

**EMT**  
ELECTRIC TRAINS®

HO TRAINS THAT DO MORE



**2008 No. 3**

# 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 found 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 digital recordings with CD-quality playback. 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.

## 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.

## 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 prototypical lighting effects. Depending on the locomotive, these may include constant-brightness headlights, illuminated number boards, lighted marker lamps, and alternating ditch lights. 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 and diesel exhaust 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 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.

## Who is M.T.H.?

While our name may be new to HO model railroaders, M.T.H. Electric Trains is a seasoned model train manufacturer with a long history of innovation. In little more than a quarter century, M.T.H. has grown from a tiny business operated out of a spare bedroom into an 80+ employee company, headquartered in its own sprawling building in a suburb of Washington, D.C.

Over the past 28 years, we have cataloged nearly 15,000 different items in four scales: O gauge, One Gauge, HO gauge, and tinplate Standard Gauge. We are co-owners of two overseas facilities that make nothing but M.T.H. trains, and we use three other factories that are dedicated solely to our product line. This gives us more control of our manufacturing process and quality than many other train companies, whose products are often made in the same factories used by their competitors.

Our research and development team has received more than 10 patents on innovations in model railroading. We believe the Proto-Sound sound and control system found in every M.T.H. locomotive, in combination with our optional Digital Command System (DCS), makes our trains more realistic and more fun to operate than any other trains in model railroading.

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.

M.T.H. Electric Trains is in no way affiliated with any of the railroads featured in this catalog.

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# www.mthHOtrains.com

Visit our site to see videos of M.T.H. locomotives in action, locate your nearest dealer, or learn more about our products.

# NYC L-3 and L-4 Mohawks



L-3b shown

While its competitors needed monstrous engines to conquer mountain ranges, the New York Central did not. Its Water Level Route from New York City to Chicago was a nearly level raceway built along rivers and the Lake Erie shoreline, and the Central's mainline steam engines were racehorses bred for speed on that route. By the early 1930s, the NYC relied on two locomotives for premier services: the 4-6-4 Hudson for its Great Steel Fleet of passenger trains and the nation's largest stable of 4-8-2s for fast freight. Although the 4-8-2 was labeled a Mountain on any other railroad, that would hardly do on the Water Level Route, so the Central named its engines Mohawks after one of the rivers its rails followed.

As the Depression waned in the late 1930s and traffic picked up, the need arose for a dual service locomotive that could augment the Hudson fleet and hustle freight as well. As an experiment, two existing L-2 Mohawks were modified with higher boiler pressure, smaller cylinders, lightweight rods and other reciprocating parts, and roller bearings — which pushed their top speed from 60 mph to the 80 mph needed for passenger work. The success of these engines led to the class L-3 Mohawks delivered from 1940–1942. With over 5000 horsepower on tap, they were equally at home pulling the *20th Century Limited* or more than 100 freight cars. A new feature on the L-3s was the largest tender yet seen on a Central locomotive, with a 43-ton-capacity coal bunker.

These tenders didn't carry enough water to match all that coal, however, because the Central used water scoops under its tenders and track pans between the rails to enable locomotives to pick up water on the move. One of the most spectacular sights of the steam era was a Mohawk or Hudson taking on water at speed, with excess water blasting out of relief vents on the tender deck.

Class L-3 engines were delivered in three subclasses. ALCo-built class L-3a Mohawks were dual service steamers with roller bearings on all axles. Class L-3b engines, built by both ALCo and Lima, and class L-3c built by ALCo, were originally intended for fast freight service. Lima-built L-3b's carried a cylindrical Elesco feedwater heater atop their smokebox fronts, while all other L-3's had Worthington feedwater heaters.

The pinnacle of Mohawk development was Lima-built wartime class L-4, with larger 72" drivers. Tenders on the final L-4's were upgraded with an expansion cistern behind the coal bunker, so water could be scooped at up to 75 mph without blowing the tender apart. Famed author Alvin Stauffer noted that "The dual purpose concept had really taken hold on the Central and the wartime service they performed was almost beyond belief. It was nothing for them to come in on a heavy freight drag, be serviced, and leave a few hours later at

the head of one of the Great Steel Fleet. Whenever possible, the heavy War Trains were assigned to the L-4 Mohawks." Soon after the war, L-4 and L-3 engines were retrofitted with smoke deflectors (a.k.a. "elephant ears") to deflect smoke from the engineer's line of vision. Whether they worked, and whether they improved or ruined the look of the Central's premier freighter, remains a subject of debate among railfans to this day.

While the M.T.H. Mohawk is not the first HO model of this NYC racehorse, we believe it is the best — offering accurate detail for each subclass of L-3 and L-4; smooth performance from a three-scale-mile-per-hour crawl to full throttle; "cruise control" for steady speeds regardless of curves, switches, and grades; a wide range of steam locomotive, crew, and station sounds; prototypical Rule 17 lighting; and puffing smoke synchronized with driver revolutions at a correct four chuffs per revolution. L-3c and L-4b models are equipped with removable elephant ears, so you can model them before or after smoke deflectors were applied. Check out this locomotive at your M.T.H. dealer; we think you'll agree there's nothing else like it.

**Quillable Whistle:** Using a DCS handheld controller (see page 20), you can "play" the Mohawk's whistle like a real engineer.

# Features

- Die-Cast Boiler and Tender Body
- Die-Cast Metal Chassis
- Authentic Paint Scheme & Cab Numbers
- RP-25 Metal Wheels Mounted On Metal Axles
- Operating Lighted Marker Lights
- Constant Voltage Headlight
- Prototypical Rule 17 Lighting
- Detailed Truck Sides
- Detailed Cab Interior
- Powerful 5-Pole Precision Flywheel-Equipped Motor
- (2) Kadee Compatible Scale Couplers
- Metal Handrails and Bell
- Metal Whistle
- Sprung Drive Wheels
- Synchronized Puffing ProtoSmoke™ System
- Locomotive Speed Control
- Locomotive Cab-To-Tender Deck Plate
- Detailed Tender Undercarriage
- Interchangeable Traction Tire-Equipped Drive Wheels
- Onboard DCC Receiver
- Operates On Code 70, 83, & 100 Track
- Proto-Sound® 3.0 With The Digital Command System, Featuring Passenger Station or Freight Yard Proto-Effects™
- Unit Measures: 15 3/8" x 1 3/8" x 1 9/16"

See a List of DCC Features on Page 4



**NEW!** New York Central - 4-8-2 L-3a Mohawk Steam Engine  
80-3123-1 w/ Proto-Sound 3.0, Featuring Passenger Station Announcements \$449.95  
Cab Number 3006



**NEW!** New York Central - 4-8-2 L-3b Mohawk Steam Engine  
80-3124-1 w/ Proto-Sound 3.0, Featuring Freight Yard Sounds \$449.95  
Cab Number 3037



**NEW!** New York Central - 4-8-2 L-3c Mohawk Steam Engine  
80-3125-1 w/ Proto-Sound 3.0, Featuring Passenger Station Announcements \$449.95  
Cab Number 3064

Includes removable smoke deflectors



# 4-8-2 L-4 Mohawk



L-4b shown

## DCC Features

All 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 locomotive features are accessible:

- (F0) Headlight on/off
- (F1) Bell on/off
- (F2) Whistle/Horn on/off
- (F3) Start-up/Shut-down
- (F4) PFA initiate and advance
- (F5) Cab Light on/off
- (F6) Engine Sounds on/off
- (F7) Volume low, med, high, off
- (F8) Smoke on/off
- (F9) Forward Signal Sound
- (F10) Reverse Signal Sound
- (F11) Coupler Slack Sound
- (F12) One-Shot Doppler on/off
- (F13) Extended Start Up
- (F14) Extended Shut Down
- (F15) Labor Chuff
- (F16) Drift Chuff
- (F17) Smoke Volume low, med, high
- (F18) Single short whistle toot
- (F19) Coupler Close
- (F20) Feature Reset
- (F21) Idle Sequence 1
- (F22) Idle Sequence 2
- (F23) Idle Sequence 3
- (F24) Idle Sequence 4
- (F25) Brakes auto/off
- (F26) Cab Chatter auto/off
- (F27) Clickety-Clack auto/off
- (F28) Train Wreck

### 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.



**NEW!** New York Central - 4-8-2 L-4a Mohawk Steam Engine  
80-3126-1 w/ Proto-Sound 3.0, Featuring Passenger Station Announcements  
Cab Number 3117 \$449.95



**NEW!** New York Central - 4-8-2 L-4b Mohawk Steam Engine  
80-3127-1 w/ Proto-Sound 3.0, Featuring Passenger Station Announcements  
Cab Number 3125 \$449.95

Includes removable smoke deflectors



# K4s



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 Juniata and Baldwin Shops.

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 K-4's appearance underwent a series of changes to better serve those needs. The most apparent changes showed up on the 1947 Postwar or Modern version of the K-4 and included a solid drop-coupler pilot, and repositioned headlight and generator.

M.T.H. Electric Trains is proud to return the 1947 Postwar rendition of this magnificent steam locomotive to life in all die-cast construction. Featuring

all of the craftsmanship and detail that make an M.T.H. steam locomotive the hobby's best value, your K4s will quickly find a home on your layout or in your collection for years to come.

#### Did You Know?

No. 1737 was the first K-4 produced for the Pennsylvania Railroad. No. 1361, formerly displayed at Horseshoe Curve, is currently undergoing restoration.





## Features

- Die-Cast Boiler and Tender Body
- Die-Cast Metal Chassis
- Authentic Paint Scheme & Cab Numbers
- RP-25 Metal Wheels Mounted On Metal Axles
- Constant Voltage Headlight
- Prototypical Rule 17 Lighting
- Detailed Truck Sides
- Detailed Cab Interior
- Powerful 5-Pole Precision Flywheel-Equipped Motor

- (2) Scale Couplers
- Metal Handrails and Bell
- Metal Whistle
- Sprung Drive Wheels
- Synchronized Puffing ProtoSmoke™ System
- Operating, Directionally Controlled Tender Back-up Light
- Locomotive Speed Control
- Locomotive Cab-To-Tender Deck Plate
- Detailed Tender Undercarriage

- Interchangeable Traction Tire-Equipped Drive Wheels
- Onboard DCC Receiver
- Operates On Code 70, 83, & 100 Track
- Proto-Sound® 3.0 With The Digital Command System Featuring Passenger Station Proto-Effects™
- Unit Measures: 11 1/2" x 1 3/8" x 2 1/8"
- Operates On 18" Radius Curves

See a List of  
DCC Features on  
Page 11



- |  |            |          |
|--|------------|----------|
| Pennsylvania 4-6-2 K4s Modern Steam Locomotive w/Proto-Sound 3.0 |            |          |
| 80-3104-1  | Cab # 1361 | \$399.95 |
| Pennsylvania 4-6-2 K4s Modern Steam Locomotive w/Proto-Sound 3.0 |            |          |
| 80-3105-1  | Cab # 518  | \$399.95 |
| Pennsylvania 4-6-2 K4s Modern Steam Locomotive w/Proto-Sound 3.0 |            |          |
| 80-3129-1  | Cab # 3875 | \$399.95 |

Post-War Version



# 4-8-4 GS-4



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.

A lone GS-4, No. 4449, was saved from the scrap-heap and restored in 1975 to pull the American Freedom Train in celebration of our nation's 200th anniversary. Repainted in Daylight colors, engine 4449 operates today in excursion service.

# Features

- Die-Cast Boiler and Tender Body
- Die-Cast Metal Chassis
- Authentic Paint Schemes & Cab Numbers
- RP-25 Metal Wheels Mounted On Metal Axles
- Constant Voltage Headlight
- Prototypical Rule 17 Lighting
- Detailed Truck Sides
- Detailed Cab Interior
- Powerful 5-Pole Precision Flywheel-Equipped Motor
- (2) Scale Kadee® Compatible Couplers
- Metal Handrails and Bell
- Metal Whistle
- Sprung Drive Wheels
- Synchronized Puffing ProtoSmoke™ System
- Locomotive Speed Control In Scale MPH Increments

- Detailed Tender Undercarriage
- Interchangeable Traction Tire-Equipped Drive Wheels
- Onboard DCC Receiver
- Operates On Code 70, 83, & 100 Track
- Wireless Drawbar
- Engineer and Fireman Figures
- Operating Marker Lights\*
- Proto-Sound® 3.0 With The Digital Command System Featuring: Passenger Station Proto-Effects™
- Unit Measures: 15 3/4" x 2 1/4" x 1 1/2"
- Operates On 22" Radius Curves

\*Patent Pending

**See a List of DCC Features on Page 11**



BNSF - 4-8-4 GS-4 Steam Engine  
80-3118-1 w/Proto-Sound 3.0 \$449.95  
Cab Number 4449



American Freedom Train - 4-8-4 GS-4 Steam Engine  
80-3119-1 w/Proto-Sound 3.0 \$449.95  
Cab Number 4449



# Matching Passenger Cars Page 16



Southern Pacific - 4-8-4 GS-4 Steam Engine  
80-3117-1 w/Proto-Sound 3.0 \$449.95  
Daylight - Small Tender Lettering, Cab Number 4449

**Quillable Whistle:** Using a DCS handheld controller (see page 20), you can "play" the GS-4's whistle like a real engineer.



Southern Pacific - 4-8-4 GS-4 Steam Engine  
80-3114-1 w/Proto-Sound 3.0 \$449.95  
Daylight - Small Tender Lettering, Cab Number 4453



Southern Pacific - 4-8-4 GS-4 Steam Engine  
80-3116-1 w/Proto-Sound 3.0 \$449.95  
Large Tender Lettering, Cab Number 4449



# 4-8-4 GS-6



The GS-6 was a first cousin to the more famous and colorful GS-4. Like most American railroads, the Southern Pacific needed extra motive power to handle the crush of traffic during World War II. But when the Espee tried to order more of its highly successful Golden States 4-8-4s, the War Production Board turned down the request, reasoning that streamlined passenger engines were an unnecessary extravagance in wartime. So the railroad revised its request to define "GS" as General Service and specified that the new engines would be used in both freight and passenger service, and this time the request was approved.

Lima Locomotive Works delivered 16 class GS-6 locomotives in 1943, painted plain black except for a sliver smokebox front, and devoid of the streamlined side skirting that had characterized earlier GS engines. The government, however, diverted 6 of the engines to the power-starved Western Pacific, where they served until 1953, when the WP became one of the first Western roads to fully dieselize. On the SP, the GS-6's worked alongside other GS Northerns, often pulling the San Joaquin Daylight as well as freight traffic and San Jose-San Francisco commuter trains. When the Western Pacific dieselized, its GS-6s came back to the SP as parts engines.

The first GS-6, No. 4460, hauled the final steam train on the Southern Pacific in 1958. Donated to the Museum of Transportation in St. Louis, it survives today, one of the only two remaining GS class locomotives.

**Quillable Whistle:** Using a DCS handheld controller (see page 20), you can "play" the GS-6's whistle like a real engineer.



Western Pacific - 4-8-4 GS-6 Steam Engine  
80-3120-1 w/Proto-Sound 3.0 \$449.95  
Cab Number 483

## Features

- Die-Cast Boiler and Tender Body
- Die-Cast Metal Chassis
- Authentic Paint Scheme & Cab Numbers
- RP-25 Metal Wheels Mounted On Metal Axles
- Constant Voltage Headlight
- Prototypical Rule 17 Lighting
- Detailed Truck Sides
- Detailed Cab Interior
- Powerful 5-Pole Precision Flywheel-Equipped Motor
- (2) Scale Kadee® Compatible Couplers
- Metal Handrails and Bell
- Metal Whistle
- Sprung Drive Wheels
- Synchronized Puffing ProtoSmoke™ System
- Locomotive Speed Control In Scale MPH Increments
- Detailed Tender Undercarriage
- Interchangeable Traction Tire-Equipped Drive Wheels
- Onboard DCC Receiver
- Operates On Code 70, 83, & 100 Track
- Wireless Drawbar
- Engineer and Fireman Figures
- Operating Marker Lights\*
- Proto-Sound® 3.0 With The Digital Command System Featuring: Passenger Station Proto-Effects™
- Unit Measures: 15 3/4" x 2 1/4" x 1 1/2"
- Operates On 22" Radius Curves

\*Patent Pending

## DCC Features

- (F0) Headlight on/off
- (F1) Bell on/off
- (F2) Whistle/Horn on/off
- (F3) Start-up/Shut-down
- (F4) PFA initiate and advance
- (F5) Cab Light on/off
- (F6) Engine Sounds on/off
- (F7) Volume low, med, high, off
- (F8) Smoke on/off
- (F9) Forward Signal Sound
- (F10) Reverse Signal Sound
- (F11) Coupler Slack Sound
- (F12) Crossing Signal
- (F13) Extended Start Up
- (F14) Extended Shut Down
- (F15) Labor Chuff
- (F16) Drift Chuff
- (F17) Smoke Volume low, med, high
- (F18) Single short whistle toot
- (F19) Coupler Close
- (F20) Feature Reset
- (F21) Idle Sequence 1
- (F22) Idle Sequence 2
- (F23) Idle Sequence 3
- (F24) Idle Sequence 4
- (F25) Brakes auto/off
- (F26) Cab Chatter auto/off
- (F27) Clickety-Clack auto/off
- (F28) Train Wreck



Southern Pacific - 4-8-4 GS-6 Steam Engine  
80-3122-1 w/Proto-Sound 3.0 \$449.95  
Black - Small Tender Lettering, Cab Number 4466



Southern Pacific - 4-8-4 GS-6 Steam Engine  
80-3121-1 w/Proto-Sound 3.0 \$449.95  
Black - Large Tender Lettering, Cab Number 4460



# SD70ACe Diesel



**Featuring Remotely  
Controlled Couplers: No Uncoupling Track Required**  
See Page 13

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.

Under the hood beats a third-generation model 710 diesel with 4300 horsepower; only slight modifications were needed to make the existing model 710 meet new emission standards. With 5000 such motors in service

worldwide and a reputation for dependability, EMD reasoned that shop crews would prefer familiar technology.

Other than the prime mover, however, 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.

New for 2008, M.T.H. introduces the SD70ACe as our first HO scale diesel, offered in a large variety of accurate paint schemes including the six-engine Union Pacific heritage fleet. Each one-of-a-kind heritage fleet locomotive honors a "fallen flag" railroad that is now part of the Union Pacific system. Our highly detailed model includes a broader range of features than you'll find on any other HO scale diesel, including flashing ditch lights; smooth performance from a three-scale-mile-per-hour crawl to



**NEW!** CSX - SD70ACe Diesel Engine  
80-2001-1 w/Proto-Sound 3.0 \$249.95  
Cab Numbers 4833, 4836 & 4839



**NEW!** Union Pacific - SD70ACe Diesel Engine  
80-2006-1 w/Proto-Sound 3.0 \$249.95  
Cab Number 8321



**NEW!** BNSF - SD70ACe Diesel Engine  
80-2003-1 w/Proto-Sound 3.0 \$249.95  
Cab Numbers 9371, 9370 & 9374



**NEW!** Kansas City Southern- SD70ACe Diesel Engine  
80-2002-1 w/Proto-Sound 3.0 \$249.95  
Cab Numbers 4030, 4031 & 4051



**NEW!** EMD Demonstrator - SD70ACe Diesel Engine  
80-2004-1 w/Proto-Sound 3.0 \$249.95  
Cab Numbers GM70, GM71 & GM73



**NEW!** Montana Rail Link- SD70ACe Diesel Engine  
80-2005-1 w/Proto-Sound 3.0 \$249.95  
Cab Numbers 4304, 4308 & 4311

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); and a full range of sounds recorded from a prototype Union Pacific SD70ACe. If you're looking for modern motive power that's accurately detailed (*our tooling can mold up to eight different variations*), smooth running, and a great deal of fun to operate, it doesn't get any better than this.

**Quillable Horn:** Using a DCS handheld controller (see page 20), you can "play" the SD70ACe's horn like a real engineer.

## Features

- Intricately Detailed ABS Body
- Authentic Paint Scheme & Cab Numbers
- Detailed Truck Sides, Pilots and Fuel Tank
- Die-Cast Metal Chassis
- Detachable Scale Snow Plow
- (2) Cab Figures
- Directionally Controlled Headlights
- RP-25 Metal Wheels Mounted On Metal Axles
- Powerful 5-Pole Precision Flywheel Equipped Motor
- Locomotive Speed Control in Scale MPH Increments
- Lighted Cab Interior
- Illuminated Number Boards

- Operating Ditch Lights
- (2) Scale Kadee®-Compatible Remotely Controlled Proto-Couplers™
- Onboard DCC Receiver
- Operates On Code 70, 83, & 100 Rail Curves
- Unit Measures: 10 9/16" x 1 7/16" x 2 3/16"
- Operates on 18" Radius Curves

### Remotely Controlled Couplers

Pick up or drop off a cut of cars or an entire train — anywhere on your layout — by opening the front or rear coupler remotely, using a DCC or DCS controller.

*Images Shown are O-Scale Models*

# SD70ACe UP Heritage Fleet



**Featuring Remotely  
Controlled Couplers: No Uncoupling Track Required**  
See Page 13

## DCC Features

- (F0) Headlight
- (F1) Bell
- (F2) Whistle/Horn
- (F3) Start Up/Shut Down
- (F4) Rear Coupler
- (F5) •(Front Coupler
- (F6) Engine Sounds On/Off
- (F7) Sound Volume
- (F8) Ditch Lights Auto/On/Off
- (F9) •(Forward Signal
- (F10) Reverse Signal
- (F11) Grade Crossing Signal
- (F12) Cab Light On/Off
- (F13) Extended Start Up
- (F14) Extended Shut Down
- (F15) Rev Up
- (F16) Rev Down
- (F17) Coupler Slack Sound
- (F18) Coupler Close
- (F19) One-Shot Doppler
- (F20) •(Feature Reset
- (F21) Idle Sequence 1
- (F22) Idle Sequence 2
- (F23) Idle Sequence 3
- (F24) Idle Sequence 4
- (F25) Brakes Auto/Off
- (F26) Cab Chatter Auto/Off
- (F27) Clickety-Clack Auto/Off
- (F28) Train Wreck







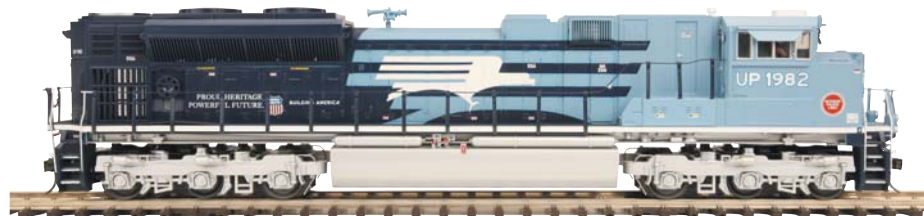
**NEW!** Western Pacific - SD70ACe Diesel Engine  
80-2008-1 w/Proto-Sound 3.0 \$249.95  
Cab Number 1983

**NEW!** Katy - SD70ACe Diesel Engine  
80-2009-1 w/Proto-Sound 3.0 \$249.95  
Cab Number 1988



**NEW!** Chicago NorthWestern- SD70ACe Diesel Engine  
80-2011-1 w/Proto-Sound 3.0 \$249.95  
Cab Number 1995

**NEW!** Denver & Rio Grande Western- SD70ACe Diesel Engine  
80-2010-1 w/Proto-Sound 3.0 \$249.95  
Cab Number 1989



**NEW!** Missouri Pacific - SD70ACe Diesel Engine  
80-2007-1 w/Proto-Sound 3.0 \$249.95  
Cab Number 1982



**NEW!** Southern Pacific - SD70ACe Diesel Engine  
80-2012-1 w/Proto-Sound 3.0 \$249.95  
Cab Number 1996

# Southern Pacific *Daylight* Passenger Cars



In 1941 the *Daylights* were re-equipped with new Pullman-Standard trainsets that included articulated cars with full-width diaphragms and no bulkheads between the cars — presenting passengers with spacious interiors up to 130 feet long, in the case

of the triple unit coffee shop-kitchen-diner. Wide windows allowed chair car passengers to take in the glorious Pacific Coast scenery, and a rooftop radio antenna brought in news reports and music. Few passengers would argue with the Southern

Pacific's claim that this was "the world's most beautiful train." New for 2008, M.T.H. offers authentic *Daylight* trainsets in the original Southern Pacific Lines livery or the later Southern Pacific livery that lasted well into the diesel era.





**Southern Pacific Lines**

Articulated Chair/Chair Passenger Car Set  
80-60010 \$134.95

**Southern Pacific Lines**

Articulated Chair/Chair Passenger Car Set  
80-60011 \$134.95

**Southern Pacific**

Articulated Chair/Chair Passenger Car Set  
80-60004 \$134.95

**Southern Pacific**

Articulated Chair/Chair Passenger Car Set  
80-60005 \$134.95



**Southern Pacific Lines**

Articulated Chair/Chair Passenger Car Set w/Antenna  
80-60008 \$134.95

**Southern Pacific Lines**

Articulated Chair/Chair Passenger Car Set w/Antenna  
80-60009 \$134.95

**Southern Pacific**

Articulated Chair/Chair Passenger Car Set w/Antenna  
80-60002 \$134.95

**Southern Pacific**

Articulated Chair/Chair Passenger Car Set w/Antenna  
80-60003 \$134.95

Each car individually numbered — see online for more numbering details.



**Southern Pacific Lines**

Chair Car  
80-60012 \$69.95

**Southern Pacific**

Chair Car  
80-60006 \$69.95

**Southern Pacific Lines - 8-Car Passenger Set**

80-60007 \$499.95

**Southern Pacific - 8-Car Passenger Set**

80-60001 \$499.95

**8-Car Sets Feature:**

- (1) Baggage
- (1) Coffee/Kitchen/Diner Articulated Set
- (1) Tavern Car
- (1) Parlor Car
- (1) Single Chair Car
- (1) Observation Car

## Features

- Durable ABS Intricately Detailed Bodies
- Metal Wheels and Axles
- Overhead Interior Lighting
- Die-Cast 4-Wheel Trucks
- Authentic Paint Scheme
- End-of-Car Diaphragms
- Separate Metal Handrails
- Detailed Car Interiors
- Detailed Car Undercarriage
- Each Car Measures Approximately:  
11 1/2" x 1 7/16" x 1 7/8"
- Operates On 22" Radius Curves

# Flat Cars

Between 1964 and 1975, Trailer Train (now known as TTX Co.) acquired a fleet of 5,000 modern 60' flat cars. Similar cars are rostered by most major U.S. railroads. Built by ACF, Thrall, and Pullman Standard, the TTX cars were assigned to various classes to handle loads as diverse as auto frames, logs, military vehicles, farm equipment, and construction equipment. Some were even modified to handle TTX's bread and butter, intermodal containers. Our model is based on the TTX class F60GH cars built in the mid-1970s by Pullman Standard. Equipped with four rows of tie-down tracks, two astride the center sill and one along each side, these wooden-decked cars are assigned to heavy-duty equipment service. Our model replicates the prototype's intricate details and is offered with several appropriate loads of heavy machinery.



**TTX**  
60' Wood Deck Flat Car w/163H Motor Grader  
80-98023 \$34.95

Also Available:  
60' Wood Deck Flat Car w/315C Hydraulic Excavator  
80-98031 \$34.95  
60' Wood Deck Flat Car w/950G Wheel Loader  
80-98015 \$34.95  
60' Wood Deck Flat Car  
80-98007 \$29.95



**Great Northern**  
60' Wood Deck Flat Car w/315C Hydraulic Excavator  
80-98028 \$34.95

Also Available:  
60' Wood Deck Flat Car w/163H Motor Grader  
80-98020 \$34.95  
60' Wood Deck Flat Car w/950G Wheel Loader  
80-98012 \$34.95  
60' Wood Deck Flat Car  
80-98004 \$29.95



**Burlington Northern**  
60' Wood Deck Flat Car  
80-98002 \$29.95

Also Available:  
60' Wood Deck Flat Car w/163H Motor Grader  
80-98018 \$34.95  
60' Wood Deck Flat Car w/315C Hydraulic Excavator  
80-98026 \$34.95  
60' Wood Deck Flat Car w/950G Wheel Loader  
80-98010 \$34.95



**BNSF**  
60' Wood Deck Flat Car w/950G Wheel Loader  
80-98009 \$34.95

Also Available:  
60' Wood Deck Flat Car w/163H Motor Grader  
80-98017 \$34.95  
60' Wood Deck Flat Car w/315C Hydraulic Excavator  
80-98025 \$34.95  
60' Wood Deck Flat Car  
80-98001 \$29.95

**Each Item Number is Available in SIX Different Road Numbers**



**Southern**  
 60' Wood Deck Flat Car  
 80-98006 \$29.95

Also Available:  
 60' Wood Deck Flat Car w/163H Motor Grader  
 80-98022 \$34.95  
 60' Wood Deck Flat Car w/315C Hydraulic Excavator  
 80-98030 \$34.95  
 60' Wood Deck Flat Car w/950G Wheel Loader  
 80-98014 \$34.95



**Canadian National**  
 60' Wood Deck Flat Car w/163H Motor Grader  
 80-98019 \$34.95

Also Available:  
 60' Wood Deck Flat Car w/315C Hydraulic Excavator  
 80-98027 \$34.95  
 60' Wood Deck Flat Car w/950G Wheel Loader  
 80-98011 \$34.95  
 60' Wood Deck Flat Car  
 80-98003 \$29.95

Each car is supplied with tie-down chains and load adjusters, which you can use to create a super-detailed load.



**Union Pacific**  
 60' Wood Deck Flat Car w/950G Wheel Loader  
 80-98016 \$34.95

Also Available:  
 60' Wood Deck Flat Car w/163H Motor Grader  
 80-98024 \$34.95  
 60' Wood Deck Flat Car w/315C Hydraulic Excavator  
 80-98032 \$34.95  
 60' Wood Deck Flat Car  
 80-98008 \$29.95



**Santa Fe**  
 60' Wood Deck Flat Car w/315C Hydraulic Excavator  
 80-98029 \$34.95

Also Available:  
 60' Wood Deck Flat Car w/163H Motor Grader  
 80-98021 \$34.95  
 60' Wood Deck Flat Car w/950G Wheel Loader  
 80-98013 \$34.95  
 60' Wood Deck Flat Car  
 80-98005 \$29.95

## Features

- Intricately Detailed Durable ABS Body
- Metal Wheels and Axles
- Fully Sprung Die-Cast Metal Trucks
- Decorative Brake Wheels
- Separate Metal Handrails
- 1:87 Scale Dimensions
- Simulated Wood Decking
- Kadee® Compatible Couplers
- Detailed Undercarriage
- Unit Measures: 8 7/8" x 1 1/2" x 3/4"
- Operates On 18" Radius Curves

# 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



## 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, even though controllers that access these NMRA standard functions are just now becoming available..

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:** depending on how long you blow the whistle, 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 4 or 11 for the complete list)

## DCS Commander

MTH's Digital Command System (DCS™) unlocks the full sound and operating potential of Proto-Sound 3.0. 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. In addition to the features available with DCC and analog DC, the DCS Commander unlocks a long list of Proto-Sound operating possibilities, 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, coupler slack, engine start-up and shut-down, engine labor and drift
- **Activate Passenger Station and Freight Yard Sounds**
- **Individual locomotive control:** control up to 99 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 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.

## Two Choices of DCS



DCS Commander Controller  
50-1028 \$149.95

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



DCS Remote Control System  
50-1001 \$299.95  
(requires separate power supply)

# More Features Than Analog DC or DCC Command Control

**SMOKE** - Turns Smoke Unit on & off  
**HDLT** - Turns Headlights on & off  
**ENGINE SOUND** - Silences Engine Sounds  
**DOPPLER** - Activates Proto-Doppler™  
**PFA** - Activates Passenger/Freight Sounds

**SFS** - Plays Forward Signal Sound  
**SRS** - Plays Reverse Signal Sound  
**VOL+** - Globally increases all sounds  
**START UP** - Activates sound, smoke & lights  
**VOL-** - Globally decreases all sounds  
**SHUT DOWN** - Deactivates all sound, smoke & lights

**CONV** - Activates Conventional Mode  
**DCS** - Activates Command Mode  
**MOM** - Adjusts Engine Momentum  
**ADD** - Adds PS 3 engines

LCD DISPLAY

**SCS** - Plays coupler slack sound  
**LIGHTS** - Turns loco lights on & off  
**ALL** - Selects all engines  
**STA MODE** - Selects Station Mode  
**STA SEL** - Activates Station Stop sounds  
**STW** - Plays Train Wreck sound

**EDIT**  
Edits engine addresses  
**DEL**  
Deletes engines  
**RESET**  
Resets PS 3 engines  
**PASS THRU**  
Sends DCC signals to track from DCC system\*\*

**AUX 1-3**  
Auxiliary buttons  
**CPLR-F/CPLR-R\***  
Fires front & rear couplers  
**BOOST/BRAKE**  
Temporarily raises or lowers speed  
**LABOR/REV UP OR DRIFT/REV DN**  
Makes an engine sound like it's working harder (labored steam chuff or higher revving diesel) or easier (drifting chuff or lower revving diesel)

**E STOP** - Cuts power to all tracks

**BELL** - Rings Bell

**ENG** - Engine Menu (To Select and Control Engines)

**SEL** - Selects or activates a setting

**THUMBWHEEL**  
Sets throttle speed & voltage setting

**W/H** - Whistle/Horn

**DIR** - Changes locomotive direction

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 99 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.

\* Operating couplers are available only on SD70ACe diesels at this time.

\*\* Customer supplied DCC system Required



# DCS...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.

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](http://www.mthH0trains.com)

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