

M.T.H. Electric Trains **2010 European Models**



O Gauge Trains That Do More

The Richest Set of Features in Model Railroading



Until now, European O gauge hobbyists have often had to choose between models that look realistic and models that run well. Now M.T.H. introduces accurate, highly detailed scale models that run superbly, have more features than any previous O gauge trains, and are offered at attractive prices. Our locomotives include:

DCC On Board

All M.T.H. locomotives are DCC equipped.* For operators with the newest DCC controllers, M.T.H. engines offer a full range of 28 DCC functions.

Compatibility with all AC and DC operating systems

M.T.H. locomotives are compatible with all common O gauge operating systems: analog AC or DC, DCC, and our own DCSTM Digital Command System. Your M.T.H. engine automatically senses what kind of power is on the rails. Just set it on the track and run it!

Proto-Scale 3-2™

M.T.H. engines are available with a choice of scale wheels or deeper-flanged hi-rail wheels. Our unique Proto-Scale 3-2 feature allows either version to operate on both 2-rail and 3-rail track; changeover is simple and takes just minutes. Engines with hi-rail wheels have blind (unflanged) center drivers to allow operation on smaller radius curves and switches.

Scale detailing

M.T.H. engines are accurately researched and as detailed as we can reasonably make them. Steam engines and our Crocodile electric feature die cast metal construction with many added-on metal details; our TRAXX electric is constructed of ABS plastic with added-on metal details and die-cast trucks and underframe. All are designed to deliver many years of smooth, dependable operation.



Extraordinary Slow Speed Capability

M.T.H. engines can throttle down as slow as three scale miles per hour, speed down the main line, and maintain any speed in between. With our DCS system, you can set engine speed in one-scale-mile-per-hour (smph) increments up to 120 smph.

Speed Control

The Proto-Speed Control™ built into every M.T.H. locomotive 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.

Choice of Couplers

M.T.H. locomotives are supplied with American-style remote-controlled knuckle couplers, Ace Trains-compatible couplers, and scale hook-and-chain couplers. Provisions are also made for mounting American Kadee® scale knuckle couplers.

** Except previously-released versions of the French Chapelon Pacific and British Duchess locomotives with hi-rail wheels only, which are not DCC-compliant and do not run on analog DC.*

Vivid Engine Sounds

Our Proto-Sound® system features digital recordings with CD-quality playback, with a full range of sounds including whistle or horn, steam locomotive chuff, electric engine cooling fans, squealing brakes, crew conversations, and much more. Passenger engines offer Passenger Station Proto-Effects™, a complete arrival and departure sequence that you can activate from an AC transformer or a DCC or DCS handheld. Freight engines include Freight Yard Proto-Effects, a symphony of freight terminal sounds.

Great Smoke

M.T.H. steam 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 a DCC or DCS handheld.

Who is M.T.H.?

While our name may be new to European model railroaders, M.T.H. Electric Trains is a seasoned American 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 to 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 over 14,000 different items in four scales: O gauge, One Gauge, HO gauge, and tinsplate 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.

Learn more about it at

www.mthtrains.com/europe

Duchess Class 4-6-2



In the years before World War II, Londoners had at least two ways to get to Scotland in style. From Kings Cross, one could speed up the East Coast main to Edinburgh on the LNER's *Flying Scotsman*, behind one of Nigel Gresley's handsome Pacifics — perhaps a streamlined A4 or maybe an older, apple-green A3. Or one could depart instead from Euston station on the LMS and fly northward to Glasgow on the *Coronation Scot* or the *Royal Scot* behind the most powerful steam locomotives in the land, William Stanier's Duchess Class (also known as Princess Coronation Class) 4-6-2's.

While the London, Midland & Scottish was the largest of England's four post-Grouping railways, its motive power department had been hobbled by internal rivalries, a legacy from the several railways that combined in 1923 to form the LMS. Locomotive designer William Stanier, with a direct line to the president of the railroad, was hired in 1932 to resolve those problems. He brought the LMS from an also-ran to a leader in British engine design. Stanier's crowning achievement was the four-cylinder Duchess Class Pacifics, built from 1937-1948 and renowned for their feats hoisting long rakes of carriages over Shap Summit, the most difficult climb on the West Coast main line. *Duchess of Abercorn* set an all-time record for British steam power when she recorded 3,300 horsepower in February 1939.

To Stanier's chagrin, the first examples of the class wore a streamlined shroud to match the *Coronation Scot* coaches they were designed to haul. Various descriptions as an upside-down bathtub or a sausage, the streamlining was omitted on later engines in the class — revealing muscular lines that looked particularly handsome in LMS crimson lake livery with gilt lining. In the British tradition, all of these passenger engines were named.

Relive the glory days of LMS and British Rail passenger service with our superbly detailed Duchess Class Pacific, complete with synchronized puffing smoke with a correct eight chuffs per driver revolution, arrival and departure announcements, and pulling power to match the prototype.

- 1:43.5 scale proportions
- 23 7/16" x 2 11/16" x 4 5/16" (595mm x 68mm x 110mm)
- Minimum curve:
 - O-54 with hi-rail wheels
 - 42" radius with scale wheels
- DCC-equipped (scale-wheeled versions only)



British Railways - Princess Coronation Duchess of Atholl Steam Engine
 20-3371-1 Hi-Rail Wheels \$1199.95
 20-3371-2 Scale Wheels \$1199.95



British Railways - Princess Coronation Duchess of Sutherland Steam Engine
 20-3370-1 Hi-Rail Wheels \$1199.95
 20-3370-2 Scale Wheels \$1199.95



London, Midland and Scottish Railway
 Princess Coronation Duchess of Buccleuch Steam Engine
 20-3367-1 Hi-Rail Wheels \$1199.95
 20-3367-2 Scale Wheels \$1199.95



London, Midland and Scottish Railway
 Princess Coronation Duchess of Montrose Steam Engine
 20-3368-1 Hi-Rail Wheels \$1199.95
 20-3368-2 Scale Wheels \$1199.95



British Railways - Princess Coronation Duchess of Abercorn Steam Engine
 20-3369-1 Hi-Rail Wheels \$1199.95
 20-3369-2 Scale Wheels \$1199.95

EST/SNCF Class 241A



The 2-4-1 axle arrangement represented the largest regular-production passenger locomotives ever to serve in France. The first of the type were 41 engines of class 241A, built starting in 1925 for the Chemins de Fer de l'Est, which ran due east from Paris to cities such as Nancy and Strasbourg.

Like most French express engines, the 241A was a four-cylinder de Glehn compound, and its *chauffeur* had five working possibilities: normal compounding; four-cylinder simple operation for starting (high-pressure boiler steam to all cylinders); compounding with some additional high-pressure steam to the low-pressure cylinders, for extra power on hills; and high-pressure steam to only the low-pressure or only the high-pressure cylinders, to limp home in case of mechanical failure. All of this was controlled by two throttles (one for each pair of cylinders), two reverse levers, and an intercepting valve to manage the flow of steam from high-pressure to low-pressure cylinders. In the 241A, an additional task was controlling the six-jet blast-pipe in the smokebox, which varied the firebox draft. In most countries, this design would have seemed horribly complex. But French *chauffeurs*, trained as *mécaniciens* (engine mechanics) rather than firemen as in other countries, prided themselves on the throttle artistry needed to achieve the wonderful performance that a de Glehn compound could deliver.

The original 241As worked well enough that 49 more were ordered for the Chemins de Fer de l'État (State Railways). A series of trials in 1933, however, showed the 241A was inferior to the smaller, famous Pacifics of the Paris-Orleans Railway, as rebuilt by André Chapelon, "the genius of French steam." As a result, the 241As — like several other classes of French steamers — were rebuilt along Chapelon lines, resulting in a 40% increase in horsepower with a 15% decrease in coal consumption. The rebuilt engines served the Est, État, and later the SNCF into the 1960s, and at least two are preserved. New for 2010, M.T.H. introduces our superdetailed model of this premier French steamer, as it appeared in Eras II and III after the Chapelon rebuild.

- 1:43.5 scale proportions
- 24 5/16" x 2 9/16" x 3 15/16"
(618mm x 65mm x 100mm)
- Minimum curve:
 - O-54 with hi-rail wheels
 - 54" radius with scale wheels
- DCC-equipped (all versions)



EST - EST Era II Class 241A Steam Engine (Gray)
 20-3402-1 Hi-Rail Wheels \$1195.95
 20-3402-2 Scale Wheels \$1195.95



SNCF - EST Era II Class 241A Steam Engine (1931 Black)
 20-3406-1 Hi-Rail Wheels \$1195.95
 20-3406-2 Scale Wheels \$1195.95



SNCF - EST Era II Class 241A Steam Engine (1945 Green/Black)
 20-3404-1 Hi-Rail Wheels \$1195.95
 20-3404-2 Scale Wheels \$1195.95

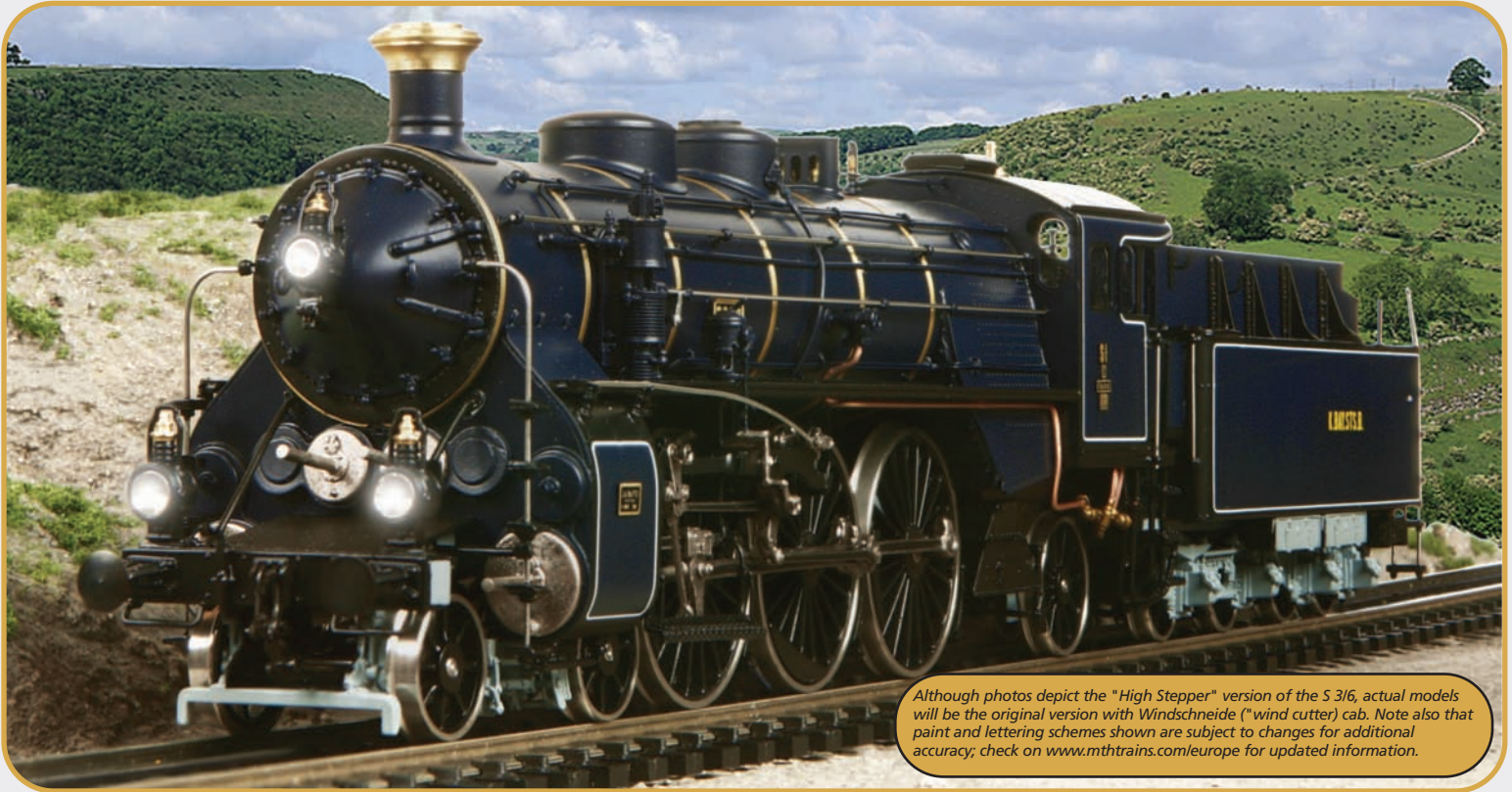


EST - EST Era II Class 241A Steam Engine (1932 Green/Black)
 20-3405-1 Hi-Rail Wheels \$1195.95
 20-3405-2 Scale Wheels \$1195.95



SNCF - EST Era II Class 241A Steam Engine (1936 Black)
 20-3403-1 Hi-Rail Wheels \$1195.95
 20-3403-2 Scale Wheels \$1195.95

Bavarian Class S 3/6



Although photos depict the "High Stepper" version of the S 3/6, actual models will be the original version with Windschneide ("wind cutter") cab. Note also that paint and lettering schemes shown are subject to changes for additional accuracy; check on www.mthtrains.com/europe for updated information.



KBayStsB - Bavarian S 3/6 Express Steam Locomotive (Era I; Green with Red Wheels)

20-3399-1 Hi-Rail Wheels \$1195.95
20-3399-2 Scale Wheels \$1195.95



KBayStsB - Bavarian S 3/6 Express Steam Locomotive (Era I; Green with Black Wheels)

20-3400-1 Hi-Rail Wheels \$1195.95
20-3400-2 Scale Wheels \$1195.95



DR - Deutsche Reichsbahn Class 18.4 Steam Locomotive (Era II; Black with Red Wheels)

20-3401-1 Hi-Rail Wheels \$1195.95
20-3401-2 Scale Wheels \$1195.95



KBayStsB - Bavarian S 3/6 Express Steam Locomotive (Era I; Blue with Black Wheels)

20-3398-1 Hi-Rail Wheels \$1195.95
20-3398-2 Scale Wheels \$1195.95

Although Germany became a nation in 1871, it would be another 50 years before the 11 provincial railroads were nationalized into the German Imperial Railway Company (DRG). In the meantime, each road continued to develop its own locomotive designs. Among the best was the Class S 3/6 of the Royal Bavarian State Railways (*K. Bay. Sts. B.*)

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 styling talent of that firm's chief designer, Heinrich Leppla. The tapered *Windschneide* ("wind cutter") cab and conical smokebox front of the S 3/6 were complemented by a handsome holly green, black, and yellow paint scheme. Two inboard high pressure cylinders and two outboard low pressure cylinders drove the center axle. Seventy-four-inch drivers were fitted to conquer Bavaria's mountainous terrain, although a small group of engines was also built with 79" drivers for 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 18.4 and 18.5. Although the DR was developing 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 a benefit, 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*.

- 1:43.5 scale proportions
- Minimum curve:
 - 54" with hi-rail wheels
 - 54" radius with scale wheels
- 20 7/8" x 2 3/4" x 4 1/4" (530mm x 71mm x 107mm)
- DCC-equipped (all versions)

Swiss Crocodile Electric



- 1:45 scale proportions
- 16 1/2" x 2 1/2" x 3 3/4"
(419mm x 64mm x 95mm)
- Minimum curve:

- O-72 with hi-rail wheels
54" radius with scale wheels
- DCC-equipped (all versions)

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



Brown - Swiss Crocodile Electric w/Proto Sound 2.0

| | | |
|-----------|----------------|----------|
| 20-5637-1 | Hi-Rail Wheels | \$899.95 |
| 20-5637-2 | Scale Wheels | \$899.95 |

To conquer the Gotthard's tight turns and steep grades, Swiss Locomotive and Machine Works (SLM) designed a freight locomotive in three articulated sections: a double-ended center section housing two engineer's stations, twin pantographs, and the huge high voltage transformer; and two end sections, each with two electric motors powering a single jackshaft that transmitted power to the 53" drivers, using steam-locomotive-type drive rods. The jackshaft drive was dictated by the motors available at the time, which were too large to be truck-mounted as in later designs. The nickname "crocodile" arose from the engine's long articulated "snouts."



Dark Green - Swiss Crocodile Electric w/Proto Sound 2.0

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|-----------|----------------|----------|
| 20-5638-1 | Hi-Rail Wheels | \$899.95 |
| 20-5638-2 | Scale Wheels | \$899.95 |

All crocodiles were delivered in brown paint, but many were later repainted green. The hugely successful Crocodiles ruled the Gotthard route into the 1950s, when they were displaced by newer power. Many worked into the 1970s on less strenuous routes and switching, and several have been preserved.

TRAXX Electric



Since the dawn of the Orient Express in 1883, Europeans have dreamed of a rail network that would transcend national borders. For more than a century, the best that could be accomplished was the handoff of passenger or freight consists from one national rail system to another, usually stopping at the border to change motive power. Today, however, all that is changing. Sporting service names like "EuroCity" and slogans like "Connecting Europe," electric engines glide seamlessly and swiftly across borders, and carriers offer freight and passenger services that span many nations.

With locomotive and car manufacturing facilities on four continents, Bombardier has emerged as a leader in the manufacture of equipment for these multinational carriers. Starting with electric locomotive technology developed by German firm Adtranz, which Bombardier acquired in 2001, Bombardier developed the TRAXX family of electric and diesel locomotives for service across Europe. TRAXX electrics feature modular construction and can be configured to run on multiple voltages and both AC and DC. Leading purchasers have included Cargo, the freight division of the Swiss Federal Railways that runs through Germany, Switzerland, and Italy, and Railion, which spans Denmark, the Netherlands, Germany, Switzerland, and Italy.

The TRAXX electric offers a near-perfect combination of speed, safety, and practicality. Its streamlined shape is designed for aerodynamics but also for economical construction, being composed almost entirely of flat surfaces. The ends are raked at an angle that slices through the air — but a steeper, more streamlined angle was avoided in order to minimize air turbulence between the engine and the following car. With up to 800 horsepower supplied to each of its eight wheels, wheelslip control on the TRAXX was mandatory. The controls, of course, are fully computerized with myriad safety systems. New for 2010, our superbly detailed TRAXX model features twin motors to replicate the massive power of the prototype, and pantographs that can be configured to pick up power from overhead catenary.

- 1:45 scale proportions
- 16 3/16" x 2 1/2" x 4 5/16"
(411mm x 64mm x 110mm)

- Minimum curve:
O-42 with hi-rail wheels
42" radius with scale wheels
- DCC-equipped (all versions)



SBB Cargo Switzerland - TRAXX F140 AC Electric Engine

| | | |
|-----------|----------------|----------|
| 20-5632-1 | Hi-Rail Wheels | \$449.95 |
| 20-5632-2 | Scale Wheels | \$499.95 |
| 20-5632-3 | Non-Powered | \$219.95 |



Veolia Transport Germany - TRAXX P160 AC2 Electric Engine

| | | |
|-----------|----------------|----------|
| 20-5633-1 | Hi-Rail Wheels | \$449.95 |
| 20-5633-2 | Scale Wheels | \$499.95 |



DEMO - TRAXX F140 AC2 Electric Engine

| | | |
|-----------|----------------|----------|
| 20-2937-1 | Hi-Rail Wheels | \$449.95 |
| 20-2937-1 | Scale Wheels | \$499.95 |



Railion European- TRAXX F140 AC2 Electric Engine

| | | |
|-----------|----------------|----------|
| 20-5634-1 | Hi-Rail Wheels | \$449.95 |
| 20-5634-2 | Scale Wheels | \$499.95 |
| 20-5634-3 | Non-Powered | \$219.95 |



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Coming in 2010

Scale-Detailed Passenger Stock



Our initial European passenger offerings will include a Compagnie Internationale des Wagons-Lits Orient Express train appropriate for both our Chapelon Pacific and DR Class S 3/6 locomotives, as well as rakes of LMS Standard Period III stock as pulled by the LMS and British Rail Duchesses. Features will include

- Full 1:43.5 scale dimensions
- Accurate detailing and paint schemes
- ABS Plastic construction with die-cast trucks
- Sprung buffers
- Interiors with overhead LED lighting