG1

Automatic
Directionally Controlled
Pantographs



All Models Include Onboard DCC Receiver

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, outlast-

ing 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.

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 system as they wish, regardless of directional state.

Proto-Sound 3E+

The Proto-Sound 3E+ models featured in this catalog come outfitted with NEM 340 Wheels and NEM 360/362 Coupler & Pocket Assemblies. They are equipped with a 3rd rail slide shoe for use with Märklin HO stud rail and can operate on AC power.

This 3-rail version of Proto-Sound 3.0 can be operated in six different modes: AC or DC powered Analog/Conventional, DCC Command Mode with any DCC Controller, DCS Digital Command System mode, Märklin DCC Command Mode, and Motorola 1 and 2 Command Modes.



Pennsylvania (Tuscan 5-Stripe) - GG1 Electric, Cab No. 4911
80-2147-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$489.95



Pennsylvania (Tuscan Single-Stripe) - GG1 Electric, Cab No. 4916
80-2148-1 DCC/DCS Proto-Sound 3.0 \$469.95
80-2148-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$489.95

All Models Feature Die-Cast Metal Body



Pennsylvania (Brunswick Green 5-Stripe) - GG1 Electric, Cab No. 4842
80-2149-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$489.95



Pennsylvania (Brunswick Green Single-Stripe) GG1 Electric, Cab No. 4900
80-2150-1 DCC/DCS Proto-Sound 3.0 \$469.95
80-2150-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$489.95



Pennsylvania (Silver) - GG1 Electric, Cab No. 4866
80-2151-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$489.95



Penn Central - GG1 Electric, Cab No. 4893
80-2154-1 DCC/DCS Proto-Sound 3.0 \$469.95
80-2154-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$489.95



Conrail - GG1 Electric, Cab No. 4898
80-2153-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$489.95



Amtrak - GG1 Electric, Cab No. 924
80-2152-1 DCC/DCS Proto-Sound 3.0 \$469.95
80-2152-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$489.95

Features

Add Matching Passenger Sets - see pages 82 and 85

- 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 Marker 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
- Unit Measures: 11 5/16" x 1 3/8" x 2 7/16"
- Operates On 18" Radius Curves
- 3E+ Model Operates On R2 (437.5mm) Radius Curves

*Available on Proto-Sound 3E+ Models

Milwaukee Road Bi-Polar

**Directionally
Controlled Operating
Pantographs!**



**See it in action at
mthHOtrains.com**

Chicago, Milwaukee, St. Paul and Pacific. The Milwaukee Road's full name described its route perfectly — from the Midwest to the Northwest with not much in between. After Chicago and the Twin Cities, a passenger on the road's *Olympian* saw virtually nothing but farms, ranches, and mountains for 1500 miles. But in 1919, this sparsely traveled mountainous route seemed the ideal place for the General Electric Company and the Milwaukee Road to prove a point: electric power was the Future of American Railroading. And the five EP-2 Bi-Polars were going to be the engines to do it.

Officially called Bi-Polar Gearless Types, they were vastly superior to the steam locomotives of their day. With 3,200 continuous

horsepower, an EP-2 could pull 13 Pullmans up a 2.2% grade, an incredibly steep hill in real-life railroading. When the Bi-Polars were young, their owners and builders delighted in staging pulling contests such as a 1924 "Battle of the Giants," in which a Bi-Polar easily won a tug-of-war against a pair of steam locomotives, a 2-8-0 and a 2-6-6-2.

Unfortunately, the source of the Bi-Polar's advantages was also their chief drawback: that darn overhead wire, which was incredibly expensive to put up. The Milwaukee Road's original plan was to electrify 870 miles of track from central Montana to Puget Sound. But a 1923 bankruptcy left the road without funds to string wire over the middle part of the route. As a result, the Bi-

Polars spent most of their lives on the 214-mile Coast Division, hauling passengers between the farming town of Othello and the ports of Tacoma and Seattle.

With prototypical rule 17 lighting, remotely controlled, directionally activated operating pantographs, and the excitement of Proto-Sound 3.0, our die-cast model of this iconic locomotive is certain to make a prized addition to any collection.

**All Models Include
Onboard DCC Receiver**



Milwaukee Road (Yellow & Gray) - Bi-Polar Electric With DCC/DCS Proto-Sound 3.0
 81-2007-1 Cab Number E-4 \$499.95
 Milwaukee Road (Yellow & Gray) - Bi-Polar Electric With DCC/DCS Proto-Sound 3.0
 81-2008-1 Cab Number E-5 \$499.95

Die-Cast Metal Body



Features

- Die-Cast Body
- Authentic Paint Scheme & Cab Numbers
- RP-25 Metal Wheels Mounted On Metal Axles
- Constant Voltage, Directional Headlights
- Prototypical Rule 17 Lighting
- Remotely Controlled, Directionally Activated Operating Pantographs
- Detailed Truck Sides
- Detailed Cab Interior
- Powerful 12-Volt 5-Pole Precision Skew-Wound Flywheel-Equipped Motor
- (2) Scale Kadee-Compatible Remotely Controlled Proto-Couplers
- (2) User-Installable Kadee Compatible Magnetic Couplers
- Metal Handrails, Horn and Bell
- Locomotive Speed Control In Scale MPH Increments
- Interchangeable Traction Tire-Equipped Drive Wheels
- On-Board DCC Receiver
- Operates On Code 70, 83, & 100 Rail Curves
- Proto-Sound 3.0 With The Digital Command System Featuring Passenger Station Proto-Effects™
- Unit Measures (Pantograph Up): 11 5/16" x 1 3/8" x 3 9/16"
- Operates On 18" Radius Curves

EMD GP38-2



READY²RAIL **NEW TOOLING!**

Produced from 1972 to 1986, the GP38-2 helped inaugurate Electro-Motive's "Dash-2" series of locomotives and became one of EMD's all-time best sellers. With over 2200 engines sold throughout North America, rare was the railroad that did not roster these reliable, second-generation EMD workhorses.

Building on the success of the GP38 introduced in 1966, the Dash-2 model looked almost identical on the outside but incorporated a host of internal upgrades that lowered exhaust emissions and improved reliability, ease of maintenance, and tractive effort. Most significant was the replacement of the maze of hard-wired circuits, switches, interlocks, and relays — which had characterized first-generation diesels and had been the source of many of their service issues — with modular, solid-state electronics. Other improvements toughened the pistons,

rings, and bearings of the 2000-horsepower, non-turbocharged model 645 prime mover.

The result was an engine so hard working and dependable that it became as common on American railroads as the F-unit was in the 1950s and '60s. *Trains* magazine recognized this in 1982 by designating B&O GP38 #3802 (a pre-Dash-2 model) as the All American Diesel; the engine now resides at the Baltimore & Ohio Railroad Museum, repainted in its 1982 Chessie System colors. While today many GP38-2s have moved on to second careers on short line and regional railroads, others have soldiered on for more than three decades with their original owners. As of late 2013, for example, Union Pacific and Norfolk Southern still rostered more than 500 GP38-2s apiece.

New for 2014, this accurately modeled GP38-2 joins our economically priced Ready2Rail lineup in eight prototypical paint schemes. While Ready2Rail locomotives have fewer added-on details than standard M.T.H. motive power, Proto-Sound 3.0 versions feature the same versatile electronics and prototypical sounds found in every Proto-Sound 3.0 engine. In command mode, you can operate this second-generation stalwart with any other DCC- or M.T.H. DCS-equipped models. With the DCS system, you can create a lashup with just a few keystrokes, combining one or more GP38-2s with other Proto-Sound 3.0 first-, second-, or third-generation diesels — and run them all from a single throttle just like the prototype.



Norfolk Southern - GP38-2 Diesel, Cab No. 5304
 85-2030-1 DCC/DCS Proto-Sound 3.0 \$199.95
 85-2030-0 DCC Ready \$129.95

Norfolk Southern - GP38-2 Diesel, Cab No. 5296
 85-2031-1 DCC/DCS Proto-Sound 3.0 \$199.95
 85-2031-0 DCC Ready \$129.95

Norfolk Southern - GP38-2 Diesel, Cab No. 5291
 85-2032-1 DCC/DCS Proto-Sound 3.0 \$199.95
 85-2032-0 DCC Ready \$129.95



Union Pacific - GP38-2 Diesel, Cab No. 307
 85-2036-1 DCC/DCS Proto-Sound 3.0 \$199.95
 85-2036-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$199.95
 85-2036-0 DCC Ready \$129.95

Union Pacific - GP38-2 Diesel, Cab No. 315
 85-2037-1 DCC/DCS Proto-Sound 3.0 \$199.95
 85-2037-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$199.95
 85-2037-0 DCC Ready \$129.95

Union Pacific - GP38-2 Diesel, Cab No. 322
 85-2038-1 DCC/DCS Proto-Sound 3.0 \$199.95
 85-2038-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$199.95
 85-2038-0 DCC Ready \$129.95

UP units feature smaller fuel tanks and no dynamic brakes, per prototype.

Features

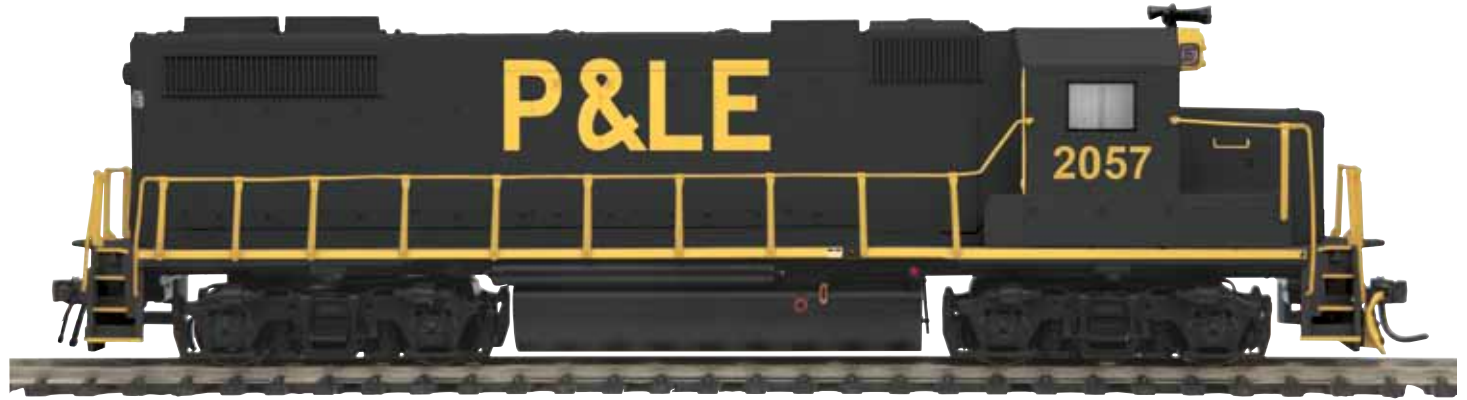
- Intricately Detailed ABS Body
- Metal Chassis
- Authentic Paint Scheme
- Metal Wheels and Axles
- RP25 Metal Wheels
- (2) #158 Scale Kadee Whisker Couplers
- Prototypical Rule 17 Lighting*

- Directionally Controlled Constant Voltage LED Headlight
- 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" x 1 3/8" x 2 1/2"
- Operates On 18" Radius Curves

* Proto-Sound 3.0 Models Only

GP38-2



Pittsburgh & Lake Erie - GP38-2 Diesel, Cab No. 2057	Pittsburgh & Lake Erie - GP38-2 Diesel, Cab No. 2059	Pittsburgh & Lake Erie - GP38-2 Diesel, Cab No. 2060
85-2033-1 DCC/DCS Proto-Sound 3.0 \$199.95	85-2034-1 DCC/DCS Proto-Sound 3.0 \$199.95	85-2035-1 DCC/DCS Proto-Sound 3.0 \$199.95
85-2033-0 DCC Ready \$129.95	85-2034-0 DCC Ready \$129.95	85-2035-0 DCC Ready \$129.95



CSX - GP38-2 Diesel, Cab No. 2722	CSX - GP38-2 Diesel, Cab No. 2736	CSX - GP38-2 Diesel, Cab No. 2729
85-2019-1 DCC/DCS Proto-Sound 3.0 \$199.95	85-2020-1 DCC/DCS Proto-Sound 3.0 \$199.95	85-2021-1 DCC/DCS Proto-Sound 3.0 \$199.95
85-2019-0 DCC Ready \$129.95	85-2020-0 DCC Ready \$129.95	85-2021-0 DCC Ready \$129.95



BNSF - GP38-2 Diesel, Cab No. 2007	BNSF - GP38-2 Diesel, Cab No. 2015	BNSF - GP38-2 Diesel, Cab No. 2019
85-2016-1 DCC/DCS Proto-Sound 3.0 \$199.95	85-2017-1 DCC/DCS Proto-Sound 3.0 \$199.95	85-2018-1 DCC/DCS Proto-Sound 3.0 \$199.95
85-2016-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$199.95	85-2017-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$199.95	85-2018-5 DCC/DCS Proto-Sound 3E+ (3-Rail) \$199.95
85-2016-0 DCC Ready \$129.95	85-2017-0 DCC Ready \$129.95	85-2018-0 DCC Ready \$129.95



Maryland Midland - GP38-2 Diesel, Cab No. 301
 85-2025-1 DCC/DCS Proto-Sound 3.0 \$199.95
 85-2025-0 DCC Ready \$129.95

Maryland Midland - GP38-2 Diesel, Cab No. 303
 85-2026-1 DCC/DCS Proto-Sound 3.0 \$199.95
 85-2026-0 DCC Ready \$129.95

Maryland Midland - GP38-2 Diesel, Cab No. 303
 85-2027-1 DCC/DCS Proto-Sound 3.0 \$199.95
 85-2027-0 DCC Ready \$129.95



New York & Atlantic - GP38-2 Diesel, Cab No. 270
 85-2028-1 DCC/DCS Proto-Sound 3.0 \$199.95
 85-2028-0 DCC Ready \$129.95

New York & Atlantic - GP38-2 Diesel, Cab No. 271
 85-2029-1 DCC/DCS Proto-Sound 3.0 \$199.95
 85-2029-0 DCC Ready \$129.95



Indiana Railroad - GP38-2 Diesel, Cab No. 3806
 85-2022-1 DCC/DCS Proto-Sound 3.0 \$199.95
 85-2022-0 DCC Ready \$129.95

Indiana Railroad - GP38-2 Diesel, Cab No. 3802
 85-2023-1 DCC/DCS Proto-Sound 3.0 \$199.95
 85-2023-0 DCC Ready \$129.95

Indiana Railroad - GP38-2 Diesel, Cab No. 3803
 85-2024-1 DCC/DCS Proto-Sound 3.0 \$199.95
 85-2024-0 DCC Ready \$129.95

GP38-2 Ready-To-Run Train Sets



Handheld Remote Control Included

See it in action at mthOtrains.com



M.T.H. HO sets are fully compatible with all other brands of HO trains and can serve as the foundation of an HO empire. With an M.T.H. set, you'll experience more fun because it features the sights and sounds that make real trains dramatic and exciting — features that you can control from the handheld Remote Digital Commander as you walk around your layout:

Speed Control

Many toy trains have two speeds: fast and faster. M.T.H. sets equipped with Proto-Sound sound and control systems allow our engines to throttle down to a s-l-o-w crawl, highball down the main line, or maintain any speed in-between. The Proto-Speed Control built into Proto-Sound locomotives acts like the cruise control on a

car, keeping your train moving at the speed you select, regardless of hills and curves.

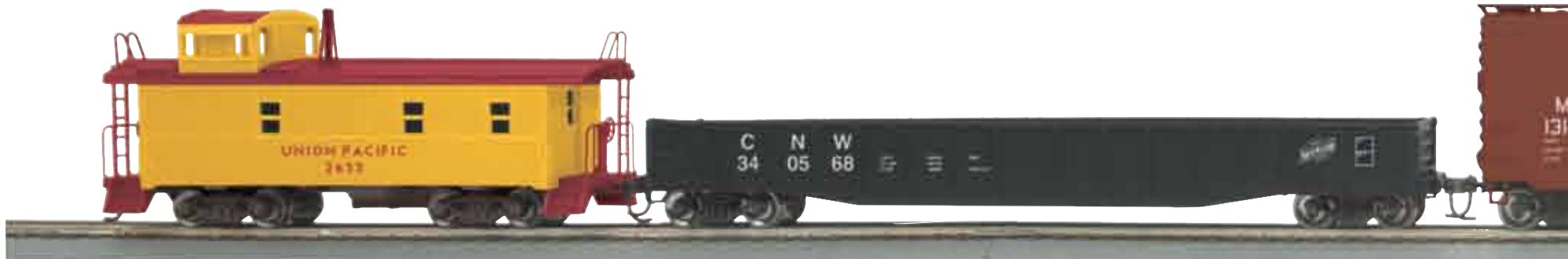
Vivid Engine Sounds

Proto-Sound features crystal clear digital sounds: the wail of a diesel horn; the bell alerting passengers to your arrival or departure; diesel roar, and crew conversations.

Proto-Effect Sounds

Freight engines include Freight Yard Proto-Effects, a symphony of freight terminal sounds.

These GP38-2 Ready-to-Run train sets include everything you need to get started, all in one box: train, track, power supply, and handheld remote control.





Norfolk Southern - GP38-2 Diesel R-T-R Deluxe Freight Train Set
85-4014-1 Proto-Sound 3.0 \$279.95

Norfolk Southern - GP38-2 Diesel Deluxe Freight Train Set (Without Track, Power Supply or Remote Control)
85-4914-1 Proto-Sound 3.0 \$259.95



Features

HO Scale Sets include:

- Locomotive
- 3-Car freight consist with hopper, gondola, and lighted caboose, all with metal wheels and axles
- Kadee®-compatible operating knuckle couplers on engine and cars
- 14-Piece, 36" x 45" RealTrax Oval with removable roadbed

- UL-approved 24-watt transformer with DCS Remote Commander handheld remote control
- Track re-railer with track-to-transformer wire harness

HO Scale GP38-2 Diesel Engines Feature:

- Intricately detailed, durable ABS body
- Powerful 12-Volt 5-Pole Precision Skew-Wound Flywheel-Equipped Motor driving all eight wheels

- All-metal wheels and gears
- Operating headlight
- Kadee®-compatible operating knuckle couplers
- Proto-Sound 3.0 sound and control system that allows your locomotive to run on any HO layout operating with ordinary analog DC, DCC command control, or our own DCS digital command system.

This is the same electronics package found in our top-of-the-line locomotives, featuring locomotive speed control for steady speeds regardless of hills and curves, as well as crystal-clear digital sounds that include horn, bell, authentic EMD diesel motor, Freight Station Proto-Effects, crew conversations, and atmospheric sounds.



Union Pacific - GP38-2 Diesel R-T-R Deluxe Freight Train Set
85-4015-1 Proto-Sound 3.0 \$279.95

Union Pacific - GP38-2 Diesel Deluxe Freight Train Set (Without Track, Power Supply or Remote Control)
85-4915-1 Proto-Sound 3.0 \$259.95

EMD F3



READY **2** RAIL

The EMD F-unit, built by the Electro-Motive Division of General Motors, was “the diesel that did it” — vanquished the steam engine from American railroads.

In 1939-40, a quartet of F-units barnstormed across 35 states, logging 83,764 miles on 20 railroads and proving once and for all that diesels were the wave of the future. While other diesel manufacturers competed with EMD, the various versions of the ubiquitous F unit — FT, F3, and F7 — became the icons of the diesel revolution.

Features

- Intricately Detailed ABS Body
- Metal Chassis
- Authentic Paint Scheme
- Metal Wheels and Axles
- RP25 Metal Wheels
- (2) #158 Scale Kadee Whisker Couplers
- Prototypical Rule 17 Lighting*
- Directionally Controlled Constant Voltage LED Headlight
- 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: 7" x 1 7/16" x 2 3/8"
- Operates On 18" Radius Curves

* Featured on Proto-Sound 3.0 Models Only



New York Central - F3 Powered A-Unit, Cab No. 1609

85-2013-1	Proto-Sound 3.0	\$189.95
85-2013-0	DCC-Ready	\$109.95
85-2013-3	Non-Powered (No. 1622)	\$69.95



Santa Fe - F3 Powered A-Unit, Cab No. 22

85-2014-1	Proto-Sound 3.0	\$189.95
85-2014-0	DCC-Ready	\$109.95
85-2014-3	Non-Powered (No. 16)	\$69.95



Union Pacific - F3 Powered A-Unit, Cab No. 1402

85-2015-1	Proto-Sound 3.0	\$189.95
85-2015-0	DCC-Ready	\$109.95
85-2015-3	Non-Powered (No. 1405)	\$69.95



EMD F3 Ready-To-Run Train Sets



**Proto-Sound Sets
Include Remote Control**

See it in action at mthHOtrains.com 

M.T.H. HO sets are fully compatible with all other brands of HO trains and can serve as the foundation of an HO empire. With an M.T.H. set, you'll experience more fun because it features the sights and sounds that make real trains dramatic and exciting — features that you can

control from the handheld Remote Digital Commander as you walk around your layout:

Speed Control — Many toy trains have two speeds: fast and faster. M.T.H. sets equipped with Proto-Sound sound and control systems allow our engines to throttle down to a s-l-o-w crawl, highball down the main line, or maintain any speed in-between. The Proto-Speed Control

built into Proto-Sound locomotives acts like the cruise control on a car, keeping your train moving at the speed you select, regardless of hills and curves.

Vivid Engine Sounds — Proto-Sound features crystal clear digital sounds: the wail of a diesel horn; the bell alerting passengers to your arrival or departure; diesel roar, and crew conversations.

Proto-Effect Sounds — Freight engines include Freight Yard Proto-Effects, a symphony of freight terminal sounds.

M.T.H. Ready-to-Run HO train sets include everything you need to get started, all in one box: train, track, power supply, and handheld remote* or controller.

**Remote found in Proto-Sound 3.0 sets only.*





Pennsylvania - F-3 Diesel R-T-R Deluxe Freight Train Set
 85-4012-1 Proto-Sound 3.0 \$279.95
 81-4001-0 DCC-Ready \$189.95

Pennsylvania - F-3 Diesel Deluxe Freight Train (Without Track, Power Supply or Remote Control)
 85-4912-1 Proto-Sound 3.0 \$259.95



Features

HO Scale Sets include:

- Locomotive
- 3-Car freight consist with hopper, gondola, and lighted caboose, all with metal wheels and axles
- Kadee®-compatible operating knuckle couplers on engine and cars
- 14-Piece, 36" x 45" RealTrax Oval with removable roadbed
- Track re-railer with track-to-transformer wire harness

- Proto-Sound 3.0 sets include UL-approved 24-watt transformer with DCS Remote Commander handheld remote control
- Non-Proto-Sound sets include UL-approved 24-watt transformer with Controller

HO Scale F3 Diesel Engines Feature:

- Intricately detailed, durable ABS body
- Powerful 12-Volt 5-Pole Precision Skew-Wound Flywheel-Equipped Motor driving all eight wheels

- All-metal wheels and gears
- Operating headlight
- Kadee®-compatible operating knuckle couplers
- Non-Proto-Sound equipped locomotives Feature a powerful motor and are DCC ready
- Proto-Sound 3.0 locomotives can run on any HO layout with ordinary analog DC, DCC command control, or our own DCS digital command system. Their sound and control system is the same as that found in our top-of-

the-line locomotives, featuring locomotive speed control for steady speeds regardless of hills and curves, as well as crystal-clear digital sounds that include horn, bell, authentic EMD diesel motor, Passenger or Freight Station Proto-Effects, crew conversations, and atmospheric sounds.

Santa Fe - F-3 Diesel R-T-R Deluxe Freight Train Set
 85-4013-1 Proto-Sound 3.0 \$279.95
 81-4002-0 DCC-Ready \$189.95
Santa Fe - F-3 Diesel Deluxe Freight Train (Without Track, Power Supply or Remote Control)
 85-4913-1 Proto-Sound 3.0 \$259.95



Rolling Stock

M.T.H. Electric Trains has a long history of developing expansive offerings throughout our product line categories, and HO rolling stock — both freight and passenger — is certainly no exception.

Our selection of premium freight and passenger cars is certain to appeal to the most serious HO modeler. As expected, our HO premium cars are true 1/87 scale models of North American freight cars. Abundantly detailed with separate grab irons, steps, hatches and brake wheels, these models will hold up to even the most discriminating eye. Outfitted with smooth rolling trucks and Kadee couplers, they are a favorite of operators who enjoy long consists of colorful liveries, each available in multiple car numbers.

Sporting crisp graphics in prototypical and colorful liveries, M.T.H. HO premium rolling stock is offered in multiple car numbers so that modelers can recreate real-life consists. Many of the same paint schemes are also offered in six car sets in up to 12 car numbers making it easy and affordable to build really long trains.

Passenger car fans have long known that it is hard to match the excitement and beauty of a long, sleek passenger train speeding down the rails. M.T.H.'s HO scale streamlined passenger cars and sets bring exactly the right look to your model railroad with features and pricing unmatched in the HO marketplace.

No other manufacturer matches the quality and value found inside and outside an M.T.H. HO passenger car. Using an intricately detailed, yet durable ABS body atop smooth rolling trucks results in a lightweight car that won't bog down a locomotive struggling to pull heavy passenger cars. What's more, each HO passenger car features a detailed car interior, flashing end lights (on observation cars), flexible end-of-car diaphragms, Kadee couplers and overhead, constant voltage flicker-free LED lighting for a realistic and authentic appearance.



Ready 2 Rail™ rolling stock from M.T.H. Electric Trains provides the superior quality and detailing you've come to expect from M.T.H. HO rolling stock, coupled with a competitive price point for the entry-level HO hobbyist. These cars offer the same construction and body detailing as their more expensive M.T.H. HO counterparts but are designed for the budget-minded model railroader. It's the perfect way to expand a Ready-To-Run set or to introduce someone new to the hobby.

And what would model railroading be without a little fun? Our HO operating action and aquarium cars take their inspiration from popular O gauge cars issued in the 1950s. There were in fact a number of prototype cars built to carry live fish, perhaps the most famous being the *Nautilus* owned by Chicago's John G. Shedd Aquarium — but of course none had glass sides! M.T.H. HO Operating Action cars feature LED powered backlit scenes that move as the car rolls by. The aquatic-themed cars feature wavy glass to simulate water, while the action cars utilize clear glass for an unobstructed view of the moving scene.

Each unique car features a backlit moving animation strip visible through each of the car's four large viewing windows. Utilizing a quiet and efficient motorized player and bright LED lighting, the animated action really shines bright and is often the star attraction on an HO layout.

Whether you're a freight or passenger fan, or both, M.T.H. Electric Trains has the HO rolling stock for your model railroad.

Operating Action Cars

See it in action at
mthHOTrains.com



Christmas - Operating Action Car
 81-99014 \$54.95



M&M'S® Brand - Operating Action Car
 81-99004 \$54.95



®/™ M&M'S, the letter M and the M&M'S Characters are registered trademarks of Mars, Incorporated and its affiliates.
 ©MARS, Incorporated 2013



Sharks - Operating Action Car
 81-99007 \$54.95



Tropical Fish - Operating Action Car
 81-99005 \$54.95



Large Mouth Bass - Operating Action Car
 81-99008 \$54.95

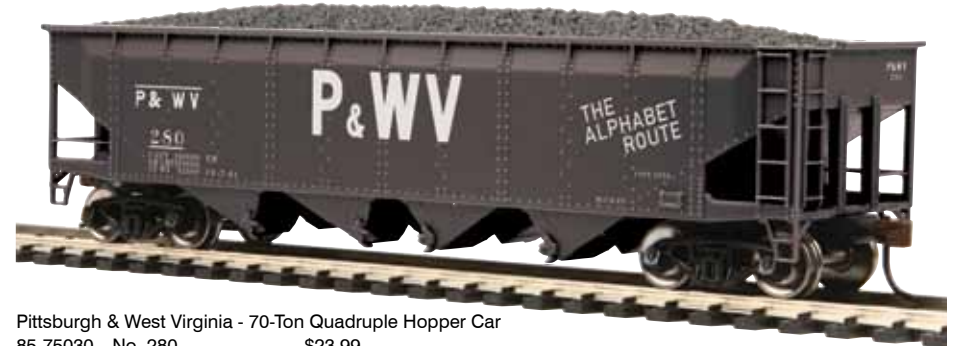
**Each Car Features
 Bright, Backlit Moving Scenes**

70-Ton Quadruple Hopper

READY **2** RAIL



Great Northern - 70-Ton Quadruple Hopper Car
 85-75022 No. 73308 \$23.99
 85-75023 No. 73300 \$23.95



Pittsburgh & West Virginia - 70-Ton Quadruple Hopper Car
 85-75030 No. 280 \$23.99
 85-75031 No. 289 \$23.99
 85-75032 No. 285 \$23.99

**All Cars Feature (2) #158
 Die-Cast Scale Kadee®
 Whisker Couplers**



Pittsburgh & Lake Erie - 70-Ton Quadruple Hopper Car
 85-75043 No. 3463 \$23.99
 85-75044 No. 3458 \$23.99



New York Central - 70-Ton Quadruple Hopper Car
 85-75025 No. 903527 \$23.99
 85-75026 No. 903520 \$23.99

70-Ton Mill Gondola



Bessemer & Lake Erie - 70-Ton Mill Gondola

85-72022	No. 36809	\$22.99
85-72023	No. 36802	\$22.99

**All Cars Feature
(2) #158 Die-Cast
Scale Kadee®
Whisker Couplers**

Western Maryland - 70-Ton Mill Gondola

85-72019	No. 54453	\$22.99
85-72020	No. 54459	\$22.99



Baltimore & Ohio - 70-Ton Mill Gondola

85-72014	No. 352089	\$22.99
----------	------------	---------

Norfolk & Western - 70-Ton Mill Gondola

85-72024	No. 98863	\$22.99
85-72025	No. 98860	\$22.99
85-72026	No. 98868	\$22.99



Southern Pacific - 70-Ton Mill Gondola

85-72028	No. 160113	\$22.99
85-72029	No. 160115	\$22.99

40' PS-1 Box Car

READY **2** RAIL



New York Central - 40' PS-1 Box Car
85-74088 No. 174375 \$24.99



Milwaukee Road - 40' PS-1 Box Car
85-74100 No. 39953 \$24.99



Santa Fe - 40' PS-1 Box Car
85-74108 No. 38526 \$24.99
85-74109 No. 38524 \$24.99



Erie Lackawanna - 40' PS-1 Box Car
85-74092 No. 84432 \$24.99
85-74093 No. 84430 \$24.99
85-74094 No. 84435 \$24.99



Burlington Northern - 40' PS-1 Box Car
85-74106 No. 127868 \$24.99



Western Maryland - 40' PS-1 Box Car
85-74089 No. 29127 \$24.99
85-74090 No. 29182 \$24.99
85-74091 No. 29165 \$24.99



Chessie - 40' PS-1 Box Car
85-74095 No. 23784 \$24.99
85-74096 No. 23789 \$24.99
85-74097 No. 23795 \$24.99

All Cars Feature (2) #158 Die-Cast Scale Kadee® Whisker Couplers



Pennsylvania - 40' PS-1 Box Car

85-74112	No. 105039	\$24.99
85-74113	No. 105034	\$24.99
85-74114	No. 105032	\$24.99



Southern - 40' PS-1 Box Car

85-74118	No. 21068	\$24.99
85-74119	No. 21062	\$24.99
85-74120	No. 21064	\$24.99



CP Rail - 40' PS-1 Box Car

85-74124	No. 269850	\$24.99
85-74125	No. 269859	\$24.99
85-74126	No. 269853	\$24.99



Great Northern - 40' PS-1 Box Car

85-74130	No. 34028	\$24.99
85-74131	No. 34021	\$24.99
85-74132	No. 34026	\$24.99



Norfolk & Western - 40' PS-1 Box Car

85-74115	No. 385350	\$24.99
85-74116	No. 385358	\$24.99
85-74117	No. 385363	\$24.99



SOO Line - 40' PS-1 Box Car

85-74121	No. 137405	\$24.99
85-74122	No. 137409	\$24.99
85-74123	No. 137402	\$24.99



Denver & Rio Grande Western - 40' PS-1 Box Car

85-74127	No. 50180	\$24.99
85-74128	No. 50183	\$24.99
85-74129	No. 50186	\$24.99



Western Pacific - 40' PS-1 Box Car

85-74133	No. 20957	\$24.99
85-74134	No. 20951	\$24.99
85-74135	No. 20954	\$24.99

40' Steel Sided Reefer

READY **2** RAIL



Marburger - 40' Steel Sided Reefer
 85-78024 No. 2012 \$24.99
 85-78025 No. 2013 \$24.99
 85-78026 No. 2014 \$24.99



Burlington - 40' Steel Sided Reefer
 85-78028 No. 74207 \$24.99
 85-78029 No. 74220 \$24.99



Santa Fe - 40' Steel Sided Reefer
 85-78031 No. 34923 \$24.99
 85-78032 No. 34927 \$24.99



Western Fruit Express - 40' Steel Sided Reefer
 85-78033 No. 68310 \$24.99
 85-78034 No. 68318 \$24.99
 85-78035 No. 68314 \$24.99



Merchant's Despatch - 40' Steel Sided Reefer
 85-78036 No. 13036 \$24.99
 85-78037 No. 13027 \$24.99
 85-78038 No. 13020 \$24.99



Milwaukee Road - 40' Steel Sided Reefer
 85-78039 No. 37055 \$24.99
 85-78040 No. 37059 \$24.99
 85-78041 No. 37063 \$24.99



Northern Pacific - 40' Steel Sided Reefer
 85-78043 No. 91280 \$24.99



American Refrigerator - 40' Steel Sided Reefer
 85-78046 No. 24375 \$24.99
 85-78047 No. 24378 \$24.99

**All Cars
 Feature (2)
 #158 Die-Cast
 Scale Kadee®
 Whisker
 Couplers**

70-Ton Center Discharge Ore Car



Bessemer & Lake Erie - 70-Ton Center Discharge Ore Car
 80-97029 No. 20090 \$34.95
 80-97030 No. 20093 \$34.95
 80-97028 No. 20069 \$34.95
 Bessemer & Lake Erie - 6-Car 70-Ton
 Center Discharge Ore Car Set
 80-90040 No. 20066, 20079, 20077, 20082, 20085, 20068 \$199.95
 80-90041 No. 20081, 20076, 20074, 20060, 20063, 20088 \$199.95



Canadian Pacific - 70-Ton Center Discharge Ore Car
 80-97031 No. 377120 \$34.95
 80-97032 No. 377135 \$34.95
 80-97033 No. 377142 \$34.95
 Canadian Pacific - 6-Car 70-Ton Center Discharge Ore Car Set
 80-90042 No. 377122, 377125, 377136, 377138, 377143, 377149 \$199.95
 80-90043 No. 377124, 377129, 377130, 377134, 377144, 377145 \$199.95



Milwaukee Road - 70-Ton Center Discharge Ore Car
 80-97037 No. 75565 \$34.95
 80-97038 No. 75568 \$34.95
 80-97039 No. 75570 \$34.95
 Milwaukee Road - 6-Car 70-Ton Center Discharge Ore Car Set
 80-90046 No. 75562, 75566, 75574, 75577, 75581, 75583 \$199.95
 80-90047 No. 75569, 75563, 75575, 75578, 75584, 75586 \$199.95



Burlington Northern - 70-Ton Center Discharge Ore Car
 80-97022 No. 95590 \$34.95
 80-97023 No. 95595 \$34.95
 80-97024 No. 95583 \$34.95
 Burlington Northern - 6-Car 70-Ton
 Center Discharge Ore Car Set
 80-90036 No. 95592, 95591, 95585, 95588, 95579, 95575 \$199.95
 80-90037 No. 95596, 95594, 95582, 95580, 95573, 95576 \$199.95



Great Northern - 70-Ton Center Discharge Ore Car
 80-97034 No. 89401 \$34.95
 80-97035 No. 89405 \$34.95
 80-97036 No. 89420 \$34.95
 Great Northern - 6-Car 70-Ton Center Discharge Ore Car Set
 80-90044 No. 89402, 89406, 89428, 89423, 89435, 89437 \$199.95
 80-90045 No. 89404, 89409, 89422, 89427, 89439, 89430 \$199.95



Long Island - 70-Ton Center Discharge Ore Car
 80-97025 No. 4064 \$34.95
 80-97026 No. 4062 \$34.95
 80-97027 No. 4044 \$34.95
 Long Island - 6-Car 70-Ton Center Discharge Ore Car Set
 80-90038 No. 4068, 4065, 4042, 4074, 4080, 4091 \$199.95
 80-90039 No. 4063, 4060, 4046, 4079, 4082, 4098 \$199.95



Union Pacific - 70-Ton Center Discharge Ore Car
 80-97043 No. 27045 \$34.95
 80-97044 No. 27052 \$34.95
 80-97045 No. 27068 \$34.95
 Union Pacific - 6-Car 70-Ton Center Discharge Ore Car Set
 80-90050 No. 27040, 27042, 27055, 27059, 27063, 27067 \$199.95
 80-90051 No. 27046, 27043, 27050, 27055, 27062, 27069 \$199.95



SOO Line - 70-Ton Center Discharge Ore Car
 80-97040 No. 81950 \$34.95
 80-97041 No. 81956 \$34.95
 80-97042 No. 81968 \$34.95
 SOO Line - 6-Car 70-Ton Center Discharge Ore Car Set
 80-90048 No. 81975, 81972, 81964, 81967, 81988, 81983 \$199.95
 80-90049 No. 81977, 81973, 81962, 81965, 81986, 81981 \$199.95

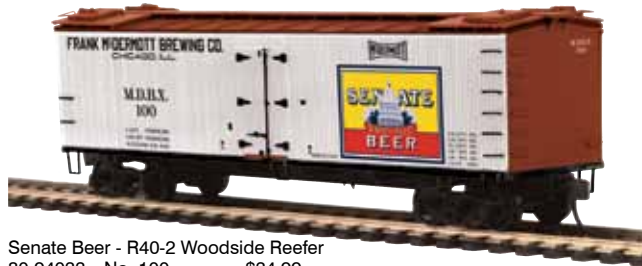
R40-2 Woodside Reefer



Schott Brewing Company - R40-2 Woodside Reefer
 80-94032 No. 9903 \$34.99
 80-94030 No. 9904 \$34.99
 80-94031 No. 9905 \$34.99



Milwaukee Road - R40-2 Woodside Reefer
 80-94042 No. 85218 \$34.99
 80-94043 No. 85219 \$34.99
 80-94044 No. 85213 \$34.99



Senate Beer - R40-2 Woodside Reefer
 80-94033 No. 100 \$34.99
 80-94034 No. 102 \$34.99
 80-94035 No. 104 \$34.99



Jelke Good Luck Margarine - R40-2 Woodside Reefer
 80-94036 No. 10803 \$34.99
 80-94037 No. 10805 \$34.99
 80-94038 No. 10808 \$34.99



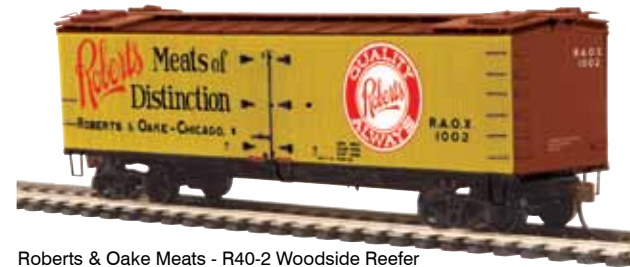
Hillsboro Pale Beer - R40-2 Woodside Reefer
 80-94039 No. 3531 \$34.99
 80-94040 No. 3532 \$34.99
 80-94041 No. 3537 \$34.99



Cook's Goldblume Beer - R40-2 Woodside Reefer
 80-94045 No. 68430 \$34.99
 80-94046 No. 68435 \$34.99
 80-94047 No. 68439 \$34.99



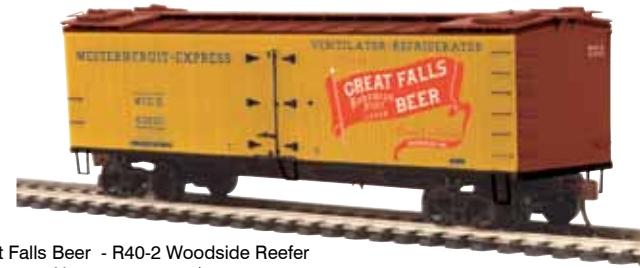
Sullivan's Packing - R40-2 Woodside Reefer
 80-94048 No. 8155 \$34.99
 80-94049 No. 8150 \$34.99
 80-94050 No. 8158 \$34.99



Roberts & Oake Meats - R40-2 Woodside Reefer
 80-94051 No. 1002 \$34.99
 80-94052 No. 1004 \$34.99
 80-94053 No. 1007 \$34.99



Gerber Products - R40-2 Woodside Reefer
 80-94013 No. 1004 \$34.99
 80-94014 No. 1008 \$34.99
 Gerber Products - 6-Car R40-2 Reefer Set
 80-90025 Numbers: 1002, 1006, 1007, 1005, 1009, 1000 \$199.95



Great Falls Beer - R40-2 Woodside Reefer
 80-94015 No. 63250 \$34.99
 80-94016 No. 63253 \$34.99
 Great Falls Beer - 6-Car R40-2 Reefer Set
 80-90026 Numbers: 63252, 63254, 63256, 63251, 63258, 63259 \$199.95

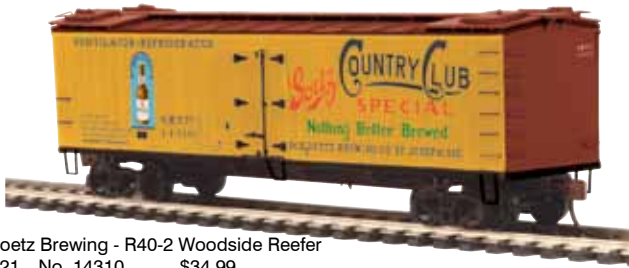


Fairmont Creamery - R40-2 Woodside Reefer
 80-94017 No. 30210 \$34.99
 80-94018 No. 30212 \$34.99
 Fairmont Creamery - 6-Car R40-2 Reefer Set
 80-90027 Numbers: 30215, 30218, 30219, 30211, 30224, 30222 \$199.95

**All Cars
 Feature (2)
 #158 Die-Cast
 Scale Kadee®
 Whisker
 Couplers**



OTOE Food Products - R40-2 Woodside Reefer
 80-94019 No. 4001 \$34.99
 80-94020 No. 4003 \$34.99
 OTOE Food Products - 6-Car R40-2 Reefer Set
 80-90028 Numbers: 4002, 4004, 4005, 4006, 4007, 4008 \$199.95



M.K. Goetz Brewing - R40-2 Woodside Reefer
 80-94021 No. 14310 \$34.99
 80-94022 No. 14313 \$34.99
 M.K. Goetz Brewing - 6-Car R40-2 Reefer Set
 8-90029 Numbers: 14312, 14314, 14315, 14319, 14311, 14316 \$199.95



LaCrosse Breweries - R40-2 Woodside Reefer
 80-94023 No. 3042 \$34.99
 80-94024 No. 3045 \$34.99
 LaCrosse Breweries - 6-Car R40-2 Reefer Set
 80-90030 Numbers: 3048, 3046, 3043, 3044, 3040, 3049 \$199.95



Nickel Plate Road - R40-2 Woodside Reefer
 80-94027 No. 701 \$34.99
 80-94028 No. 700 \$34.99
 Nickel Plate Road - 6-Car R40-2 Reefer Set
 80-90032 Numbers: 903, 904, 708, 705, 907, 900 \$199.95



Skyland Eggs - R40-2 Woodside Reefer
 80-94025 No. 6002 \$34.99
 80-94026 No. 6004 \$34.99
 Skyland Eggs - 6-Car R40-2 Reefer Set
 80-90031 Numbers: 6000, 6003, 6006, 6005, 6007, 6008 \$199.95

USRA 55-Ton Steel Twin Hopper



Chesapeake & Ohio - USRA 55-Ton Steel Twin Hopper

80-97046 No. 300510 \$34.95
 80-97047 No. 300511 \$34.95
 80-97048 No. 300500 \$34.95

Chesapeake & Ohio - 6-Car USRA 55-Ton Steel Twin Hopper Set

80-90052 No. 300501, 300502, 300503, 300504, 300505, 300506 \$199.95
 80-90053 No. 300507, 300508, 300509, 300512, 300513, 300514 \$199.95



Pennsylvania - USRA 55-Ton Steel Twin Hopper

80-97055 No. 220380 \$34.95
 80-97056 No. 220383 \$34.95
 80-97057 No. 220378 \$34.95

Pennsylvania - 6-Car USRA 55-Ton Steel Twin Hopper Set

80-90058 No. 220389, 220387, 220373, 220375, 220387, 220382 \$199.95
 80-90059 No. 220382, 220385, 220372, 220370, 220386, 220384 \$199.95



Western Maryland - USRA 55-Ton Steel Twin Hopper

80-97049 No. 15528 \$34.95
 80-97050 No. 15530 \$34.95
 80-97051 No. 15542 \$34.95

Western Maryland - 6-Car USRA 55-Ton Steel Twin Hopper Set

80-90054 No. 15520, 15524, 15532, 15535, 15546, 15543 \$199.95
 80-90055 No. 15525, 15521, 15534, 15538, 15544, 15540 \$199.95



Pittsburgh & Lake Erie - USRA 55-Ton Steel Twin Hopper

80-97052 No. 37845 \$34.95
 80-97053 No. 37848 \$34.95
 80-97054 No. 37852 \$34.95

Pittsburgh & Lake Erie - 6-Car USRA 55-Ton Steel Twin Hopper Set

80-90056 No. 37840, 37846, 37854, 37858, 37867, 37865 \$199.95
 80-90057 No. 37842, 37844, 37853, 37857, 37869, 37860 \$199.95





Union Pacific - USRA 55-Ton Steel Twin Hopper

- 80-97082 No. 88808 \$34.95
- 80-97083 No. 88812 \$34.95
- 80-97084 No. 88860 \$34.95

Union Pacific - 6-Car USRA 55-Ton Steel Twin Hopper Set

- 80-90076 Nos. 88820, 88824, 88832, 88836, 88845, 88848 \$199.95
- 80-90077 Nos. 88829, 88827, 88833, 88830, 88842, 88846 \$199.95

**All Cars
Feature (2) #158
Die-Cast Scale
Kadee® Whisker
Couplers**



Baltimore & Ohio - USRA 55-Ton Steel Twin Hopper

- 80-97061 No. 324109 \$34.95
- 80-97062 No. 324122 \$34.95
- 80-97063 No. 324135 \$34.95

Baltimore & Ohio - 6-Car USRA 55-Ton Steel Twin Hopper Set

- 80-90062 No. 324106, 324105, 324127, 324124, 324133, 324130 \$199.95
- 80-90063 No. 324104, 324108, 324126, 324120, 324137, 324139 \$199.95



Virginian - USRA 55-Ton Steel Twin Hopper

- 80-97067 No. 23630 \$34.95
- 80-97068 No. 23633 \$34.95
- 80-97069 No. 23644 \$34.95

Virginian - 6-Car USRA 55-Ton Steel Twin Hopper Set

- 80-90066 No. 23632, 23637, 23626, 23620, 23643, 23645 \$199.95
- 80-90067 No. 23634, 23639, 23623, 23625, 23646, 23648 \$199.95



Canadian National - USRA 55-Ton Steel Twin Hopper

- 80-97064 No. 116508 \$34.95
- 80-97065 No. 11652 \$34.95
- 80-97066 No. 116539 \$34.95

Canadian National - 6-Car USRA 55-Ton Steel Twin Hopper Set

- 80-90064 No. 116506, 116500, 116527, 116524, 116533, 116535 \$199.95
- 80-90065 No. 116504, 116502, 116525, 116529, 116530, 116537 \$199.95



Norfolk & Western - USRA 55-Ton Steel Hopper Car

- 80-97019 No. 22072, 22076 \$34.95
- 80-97020 No. 22095, 22097 \$34.95

Norfolk & Western - 6-Car USRA 55-Ton Steel Twin Hopper Car Set

- 80-90033 Nos. 22052, 22056, 22068, 22063, 22075, 22070 \$199.95

Passenger Cars



Pennsylvania - 5-Car Heavyweight Passenger Set
80-40001 \$469.95

All Cars Feature (2) #158 Die-Cast Scale Kadee® Whisker Couplers



Pennsylvania - 2-Car Heavyweight Baggage/Sleeper Passenger Set
80-40002 \$189.95



Pennsylvania - 2-Car Heavyweight Sleeper/Sleeper Passenger Set
80-40003 \$189.95



Union Pacific - 5-Car Heavyweight Passenger Set
80-40004 \$469.95



Union Pacific - 2-Car Heavyweight Sleeper/Sleeper Passenger Set
80-40006 \$189.95



Union Pacific - 2-Car Heavyweight Baggage/Sleeper Passenger Set
80-40005 \$189.95



Features

- Durable, Intricately Detailed ABS Bodies
- Metal Wheels and Axles
- Constant Voltage Overhead LED Interior Lighting
- Detailed 6-Wheel Trucks
- Authentic Paint Scheme
- Separate Metal Handrails

- Detailed Car Interiors
- Kadee Couplers
- Detailed Car Undercarriage
- 5-Car Sets Feature: (1) Baggage Car, (3) Sleeper Cars, (1) Observation Car (Except Pullman Set, Which Features (4) Sleepers and (1) Observation Car)

- 2-Car Sets Features: (1) Baggage Car, (1) Sleeper Car or (2) Sleepers
- Each Car Measures: 11 3/4" x 1 3/8" x 2"
- Operates On 22" Radius Curves



Pullman - 5-Car Heavyweight Passenger Set
80-40007 \$469.95



Pullman - 2-Car Heavyweight Baggage/Sleeper Passenger Set
80-40008 \$189.95



Pullman - 2-Car Heavyweight Sleeper/Sleeper Passenger Set
80-40009 \$189.95



Milwaukee Road - 2-Car Heavyweight Baggage/Sleeper Passenger Set
80-40011 \$189.95



Milwaukee Road - 2-Car Heavyweight Sleeper/Sleeper Passenger Set
80-40012 \$189.95



Milwaukee Road - 5-Car Heavyweight Passenger Set
80-40010 \$469.95

Passenger Cars



Missouri Pacific - 5-Car Passenger Set (Smooth-Sided)
80-60052 \$469.95



Missouri Pacific - 2-Car Parlor Passenger Set (Smooth-Sided)
80-60053 \$189.95



Lehigh Valley - 2-Car Parlor Passenger Set (Smooth-Sided)
80-60047 \$189.95



Lehigh Valley - 5-Car Passenger Set (Smooth-Sided)
80-60046 \$469.95



Santa Fe - 5-Car Passenger Set (Ribbed-Sided)
80-60056 \$469.95

All Cars Feature (2) #158 Die-Cast Scale Kadee® Whisker Couplers



Nickel Plate Road - 2-Car Parlor Passenger Set (Ribbed-Sided)
80-60051 \$189.95



Santa Fe - 2-Car Parlor Passenger Set (Ribbed-Sided)
80-60057 \$189.95



Nickel Plate Road - 5-Car Passenger Set (Ribbed-Sided)
80-60050 \$469.95



Union Pacific - 5-Car Passenger Set (Smooth-Sided)
80-60054 \$469.95



Union Pacific - 2-Car Parlor Passenger Set (Smooth-Sided)
80-60055 \$189.95



Pennsylvania - 2-Car Parlor Passenger Set (Smooth-Sided)
80-60049 \$189.95



Pennsylvania - 5-Car Passenger Set (Smooth-Sided)
80-60048 \$469.95



Erie - 5-Car Passenger Set
81-60007 \$399.95



Northern Pacific - 5-Car Passenger Set
81-60008 \$399.95



Santa Fe - 2-Car Parlor Passenger Set
81-60011 \$179.95



Delaware & Hudson - 2-Car Parlor Passenger Set
81-60012 \$179.95

Passenger Cars - New York Central



New York Central (1940) - 5-Car Passenger Set
80-60017 \$469.95

**All Cars Feature (2) #158 Die-Cast
Scale Kadee® Whisker Couplers**



Empire State Express - 5-Car Passenger Set
80-60025 \$469.95



Empire State Express - 2-Car Parlor/Diner Passenger Set
80-60028 \$189.95



Empire State Express - 2-Car Coach Passenger Set
80-60027 \$189.95



Empire State Express - Baggage Tavern Car
80-60026 \$95.95

**Prototypically Designed To
Match Real-Life Prototypes**



New York Central (1938) - 5-Car Passenger Set
80-60021 \$469.95

See them in action at
mthHOTrains.com



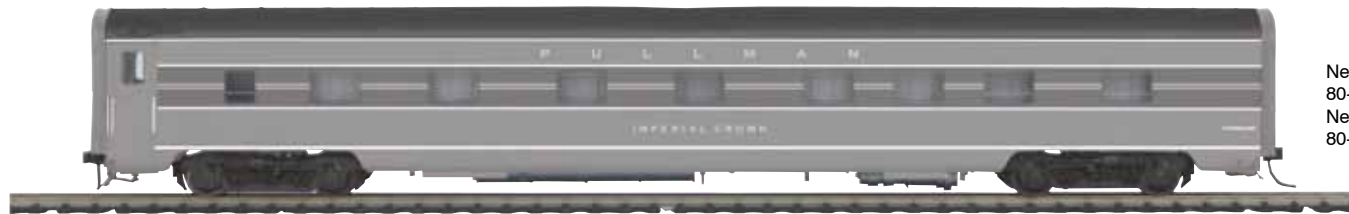
New York Central (1940) - 2-Car Sleeper Passenger Set
80-60019 \$189.95

New York Central (1940) - 2-Car Sleeper Passenger Set
80-60020 \$189.95



New York Central (1938) - 2-Car Sleeper Passenger Set
80-60023 \$189.95

New York Central (1938) - 2-Car Sleeper Passenger Set
80-60024 \$189.95



Soft, Flexible End-of-Car Diaphragms

New York Central (1940) - 4-4-2 Sleeper Passenger Car
80-60018 \$95.95
New York Central (1938) - Sleeper Passenger Car
80-60022 \$95.95



Passenger Cars - Southern Pacific



Southern Pacific - 5-Car De-skirted Passenger Set
 80-60035 \$469.95
 80-69035 (HO 3-Rail) \$499.95

All Cars Feature (2) #158 Die-Cast Scale Kadee® Whisker Couplers



Prototypically Designed To Match Real-Life Prototypes

Features

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



Southern Pacific - Chair/Chair Deskirted Passenger Set
 80-60043 \$189.95



Southern Pacific - Chair Car
 80-60006 \$95.95

Southern Pacific Lines - Chair Car
 80-60012 \$95.95

Southern Pacific - Chair Car
 80-60037 \$95.95



**See them in action
 at mthHOTrains.com**



Southern Pacific - 5-Car Passenger Set
 80-60029 \$469.95
 80-60029-5 (HO 3-Rail) \$499.95

Southern Pacific Lines - 5-Car Passenger Set
 80-60041 \$469.95
 80-69041 (HO 3-Rail) \$499.95

Soft, Flexible End-of-Car Diaphragms



Southern Pacific - 3-Car Diner/Kitchen/Coffee Passenger Set
 80-60030-5 (HO 3-Rail) \$299.95

Southern Pacific Lines - 3-Car Diner/Kitchen/Coffee Passenger Set
 80-60042 \$279.95
 80-69042 (HO 3-Rail) \$299.95



Southern Pacific Lines - Articulated Chair/Chair Passenger Car Set
 80-60010 Car No. 2458, 2457 \$189.95
 80-60011 Car No. 2460, 2459 \$189.95

Southern Pacific - Articulated Chair/Chair Passenger Car Set
 80-60004 Car No. 2464, 2463 \$189.95
 80-60005 Car No. 2466, 2465 \$189.95



Southern Pacific Lines - Articulated Chair/Chair Passenger Car Set w/Antenna
 80-60009 Car No. 2474, 2473 \$189.95
 80-60008 Car No. 2462, 2461 \$189.95

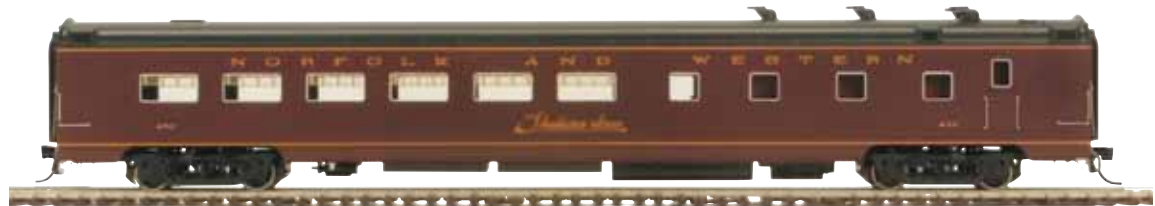
Southern Pacific - Articulated Chair/Chair Passenger Car Set w/Antenna
 80-60002 Car No. 2470, 2469 \$189.95
 80-60003 Car No. 2476, 2475 \$189.95

Passenger Cars - Norfolk & Western



Norfolk & Western - 5-Car Passenger Set
80-60013 \$469.95

**All Cars Feature (2) #158 Die-Cast
Scale Kadee® Whisker Couplers**



Norfolk & Western - Dining Car
80-60015 \$95.95



**Prototypically Designed To Match
Real-Life Prototypes**



Norfolk & Western (Blue) - Coach
80-60045 \$95.99



**See them in action
at mthHOTrains.com**

Diesel Era Passenger Train

Norfolk & Western (Blue) - 5-Car Passenger Set
80-60039 \$469.95



Track & Accessories

REALTRAX
BY M.T.H. ELECTRIC TRAINS

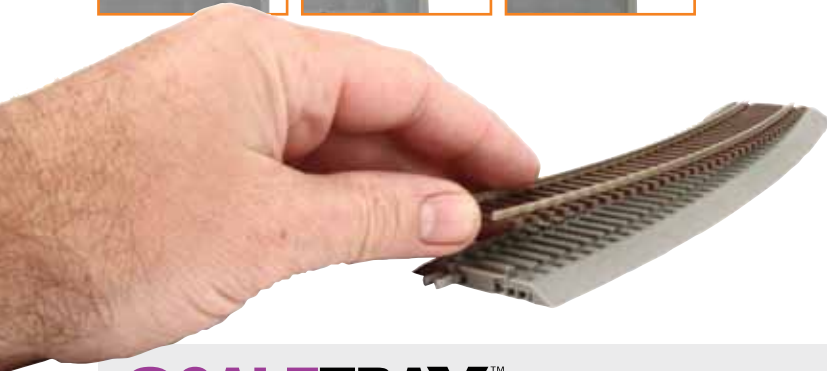
At M.T.H. Electric Trains, we believe a track system should allow your model railroad empire to grow. The RealTrax system includes 18" and 22" curves as well as 9" straight lengths that make a perfect solution for your first model railroad empire. And every piece of RealTrax is rugged, realistic, and reliable so you can have fun running your trains.



See it in action at mthHOtrains.com



Compatible with Atlas® HO Track using 81-1011 Adapters



HO RealTrax 22" Radius Curve Code 83 Track w/Roadbed - 4 Pack
81-1022 \$7.29



HO RealTrax 9" Straight Code 83 Track Rerailer with Terminal Joiner Wire Harness
81-1015 \$7.99



HO RealTrax 9" Straight Code 83 Track w/Roadbed - 4 Pack
81-1001 \$7.29



HO RealTrax 18" Radius Curve Code 83 Track w/Roadbed - 4 Pack
81-1018 \$7.29



HO RealTrax Track Adapter Pack (24 Ct)
81-1011 \$7.99



HO RealTrax Track Terminal Pack (2 Ct)
81-1003 \$3.99



HO RealTrax Track Railjoiner Pack (48 Ct)
81-1014 \$2.99

SCALETRAX
BY M.T.H. ELECTRIC TRAINS



HO ScaleTrax 36" Code 83 Flex Track
80-1036 \$6.49

HO ScaleTrax 9" Straight Code 83 Track Rerailer (3 Pack) (Not Shown)
80-1003 \$8.50



HO ScaleTrax 9" Straight Code 83 Track
80-1001 \$1.40
HO ScaleTrax 9" Straight Code 83 Track (6 Pack)
80-1002 \$8.40



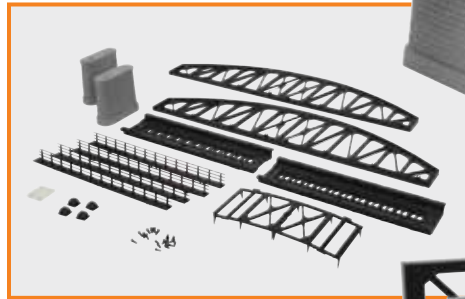
HO ScaleTrax 22" Code 83 Radius Curve Track
80-1022 \$1.40
HO ScaleTrax 22" Radius Code 83 Curve Track (6 Pack)
80-1023 \$8.40
HO ScaleTrax 18" Radius Curve Code 83 Track
80-1018 \$1.40
HO ScaleTrax 18" Radius Curve Code 83 Track (6 Pack)
80-1019 \$8.40

**Compatible With All Code 83
HO Non-Roadbed Track**

Bridge Kits



Black - HO Arch Bridge Kit
80-1040 \$32.95
Silver - HO Arch Bridge Kit
80-1042 \$32.95



This easy-to-assemble Arch Bridge kit makes layout expansion easy. Molded in black or silver and mounted atop molded gray stone pillars, the ABS components can be painted in a color of your choice and ready to install in minutes.

Snap together design and screw based mounts ensure that the kit goes together easily and lasts a lifetime. Track can be quickly integrated via the slide channels in the roadbed. The roadbed accepts both regular tie track and road-bed designed track from Atlas®, Bachmann® or M.T.H.

Mate up the Arch Bridge with one or more separately sold 9" Girder Bridges for an even more impressive scene. Add an optional red LED Flashing Beacon atop the Arch Bridge and you'll quickly appreciate how this realistic and easy-to-use track accessory can enhance your layout.



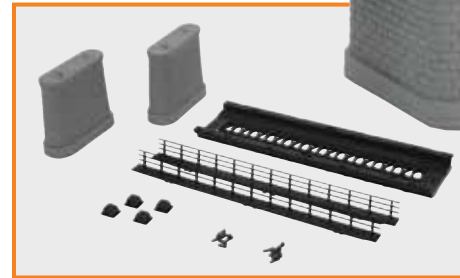
Works With All Track Types



Easy To Assemble



Black - HO Girder Bridge Kit
80-1041 \$12.95
Silver - HO Girder Bridge Kit
80-1043 \$12.95



Features

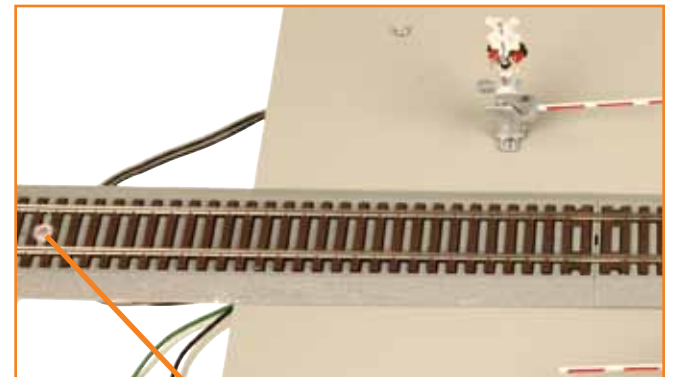
- Intricately Detailed ABS Construction
- Easy-to-Assemble Kit
- Includes Two Molded Gray Stone Pillars, Molded Black Arch Girders, Molded Black Track Base
- Accepts Road-Bed Equipped Track and Regular Tie Track
- Mates Easily With Separately Sold Girder Bridges
- Optional Flashing Red LED Beacon Light (*powered by separately sold AC or DC power supply*)
- Unit Measures: 18" x 2 5/8" x 9 1/2"

Flashing Warning Beacon Kit
80-1044 \$12.95

This easy to install operating beacon light will quickly bring your M.T.H. HO Arch Bridge to life. The flashing LED is powered by a small circuit board that quickly wires up to any AC or DC power source.



Operating Crossing Signal



Operating Crossing Signals
80-10001 \$179.95

- Flashing warning lights
- Smooth operating motorized gates
- Ringing warning bell
- Guards up to four tracks

For the first time, operating crossing signals come to the HO marketplace in an easy-to-install package that can be up and running in short order! Each die-cast crossing signal features flashing LED warning lights and the set includes warning bell sounds.

Each crossing signal is fully decorated and ready-to-install with just two mounting screws. The signals are controlled by a modular harness and activation lever that extend down through the base of the layout to easily installed control boxes. Like the signals themselves, each control box attaches to the underside of the platform with just two screws and features modular plugs to accept the harness from the signal.

Activation of the signals is handled through two sensors for each track. The crossing signal set can handle up to four tracks at once. The sensors are installed in the base of each track before and after the grade crossing by drilling a small hole through the track and platform. Insert the sensors up through the underside of the platform, plug in each sensor set to the master control box and you're ready to run!

Features

- Die-Cast Construction
- Fully Assembled
- Fully Painted
- Motorized Under Table-Control Boxes
- Controls 1 to 4 Tracks
- Multi-Direction Functionality
- Easily Installed In-Track Train Sensors
- Operating Bell With Volume Adjustment
- Flashing LED Warning Lights
- Modular Plug Connections For Easy Setup
- Installs On Benchwork Up To 1 1/2 Inches Thick
- Includes User Installed Track Signs For 1 to 4 Tracks
- Unit Measures: 2 1/8" High

Optical Track Sensors

No Matter How You Run It

Your new Proto-Sound® 3.0 locomotive has more features than any engine you've ever owned

Analog DC

With just an ordinary DC transformer, you get operating features unmatched by any other HO locomotives:

- Synchronized puffing smoke and chuffing sounds: billowing smoke correctly synchronized with the drivers at four puffs per revolution; at rest, smoke wafts out of the stack steadily, just like the prototype. As with smoke, chuffs are correctly timed, in sync with smoke puffs at four per driver revolution
- Squealing brakes: slow down quickly and hear the squeal of a brake application
- Idle sounds: at track voltages between about 6-8 volts, your engine idles and plays random maintenance sounds — like the whoosh of steam cocks being opened
- Prototypical Rule 17 lighting: the headlight dims automatically when the engine comes to a stop, and the tender light illuminates for backup moves
- Speed control: set any speed and your engine maintains it, regardless of load, hills, or curves
- Automatically smooth reversing: flip your transformer's reversing switch at any speed and watch your engine gradually come to a stop, turn on the appropriate directional lighting, and smoothly accelerate up to speed in the opposite direction

Z-DC300 30 Watt
DC Transformer
40-300 \$79.95



DCC

If you operate with Digital Command Control (DCC), you'll find Proto-Sound 3.0 locomotives take full advantage of the capabilities of DCC and are completely compatible with all DCC motive power. In fact, Proto-Sound engines are already equipped to use DCC functions 0 through 28, to take full advantage of newer DCC controllers that use the full range of NMRA standard functions.

With today's standard DCC controllers, your Proto-Sound 3.0 engine has all the features available with analog DC and these additional functions activated by your controller:

- Full command control
- Bell: listen for the realistic last half ring when you release the bell button
- Whistle/Horn: depending on how long you blow the whistle or horn, you'll hear one of several different end signatures
- PFA (Passenger and Freight Announcements): passenger engines offer a complete passenger station arrival and departure sequence that you can activate on command; freight engines allow you to play a symphony of freight terminal sounds
- Startup and shut down sounds
- Volume control
- Sound mute
- Smoke on/off
- Lighting on/off
- Plus 19 others



(see page 1 for the complete list)

DCS Commander

Insert a DCS Commander in the wires from your existing DCC system to the track and you can switch back and forth between DCC and DCS with the push of a button. Or use the Commander alone with your own DC power supply.

The DCS Commander offers intuitive control of multiple Proto-Sound engines; for each locomotive, more than 32 functions are available at the touch of a single, clearly-labeled button, including:

- Speed adjustment in one-scale-mile-per-hour steps
 - Independent feature control: tune your engines' sound, lights, smoke and acceleration/deceleration settings
 - Smoke on/off
 - Doppler sounds: simulate the classic sound effect of a train approaching and then whizzing past
 - Accent sounds: activate any one of 7 individual sounds, including forward and reverse signal sounds and more
 - Activate Passenger Station and Freight Yard Sounds
 - Individual locomotive control: control up to 10 Proto-Sound 3.0 engines at the same time, on the same track
 - Selectable control configurations: choose between analog DC, DCC* and DCS modes
- * Customer-supplied DCC system required

DCS Commander Controller
50-1028 \$149.95



DCS Commander Controller
w/ 100 watt power supply
50-1029 \$229.95

DCS Remote Control System

Run your entire layout from one wireless handheld — or several. With a DCS Remote Control System, you can operate up to 99 Proto-Sound 3.0 engines in command mode at the same time, with full access to all locomotive functions. Add an optional Accessory Interface Unit (AIU) and the same handheld controls hundreds of switches or accessories. For group operating sessions, equip each guest with their own full-featured handheld.

**Unlike the DCS Commander, the DCS Remote Control System is not compatible with DCC systems.



DCS Remote Control System
50-1001 \$329.95
(requires separate power supply)

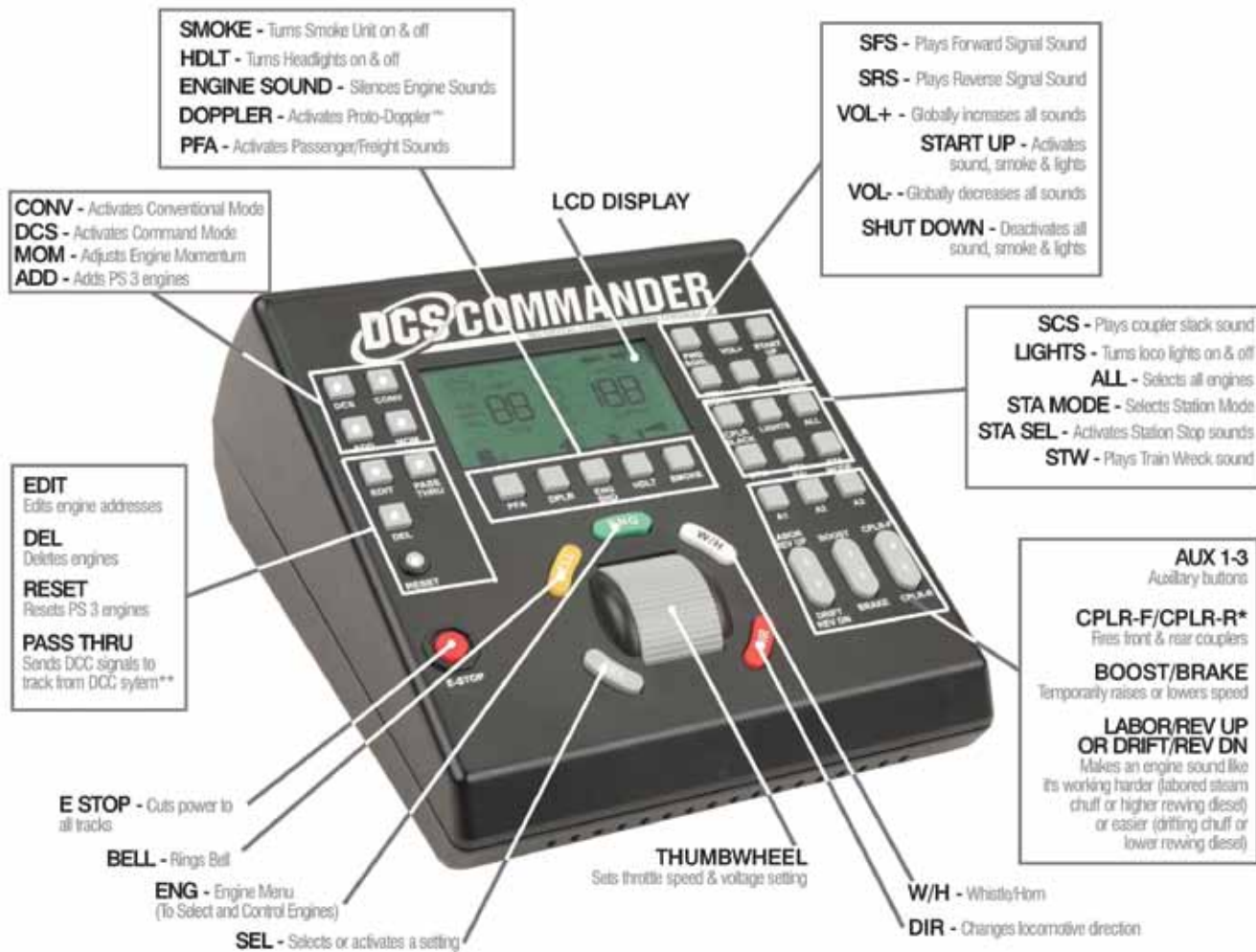
DCS Accessory
Interface Unit (AIU)
50-1004 \$99.95



Your Proto-Sound engine senses what kind of power is on the rails. **Just set it on the track and run it!**

DCS COMMANDER

BY MTH ELECTRIC TRAINS
DIGITAL COMMAND SYSTEM
HO DIGITAL COMMAND SYSTEM CONTROLLER



More Features Than Analog DC or DCC Command Control

The DCS Commander is the easiest way to access the dozens of command control functions already programmed into your M.T.H. HO locomotive. The Commander features clearly-labeled, one-button control of more than 32 engine functions; no function keys or special codes to remember; and more features than any DCC system made today. Use the engine menu to select and control up to 10 different DCS engines from a single Commander at the same time on the same track — or switch back to DCC or analog DC operation with the push of a button.



In DCS mode, the large LCD screen identifies your locomotive's number and provides readouts for scale speed and active features.



In conventional mode, the LCD provides track voltage and amperage level readouts, making the Commander a full-featured DC controller.

Adding a DCS Commander to your existing layout is simple: just insert it into the wires that connect your DC transformer or DCC system to the track. The Commander can accept any power input (AC, DC or DCC) and output analog DC with volt and current display. The Commander also acts as a passive conduit for your DCC signal until you press the button to switch to DCS or conventional operation.

Not all products depicted in this catalog are production models. In some cases, the items pictured may be models in HO scale, O scale, or another scale that have been altered digitally. Each item's graphic features and content are subject to change after publication. All product features may be verified on their retail packages.

MTH Trademarks: M.T.H. Electric Trains®, M.T.H.®, MTH Railroaders Club™, CrossingGate™, Ives®, Loco-Sound™, Proto-Sound® 2.0, Proto-Sound® 3.0, Proto-Speed Control™, Proto-Doppler™, Proto-Dispatch™, Proto-Cast™, ProtoSmoke™, Proto-Coupler™, Proto-Effects™, RailKing®, Rugged Rails®, RailKing One-Gauge™, RailTown™, Tinplate Traditions™, ScaleTrax™, RealTrax®, Z-750™, Z-4000®, Z-1000™, DCS™ and the MTH Numbering System and all others indicated throughout this catalog.

DCS™ Simply The Best Way To Run A Railroad™
M.T.H.'s DCS Digital Command System has received U.S. Patent No. 6,457,681. M.T.H.'s Proto-Sound® 2.0 system has received U.S. Patent No's 6,457,681 B1 (sound system), 6,457,681 B1 (Proto-Speed Control™), 6,604,641 (Proto-Coupler™), 7,210,656 (Sound), 6,662,917 (2/3Rail), 7,210,656 (Internet Downloads, Music & Doppler), 6,655,640 (Smoke Synchronization)
M.T.H.'s RealTrax® has received U.S. Patent No. 6,019,289.
M.T.H.'s Z-4000® Transformer has received U.S. Patent No's. 6,281,606 & 6,624,537.
HO Coupler 7,694,834 , Bi-Directional Communication 8262034

Some images used in this publication © 2012 www.clipart.com

© 2013 H-D, All Rights Reserved. Manufactured by M.T.H. Electric Trains under license from Harley-Davidson Motor Company.

Märklin is a Registered Trademark of Märklin, Inc.

Kadee® is a registered Trademark of Kadee Quality Products Co.

Products bearing Chicago and North Western, Denver & Rio Grande, Denver & Rio Grande Western, MKT/Katy, Missouri Pacific, Southern Pacific, Union Pacific, Western Pacific are made under trademark license from Union Pacific Railroad Company.

© 2013 M.T.H. Electric Trains, 7020 Columbia Gateway Drive, Columbia, Maryland 21046



DCS REMOTE COMMANDER:
Get into DCS on a budget

DCS Remote Commander Set
50-1033 \$49.95

* Operating couplers are available only on diesels at this time.
** Customer supplied DCC system Required

Join The Club!

There are **TEN** different types of memberships, based on the style of model railroading that most interests you.



MTHRRC Pennsylvania
USRA 55-Ton Steel Twin Hopper
HO Membership is \$30.00

60-1000 - The Basic Club Membership does not include a club car
Basic Membership is \$25.00

As a member of the **M.T.H. RailRoders Club** you'll receive:

Limited-Edition Club Car



Each year we produce beautifully decorated cars exclusively for our Club members. Members automatically receive the car that matches their Club membership (RailKing, Premier, Tinplate Traditions or One Gauge) and have the option to collect other Club cars as well.

RailWare™ Software



Use your computer to design track layouts, search the database of all M.T.H. products, look at our past catalogs, listen to Proto-Sound 2.0 train effects, & much more. This Interactive DVD retails for \$79.95, but is yours **FREE** as a Club member.

The CrossingGate™ Club Magazine



You will receive our full-color Club magazines, jam-packed with product news, ideas from other members, rail history, & step-by-step articles explaining how M.T.H. technology can bring your railroad to life.

1st Class Mailing of M.T.H. Catalogs

Club Members get all M.T.H. catalogs earlier than other mailing list members, via First-Class mailings, so they can order from their local train store before the best items are sold out.

Club Card & Lapel Pin



Show the world your membership in this elite group of model railroaders with your high-quality embossed membership card & beautiful enameled lapel pin.

Proto-Sound 2.0 Upgrade Kits

Club members can save an additional 15% on these kits by visiting the MTHRRC web page.

Club Web Site



Visit www.mthtrains.com and type in your member number to gain access to the Club web site. Here you can exchange messages with other Club members, keep up with the latest news, and even build your own homepage.

CARRY ON THE M.T.H. TRADITION WITH MEMORABILIA AND COLLECTIBLES

MTH Promotional DVD

This interactive DVD is packed full of sights & sounds guaranteed to make you rethink how far the hobby of model railroading has come. You'll learn about some of the most innovative products ever produced & marvel at the sophistication of a product line unmatched by other model train manufacturers.



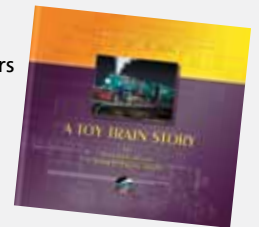
Previous Year Club Cars

MTHRRC members can still obtain earlier produced MTHRRC cars by visiting the MTHRRC pages on the website. Only MTHRRC members can get these cars!



A Toy Train Story

This comprehensive book is a must for collectors & other lovers of toy trains. 350 pages & 1900 color photos, hard cover. Add this book to your membership for only \$25.00 (50% off the \$49.95 cover price)!



GET THE MOST FROM MODEL RAILROADING

JOIN ONLINE! IT'S EASY — JUST GO TO

WWW.MTHTRAINS.COM

We don't think we're exaggerating when we say M.T.H. has the most useful train manufacturer's site on the Internet. Here's just a sample of the answers you can find online.

M.T.H. Online



HOW DOES IT WORK?

Misplaced an instruction manual or just want to know how a product works? Use Product Search to look up the item and view its instruction manual.



① CAN I SEE AND HEAR IT IN ACTION ...?

Click on Video — only M.T.H. gives you the chance to see and hear locomotives and other products in action, before you buy.

② WHAT'S THE LATEST INFO ON ...?

Use Product Search to find the latest info on new products before they're delivered — sound sets, cab numbers, feature and paint scheme updates, and other information that arrived after the catalog was published.

DID YOU EVER MAKE?

Use Product Search to search through nearly all of the 21,000 items we've made in the past 33 years, for your favorite road name, engine, or type of rolling stock.

③ DOES ANY DEALER STILL HAVE ...?

Locate hard-to-find items with our Product Locator, which searches the inventories of M.T.H. dealers across the country.

④ WHEN IS IT COMING?

Our online Shipping schedule is updated frequently to let you know what's coming soon to your hobby shop.

⑤ ARE YOU GOING TO MAKE?

View the last several M.T.H. Catalogs online.

⑥ HOW CAN I FIX...?

The Service area of our site allows you to email a question to our factory technicians or find which of our 150+ local service centers is closest to you.

⑦ WHAT'S NEW?

New arrivals and other news are posted frequently on our home page.

HOW CAN I BE AMONG THE FIRST TO KNOW?

To get the news as it happens, sign up for our free weekly electronic newsletter, with information on new M.T.H. products, industry news, and sneak peeks at upcoming specials!

⑧ HOW CAN I LEARN MORE ABOUT DCS?

Follow the link to the protosound2.com Web site for DCS and Proto-Sound information — and a list of Authorized DCS Demo Centers where you can try DCS hands-on.

HOW CAN I UPDATE MY DCS SYSTEM OR CHANGE A SOUND SET?

Only M.T.H. allows you to update your control system or change an engine's sound set right over the Internet. Follow the link to the protosound2.com Web site for DCS and Proto-Sound downloads.



...SIMPLY THE BEST WAY TO RUN A RAILROAD™

TRY IT at your local DCS Demo Center or learn more with a complimentary DVD on DCS & M.T.H. technology.



Sign Up for Our E-News



- Free Weekly Delivery
- Product Videos
- Show Schedule
- Delivery Schedule
- Latest New Announcements
- Special Offers

www.mthH0trains.com

Take your favorite Proto-Sound® 2.0 or 3.0 locomotive to any Demo Center and experience the additional features your engine has with DCS Control.

To find your nearest DCS Demo Center or request your complimentary DVD visit

www.mthH0trains.com



©2013 M.T.H. Electric Trains
7020 Columbia Gateway Drive
Columbia, Maryland 21046