
märklin
HO
C
2007
1988/89 E

Gebr. Märklin & Cie. GmbH
Postfach 8 60 / 8 80
D-7320 Göppingen
Federal Republic of Germany

Direct selling from factory to private individuals is not possible. We reserve the right to make changes and availability is not guaranteed. Dimensions shown for reference only. This catalog supercedes all previous issues.

Model Size H0
Gauge 16.5 mm (5/8")
Scale 1 : 87

Title:
The Württemberg C with open platform cars, photographed on the PREISER Company's layout scene "Göppingen Station around 1910".

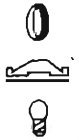
Contents and Symbols

Special model features and passages of text are denoted by the following symbols:

This model is equipped at the factory with close couplers and guide mechanisms.

This model is equipped with the standard propulsion system and a Digital decoder.

This model is equipped with the new electronically controlled propulsion system.



Traction Tires
Pickup Shoes
Light Bulbs

New Item 1988

Information

New Propulsion System

The new generation of Märklin H0 3500 series locomotives is equipped with an advanced high-efficiency motor and integrated control electronics which monitor the entire propulsion system. This permits the locomotives to achieve outstanding operating characteristics. The new five star propulsion system fulfills the critical demands of model railroad specialists.

All conventional Märklin H0 locomotives with the drum-style commutator motor can be converted with the 7180 kit to the new five star propulsion system.

As the conversion of locomotives requires a certain amount of experience, it is recommended that this work be done by trained dealers. Conversions done by these dealers will be given a one year guarantee on the motor and the electronic circuit.

★★★★★ The five-pole, high-efficiency motor provides very high torque over the entire speed range and has considerable power reserves at its disposal. It runs with absolute quietness and smoothness even at slow speeds and with a load.

Digital

Märklin Digital is an electronic control system for model railroads using the most modern micro-processor technology. With Märklin Digital up to 80 locomotives and 256 turnouts or signals can be controlled and switched with a minimum of wiring on model railroads with equipment of different gauges, systems and makes.

The components deliver power and information to the track, control locomotives and functions, switch turnouts, signals or uncoupler tracks individually, control entire routes and create the link to conventional track diagram control boards or to a computer.

Märklin Digital locomotives also operate on conventional layouts, of course. There are many Digital locomotives in H0, Z and 1 in the programs for those who want to operate digitally right from the start. This is why conventional layouts can be converted to Digital gradually in steps or all at once.

Close Coupler

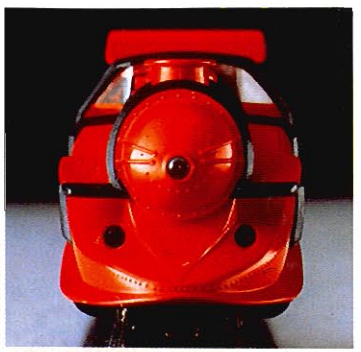
Märklin fulfills the wish of many model railroad specialists for esthetically perfect transitions between cars and locomotives with the new Märklin H0 close coupler. Of course, there is no problem in using the new Märklin H0 close coupler with all previous coupler designs on Märklin H0 models.

Märklin H0 models with close couplers and guide mechanisms can be coupled prototypically close together. The kinetics integrated into the car bottoms control the couplers' lateral play automatically according to the path of the track. This guide mechanism is a prerequisite for reliable operation.

The special Märklin close coupler head offers other advantages for demanding model railroad operation. It produces the rigid linkage of the coupler drawbars necessary for close coupled operation. Coupling takes place very smoothly and without jolting impacts during switching.

ALPHA

ALPHA – this is the adventure railroad, the new world of play from Märklin for girls and boys ages 4 to 8, with the same scale and system as Märklin H0 model railroads.



ALPHA – playing is everything: the bright red "F-1" locomotive, multifunction cars, track and turnouts from the new "2000" track system, the funny backgrounds for a round-the-world trip and the safe rechargeable transformer, free from electrical plugs. Everything is packed in sturdy adventure cases which can be turned into stations, locomotive sheds, tunnels, grade crossings, loading ramps and much more.

★★★★★ To a large extent the control electronics compensate for the effects of changing loads on the operating characteristics. The speed always remains in the desired range on ascending and descending grades, sharp curves or in concentrated areas of turnouts, with heavy trains or when pushing cars.

★★★★★ The desired maximum speed for any locomotive can be adjusted infinitely according to the type of locomotive and its planned use. The range of adjustment includes the exact prototypical scale speed as well as the usual speed for toy trains.

★★★★★ The specially adjusted control for slow speed running allows the locomotive to start up smoothly from a standing position and to accelerate prototypically up to the desired speed. Extreme slow running or switching maneuvers are thereby possible.

★★★★★ The control for tractive effort consistently adjusts the propulsion system's power output to the operating situation. This keeps the locomotive's powered wheels from slipping as it approaches maximum load. The locomotive's maximum tractive effort is increased considerably. Moreover, the motor and electronics are safeguarded against overloads.

New and older conventional Märklin locomotives in H0 and 1 scales can be converted to Digital at any time.

Special locomotive decoders are available when operating with Märklin Digital on other systems or makes of equipment.

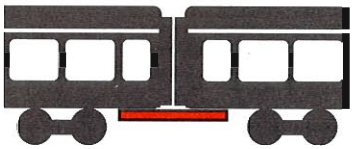
All Digital decoders are guaranteed only when they are installed by trained specialists at an authorized dealer, provided there is sufficient space in the locomotive or that space can be created. Of course, the models must be in working order when brought in for conversion.

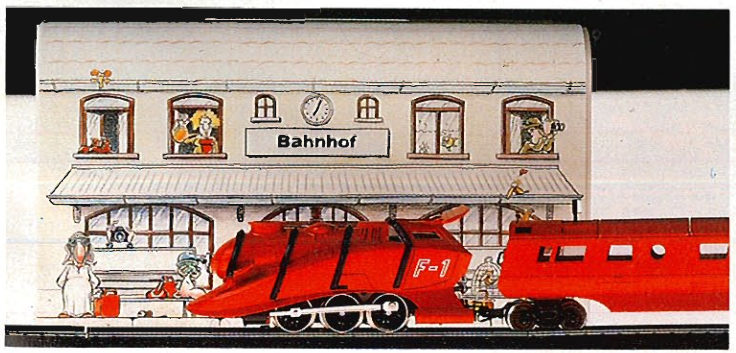
There are different solenoid accessory modules for switching turnouts, signals, uncoupler tracks, transfer tables, turntables or other model railroad accessories. They are designed to meet different requirements and work on different systems.

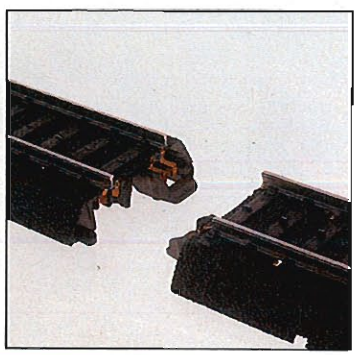
The connection is also functionally reliable in extreme operating situations. The close couplers can be separated with the normal uncoupler tracks. The reliable preuncoupler allows uncoupled cars to be pushed further down the track as desired.

The additional advantages of the Märklin close coupler can also be used – with partially reduced car spacing – on many Märklin cars and locomotives without the guide mechanism. The 7205 coupler head can be exchanged with existing couplers.

All new express passenger cars will be equipped from the outset with close couplers and guide mechanisms.





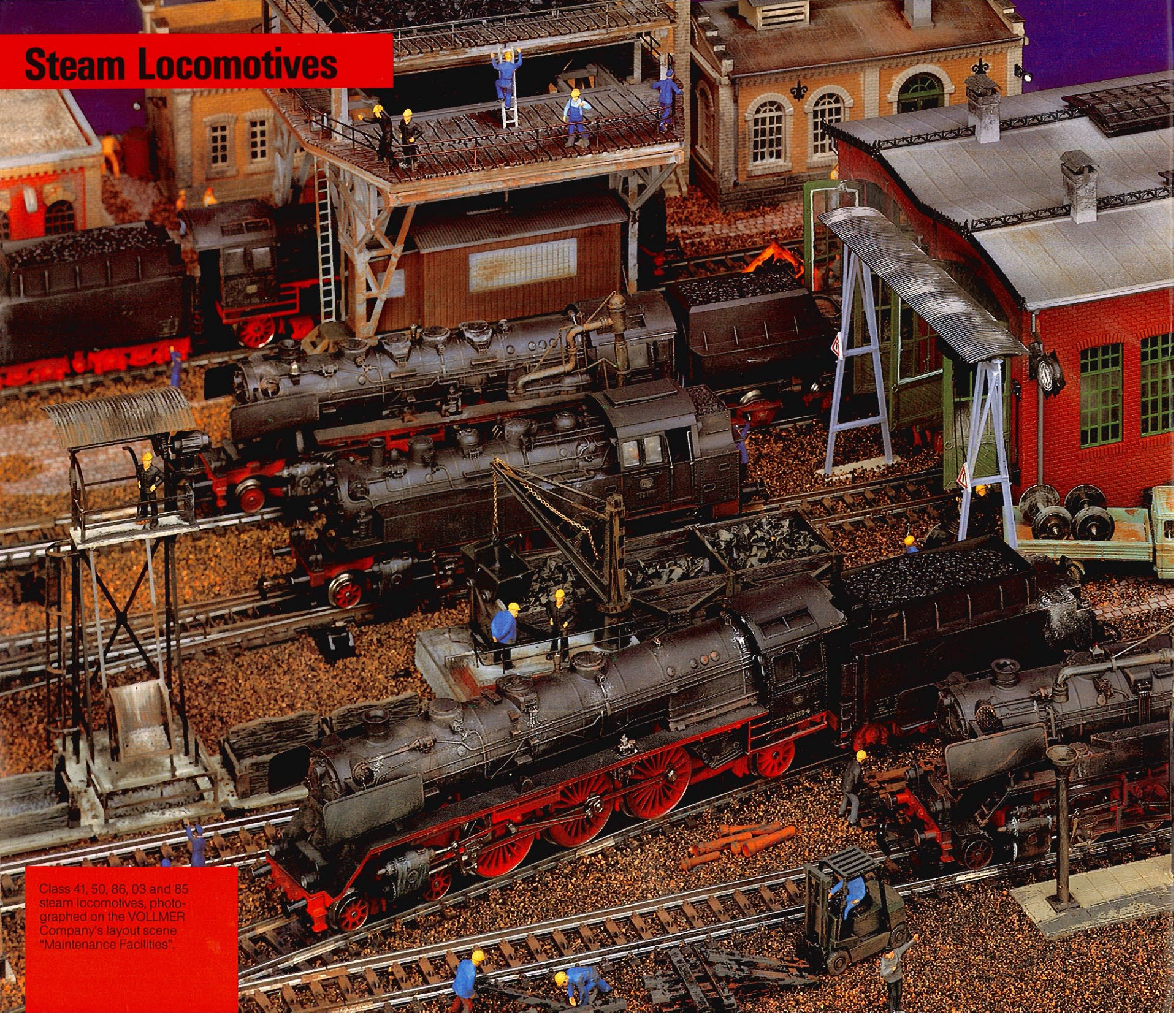


ALPHA was developed in cooperation with children.

ALPHA encourages creativity and a wealth of imagination in children with its limitless possibilities for play and transformation.

ALPHA – at Märklin imagination is given free rein.

Steam Locomotives

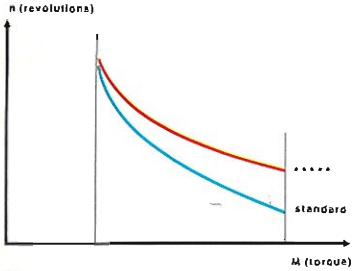


Class 41, 50, 86, 03 and 85 steam locomotives, photographed on the VOLLMER Company's layout scene "Maintenance Facilities".

3518 · ★★★★★

3618 · Digital

N



★★★★★

The New Motor

The "Rheingold" Locomotive

The famous class 18⁴ express locomotive comes in the refined State Railroad version **3518** with new propulsion technology and refined detailing. It is a reproduction of one of the less common locomotives that was used with the legendary "Rheingold" luxury train. The appropriate salon cars are available as the complete set **4228**.

3518 · ★★★★★ · Express Locomotive with Tender · Class 18⁴ of the former German State Railroad (DR) · 3 axles powered by side rods · 2 traction tires · Five-pole high-efficiency motor · Electronically controlled propulsion system · Adjustable maximum speed · Adjustable acceleration rate · Electronic direction reversing · Illuminated double headlight at the front of the locomotive and on the rear of the tender, changes with the direction of travel · Metal body and frame · Standard coupler pocket with close coupler head on the tender · Length 24.9 cm (9-3/4") · Equipped for installation of smoke unit (Seuthe no. 20)

○ = 7152 ⌓ = 7185 ♀ = 60008

3318 · Express Locomotive with Tender · Same as 3518, but with standard propulsion system without electronic control, adjustable maximum speed and acceleration rate

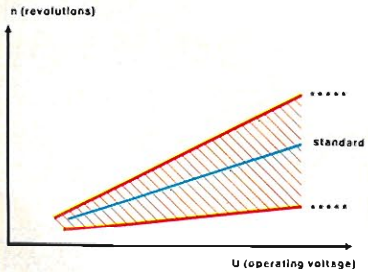
3618 · Digital · Express Locomotive with Tender · Same as 3318 · Headlights as a digitally controlled auxiliary function

Digital locomotives can also be used on conventional layouts.

3511 · ★★★★★

3611 · Digital

N



★★★★★

Preselecting the Speed

The new class

The "Beautiful Lady of Württemberg in a scale of 1:87 is the proud result of an ambitious development · Using the most modern technologies, scale fidelity and function were united in an unparalleled level of quality · The **3511** is a first class model which meets all demands and sets a new standard for the mass production of model trains.

3511 · ★★★★★ · Express Locomotive with Tender · Class C no. 2007 of the Royal Württemberg State Railways (K.W.St.E.) · 3 axles powered by side rods · 2 traction tires · High reduction, non-locking miter gear drive · Märklin high-performance Faulhaber-type motor · Electronically controlled propulsion system · Adjustable maximum speed · Prototypical acceleration rate · Electronic direction reversing · Triple headlight at the front of the locomotive and double headlight on the rear of the tender, changes over with the direction of travel · Maintenance-free LED's for illumination · Metal frame, body and tender · Permanent close coupling between locomotive and tender · Automatic close coupler on rear of tender · Length over buffers 23.7 cm (9-5/16")

○ = 7152 ⌓ = 28251

3311 · Express Locomotive with Tender · Same as 3511, but with special gearing without electronic control, adjustable maximum speed and acceleration rate

3611 · Digital · Express Locomotive with Tender · Same as 3311 · Headlights as a digitally controlled auxiliary function

Digital locomotives can also be used on conventional layouts.

Steam Locomotives

3000 · Tank Locomotive · Class 89 · 3 axles powered · 2 traction tires · Illuminated triple headlight · Metal frame · Coupler hooks · Length over buffers 11 cm (4-15/16")

◐ = 7154 ⌓ = 7185 ♀ = 60010

3087 · Tank Locomotive · Based on a German provincial prototype · 1 axle powered · 2 traction tires · Metal frame · Coupler hooks · Length over buffers 10.8 cm (4-1/4")

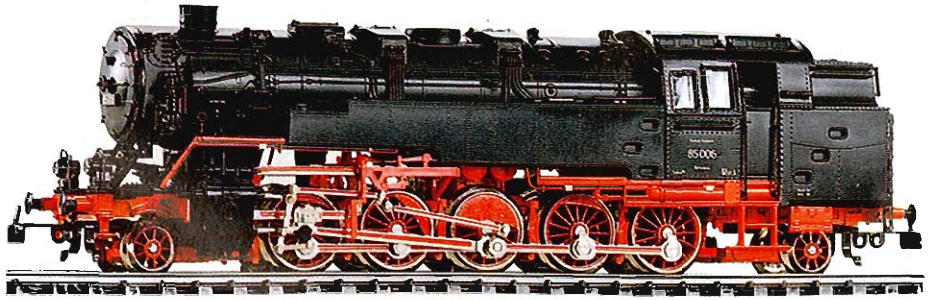
◐ = 7154 ⌓ = 7185

3095 · Tank Locomotive · German Federal Railroad class 74 · 3 axles powered · 2 traction tires · Illuminated triple headlight · Metal frame · Coupler hook with preuncoupler on front, RELEX coupler on rear · Length over buffers 13.5 cm (5-5/16")

◐ = 7153 ⌓ = 7185 ♀ = 60010

3308 · Tank Locomotive · Former German State Railroad class 85 · 5 axles powered · 4 traction tires · Illuminated dual headlight at both ends · Metal boiler and frame · Driving wheels divided into two coupled groups enabling the locomotive to negotiate sharp curves · Coupler hooks · Electronic reverse unit · Length over buffers 18.6 cm (7-15/16") · Equipped for installation of smoke unit 7226

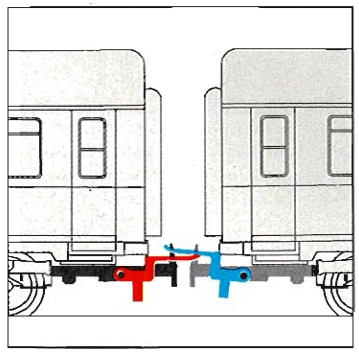
◐ = 7153 ⌓ = 7164 ♀ = 60010



Couplers in the Märklin HO System

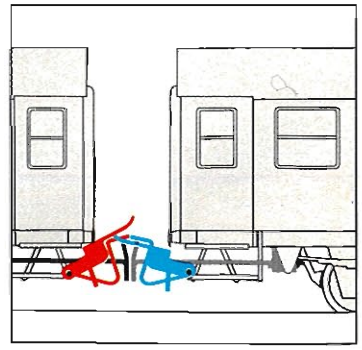
Automatic Coupler

The automatic couplers engage by themselves when locomotives and cars meet and can be uncoupled by remote control using the uncoupler track. The design of the Märklin coupler has been accepted as the European model railroad norm (NEM 360).



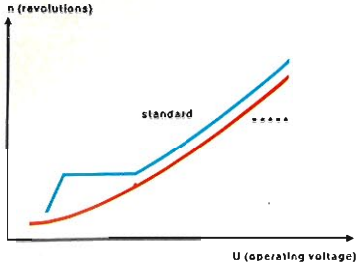
RELEX Coupler

Locomotives and cars with RELEX couplers can be preuncoupled over the uncoupler track and pushed further on to a siding or hump track.



3504 · ★★★★★

3604 · Digital



★★★★★
Controlled Slow Speed Running

Prototypical Switching

The new class 80 in the **3504** version is just ideal for realistic operations in a model switch yard. The electronically controlled propulsion system offers all of the conditions for millimeter precise switching, prototypically slow operating and delicate releases on the hump track.

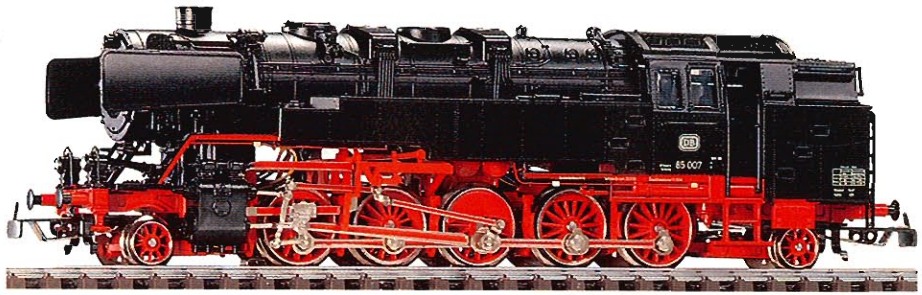
3504 · ★★★★★ · Tank Locomotive · German Federal Railroad class 80 · 3 axles powered · 2 traction tires · Five-pole high efficiency motor · Electronically controlled propulsion system · Adjustable maximum speed · Adjustable acceleration rate · Electronic direction reversing · Illuminated triple headlight, changes over with the direction of travel · Metal body and frame · Automatic close couplers · Length over buffers 11.1 cm (4-3/8")

7154 · 20182 · 60008

3304 · Tank Locomotive · Same as 3504, but with standard propulsion system without electronic control, adjustable maximum speed and acceleration rate

3604 · Digital · Tank Locomotive · Same as 3304 · Headlights as digitally controlled auxiliary function

Digital locomotives can also be used on conventional layouts.

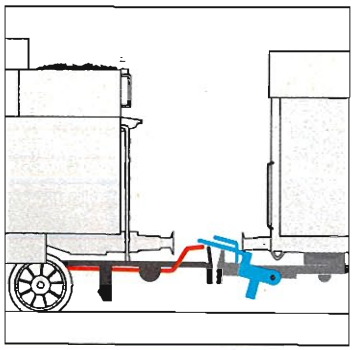


3309 · Tank Locomotive with TELEX Couplers · German Federal Railroad class 85 · 5 axles powered · 4 traction tires · Illuminated triple headlight at each end · Metal boiler and frame · Driving wheels divided into two coupled groups enabling the locomotive to negotiate sharp curves · Electronic reverse unit · Length over buffers 18.6 cm (7-5/16") · Equipped for installation of smoke unit 7226

7153 · 7164 · 60010

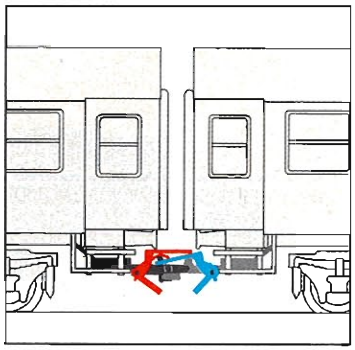
TELEX Coupler

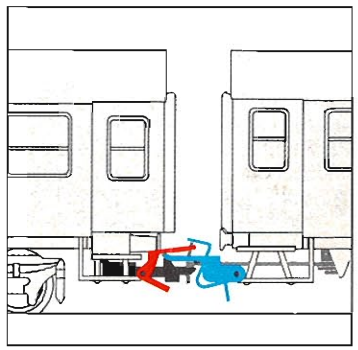
Locomotives with TELEX couplers can be uncoupled from their cars by remote control at any spot on the layout.



Close Coupler

Locomotives and cars with close couplers can be coupled together with a prototypical spacing. The Märklin close coupler couples with very little effort and can be preuncoupled. It can be used with all other Märklin system couplers (compatible with NEM 360).



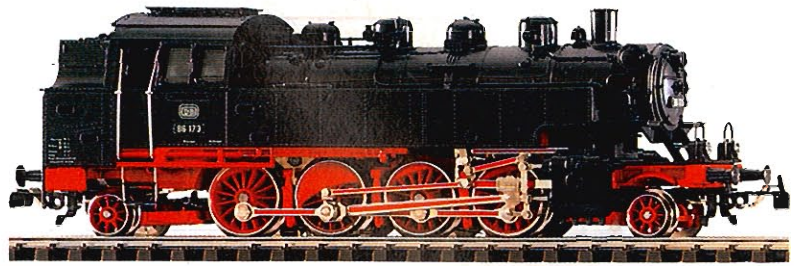


Steam Locomotives

3096 · Tank Locomotive with TELEX Couplers · German Federal Railroad class 86 · 4 axles powered by side rods · 2 traction tires · Illuminated triple headlight at each end · Metal frame · Length over buffers 15.8 cm (6-5/8")

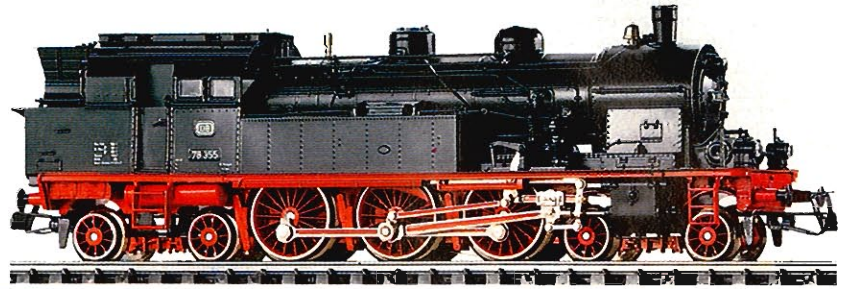
⓪ = 7153 ⌓ = 7164 ♀ = 60015

3696 · Digital



3106 · Tank Locomotive · German Federal Railroad class 78 · 3 axles powered · 2 traction tires · Illuminated triple headlight at both ends · Metal boiler and frame · Coupler hooks · Length over buffers 16.9 cm (6-5/8")

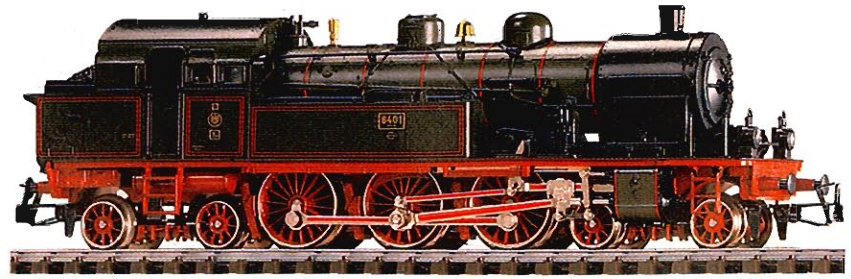
⓪ = 7153 ⌓ = 7164 ♀ = 60015



3109 · Tank Locomotive · Royal Prussian Railroad Administration (KPEV) class T 18 · 3 axles powered · 2 traction tires · Illuminated dual headlight at both ends · Metal boiler and frame · Coupler hooks · Length over buffers 16.9 cm (6-5/8")

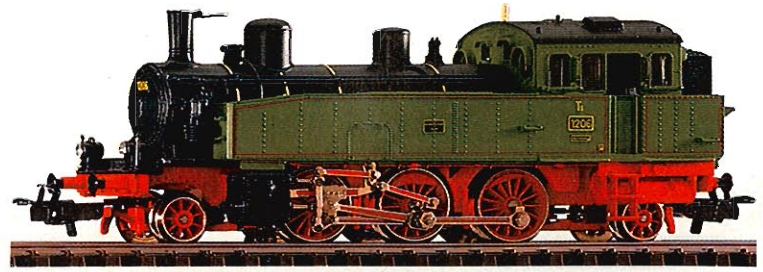
⓪ = 7153 ⌓ = 7164 ♀ = 60015

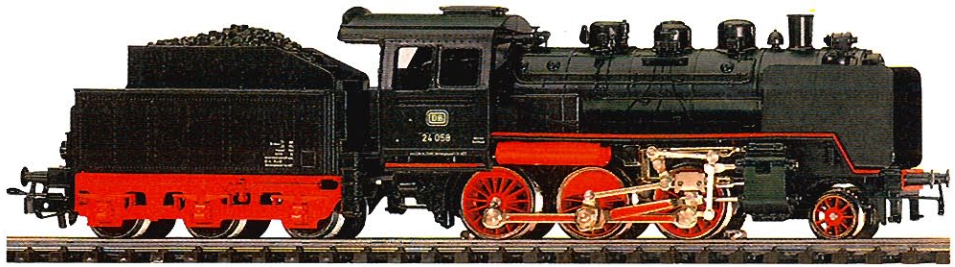
3609 · Digital



3312 · Tank Locomotive · Royal Württemberg State Railways (K.W.St.E.) class T 5, No. 1206 · 3 axles powered · 2 traction tires · Illuminated dual headlight at each end · Moveable smokestack lid · Metal boiler and frame · RELEX couplers · Electronic reverse unit · Length over buffers 14 cm (5-1/2")

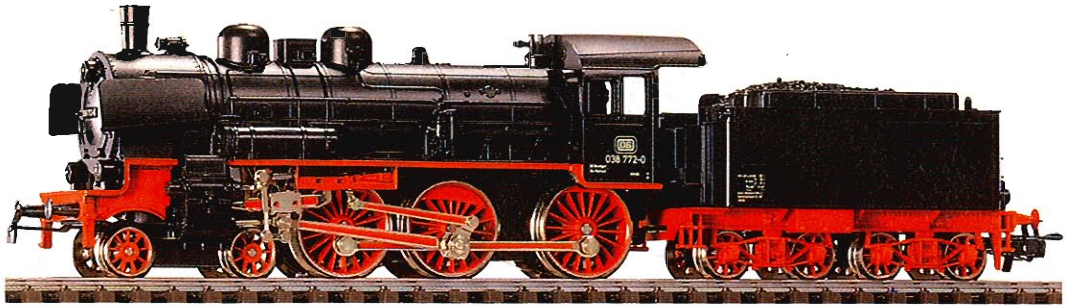
⓪ = 7153 ⌓ = 7185 ♀ = 60019





3003 · Locomotive with Tender · German Federal Railroad class 24 · 3 axles powered · 2 traction tires · Illuminated triple headlight · Metal frame · Coupler hook on front, RELEX coupler on tender · Length over buffers 20 cm (7-7/8")

⓪=7153 =7185 =60010

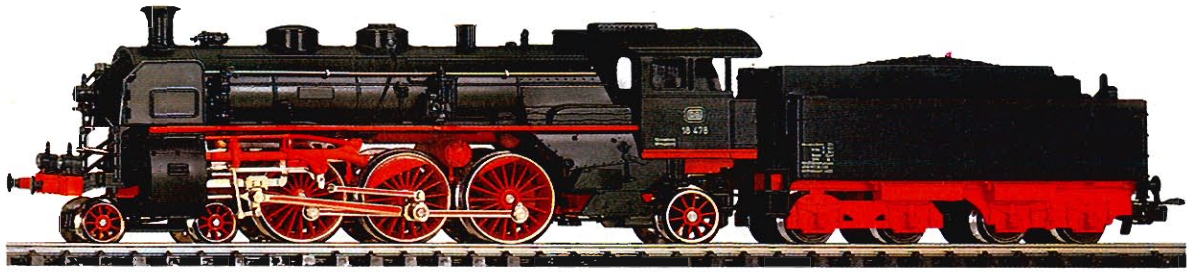


3099 · Locomotive with Tender · German Federal Railroad class 038 · 3 axles powered · 2 traction tires · Illuminated triple headlight · Metal body and frame · Engineer and fireman figures · Coupling hook on front, RELEX coupler on tender · Length over buffers 21.8 cm (8-9/16")

⓪=7152 =7185 =60015

3092 · Express Locomotive with Tender · Royal Bavarian State Railroad (K.BAY.STS.B.) class S 3/6, series i · 3 axles powered by side rods · 2 traction tires · Illuminated triple headlight · Metal body and frame · RELEX coupler on tender · Length over buffers 24.9 cm (9-13/16") · Equipped for installation of smoke unit (Seuthe No. 20)

⓪=7152 =7185 =60015



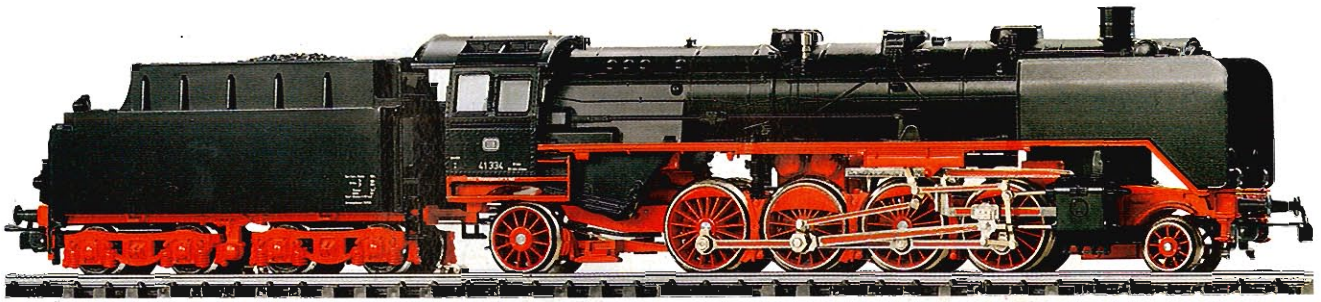
3093 · Express Locomotive with Tender · German Federal Railroad class 18⁴ (former S 3/6) · 3 axles powered by side rods · 2 traction tires · Illuminated triple headlight · Metal body and frame · RELEX coupler on tender · Length over buffers 24.9 cm (9-13/16") · Equipped for installation of smoke unit (Seuthe No. 20)

⓪=7152 =7185 =60015

Steam Locomotives

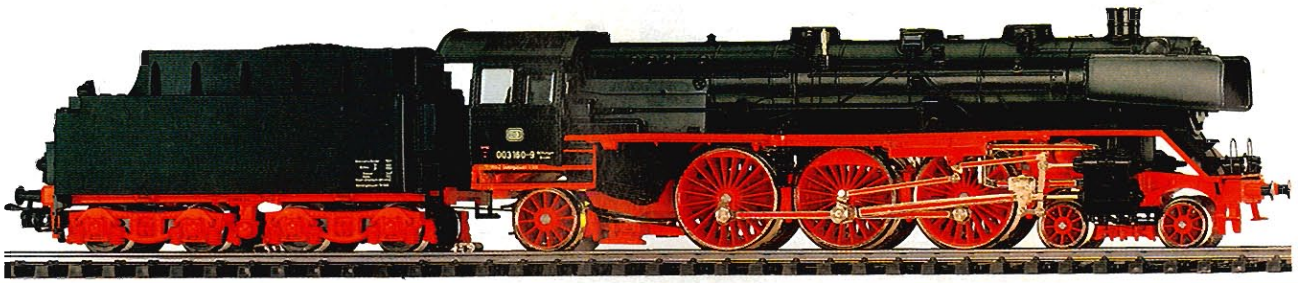
3082 · Freight Locomotive with Tender · German Federal Railroad class 41 · 4 axles powered · 2 traction tires · Illuminated triple headlight · Metal boiler and frame · Coupling hook in front, RELEX coupler on tender · Length over buffers 27.5 cm (10-13/16") · Equipped for installation of smoke unit 7226

⓪=7153 =7164 =60015



3085 · Express Locomotive with Tender · German Federal Railroad class 003 · 3 axles powered · 2 traction tires · Illuminated triple headlight · Metal boiler and frame · RELEX coupler on tender · Length over buffers 27.7 cm (10-7/8") · Equipped for installation of smoke unit 7226

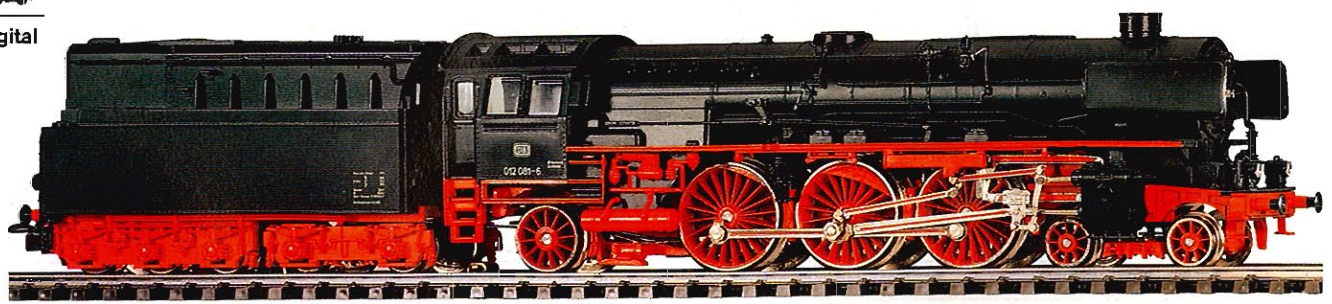
⓪=7152 =7164 =60010



3310 · Express Locomotive with Tender · German Federal Railroad class 012 · 3 axles powered · 2 traction tires · Illuminated triple headlight at front of locomotive and rear of tender · Metal boiler and frame · RELEX coupler on tender · Electronic reverse unit · Length over buffers 27.8 cm (10-15/16") · Equipped for installation of smoke unit 7226

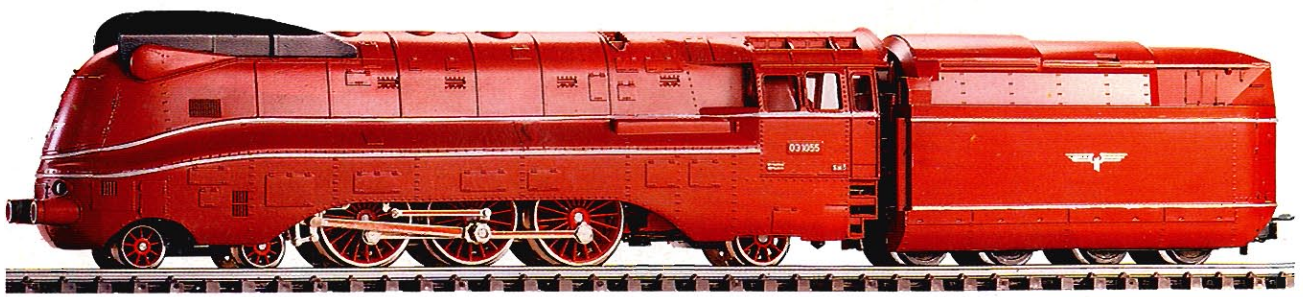
⓪=7152 =7164 =60010

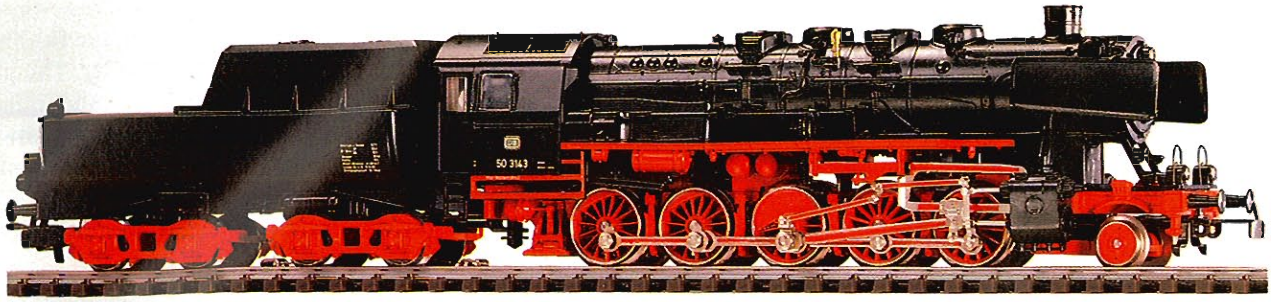
3610 · Digital



3089 · Streamlined Locomotive with Tender · Class 03[10] · 3 axles powered by side rods · 2 traction tires · Illuminated double headlight · Metal body and frame · RELEX coupler on tender · Length over buffers 27.4 cm (10-3/4")

⓪=7152 =7185 =60015

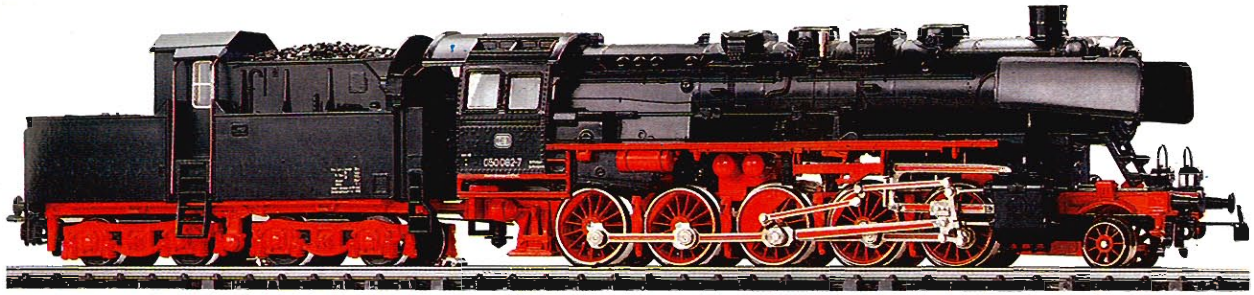




3615 · Digital

3315 · Freight Locomotive with Tub-style Tender · German Federal Railroad class 50 · 5 axles powered · 4 traction tires · Illuminated triple headlight · Metal boiler and frame · Driving wheels divided into two groups, enabling the locomotive to negotiate sharp curves · Coupling hook in front, RELEX coupler on tender · Length over buffers 26.7 cm (10-3/8") · Equipped for installation of smoke unit 7226

◐ = 7153 ⌓ = 28027 ♀ = 60008

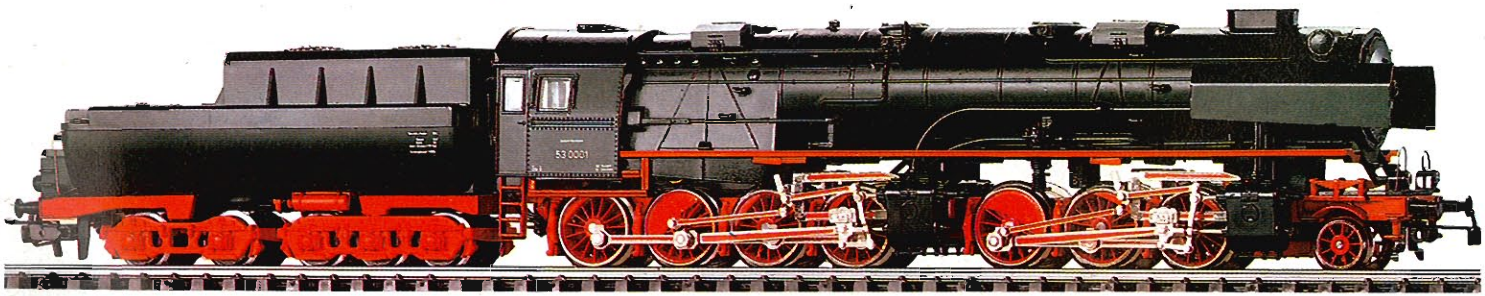


3684 · Digital

3084 · Freight Locomotive with Brakeman-Cab Tender · German Federal Railroad class 050 · 5 axles powered · 4 traction tires · Illuminated triple headlight · Metal boiler and frame · Driving wheels divided into two groups, enabling the locomotive to negotiate sharp curves · Coupling hook in front, RELEX coupler on tender · Length over buffers 26.1 cm (10-1/4") · Equipped for installation of smoke unit 7226

◐ = 7153 ⌓ = 7164 ♀ = 60015

Commentary! Please turn the page.



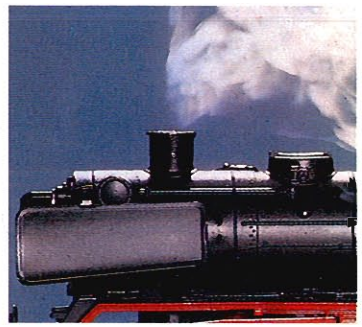
3102 · Freight Locomotive with Teder · Design by Borsig for the former German State Railroad (DR) · 4 axles powered · 4 traction tires · Illuminated double headlight at front of locomotive and on tender · Metal boiler and frame · Coupling hook in front, RELEX coupler on tender · Length over buffers 31.4 cm (12-3/8") · Equipped for installation of 2 smoke units 7226

◐ = 7153 ⌓ = 7185 ♀ = 60015

Genuine Steam Locomotive Atmosphere

Steam locomotives can produce smoke on model railroads just like their big brothers. The realistic effect of the genuine steam locomotive atmosphere is added to the prototypical appearance and impressive motion of the machines. The only things needed for this are the 7226 smoke unit kit and a few drops of 0241 smoke fluid.

The smoke unit is quite simple to install, since many Märklin locomotives are already equipped for its use. You insert it into the smoke stack without taking the body off and it is ready to go. When the current is turned on, the smoke fluid poured in is electrically heated and in a few moments clouds of smoke come puffing up. The locomotive is thus accompanied by a stream of amazingly realistic smoke.



7226 · Smoke Unit Kit · Includes smoke unit (for locomotives 3082, 3084, 3085, 3102, 3308, 3309, 3310, 3315, 3610, 3615 and 3684), extra smoke tube, cleaning wire, tweezers and a capsule of smoke fluid

0241 · Smoke Fluid · Plastic capsule refills for smoke unit kit 7226

The giant locomotive which was built...

The sentence, "The prototype of the Märklin 3102 locomotive was never built", is incorrect. Karl-Heinz Golze says, "At Borsig I saw with my own eyes the first assembly work for this locomotive." During his training at the German State Railroad's engineering school in Mittweida in Saxony, the engineer from Leipzig was at the Borsig factory in Berlin several times in 1944. "It was not entirely true that the German State Railroad had given out contracts in 1943 only to the locomotive builders for the development of such a super heavy freight locomotive." On the contrary, the State Railroad's schools were also entrusted with designs.

A speed of 80 km/h (50 m.p.h.) forwards and reverse required

The chief requirements were: Be able to pull 1,700 tons up an 8% grade on a 360 meter (1,181') curve while maintaining a speed of 20 km/h (12.5 m.p.h.), have a maximum speed of 80 km/h (50 m.p.h.) forwards and reverse, an axle load of 20 tons, be able to negotiate 1 : 7 turnouts with 140 meter (459') curves and fit on a 23 meter (75' 6") turnable.

Moreover, the locomotive had to be manufactured as rationally as possible, given the technology available at the time. Among the designs submitted were two Borsig proposals. Design I proposed a (1'C) D h4C 78.20 (2-6-8-0). The boiler was to have a diameter between 2 and 2.2 meters (6' 6" to 7'3"). The flues were 6 meters (39'). The frame was divided into two groups of driving wheels, each with 2 cylinders, with the boiler resting on a pivoting bolster over the front group.

"Even in Mittweida there were people involved in the contracts." There were some rather odd designs, a locomotive with the cab in the middle and a boiler in the front and the back, for example. The coal bunkers would have been located over the low-slung boilers. Another version was planned for powdered coal firing because of its better combustion characteristics. The powder would have been sprayed into the firebox with jets, similar to the oil sprayers today. "The attempt failed because, among other things, it was too expensive in wartime to produce coal powder from lignite and bituminous coal."

Golze quoted one of his instructors with the words, "It is important that something sensible comes out of it which does not cost anything."

And this was the way things were even at Borsig during days which were ruled not only by shortages of money and material but already by the naked struggle for survival. "We were happy to go to Berlin because the meals at Borsig were good. At least for the German workers." They and many forced laborers from the conquered territories in the East called "foreign workers" were chiefly busy "knocking together", as Golze termed it, class 52's and other classes of locomotives or repairing them.

Photo: R. Gillmann

Karl-Heinz Golze (61) saw with his own eyes how work was begun at Borsig on the prototype of this Märklin H0 model, the large freight locomotive with a tender.

Karl-Heinz Golze saw the giant freight locomotive under construction in these work areas of Borsig, the Berlin locomotive builder. The photo shows the boiler and frame for a Yugoslavian State Railway steam locomotive being placed on its wheels.

Almost mass production in the large work areas

The engineering student describes what he saw there. "It was almost mass production in the large work areas. There were always five to ten locomotives under construction at the same time." It smelled of oils and grease. Little diesel locomotives pulled the big "brothers" out of the work areas when they were finished. Outside the steam locomotives were fired up and taken for test runs on the company tracks.

But there was also another locomotive under construction which looked quite differ-

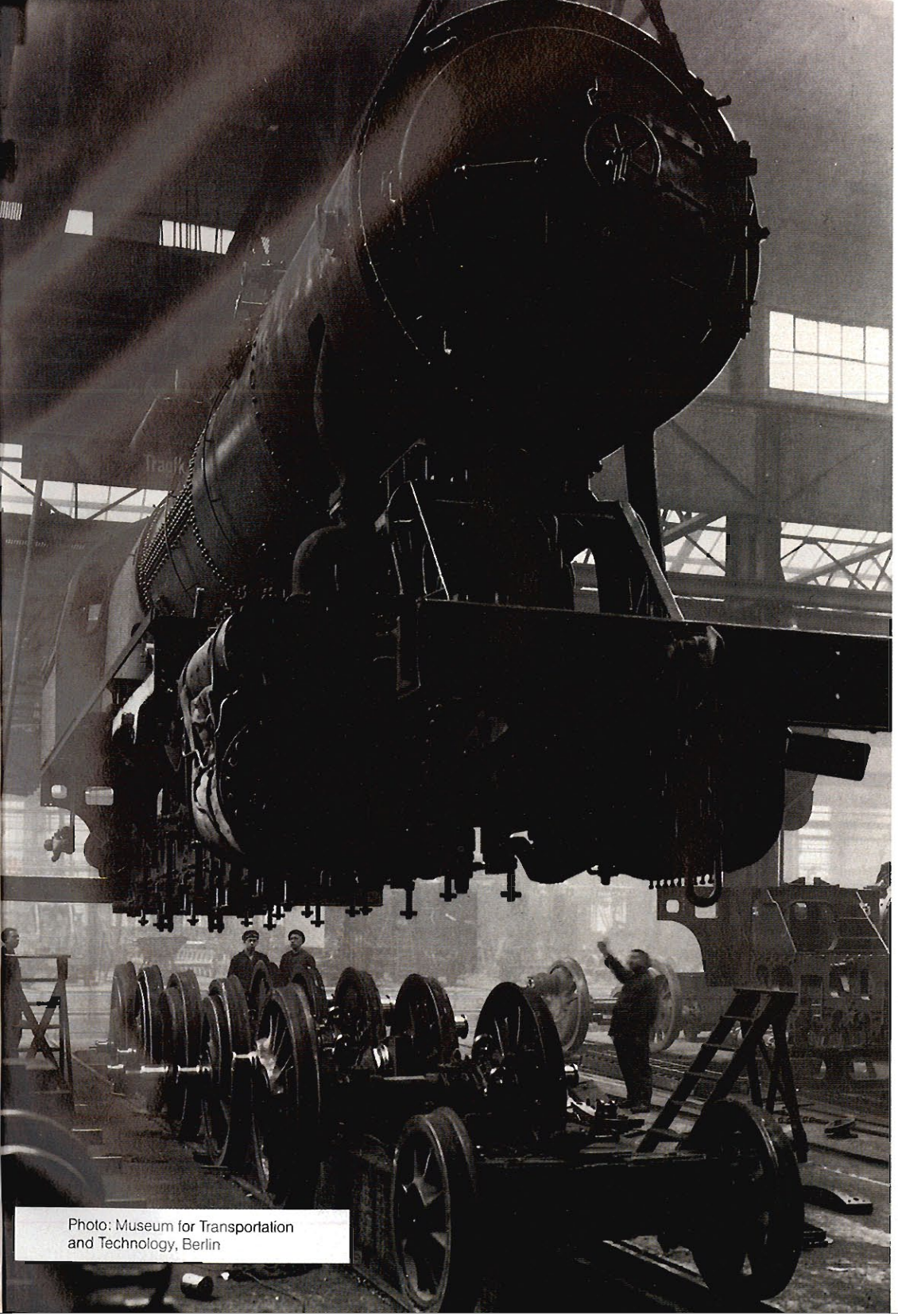


Photo: Museum for Transportation and Technology, Berlin

ent from the wartime locomotives known up until then, the realization of the "Borsig I", the giant freight locomotive which was to guarantee transportation into occupied Russia. Evidently, the design had been given for manufacture of a prototype because no one was allowed to admit that the war at this point could not be won. Golze describes the sight, "The cylinder mounts could be seen easily." "The frame was finished. I walked on it myself."

There was as little to see of the tender and the cab as there was of the cylinders, but the lathe operators had already worked on the wheel sets. The boiler was also in progress.

As a fireman after the war

Golze cannot conceive that the locomotive was ever totally finished or under steam. He also does not know what became of the parts under construction; "In the summer of 1944 I was drafted."

After the war he succeeded in reaching West Germany and tried to continue his training with the railroad. In the postwar chaos, however, he suddenly found himself as a fireman again and had to shovel fuel in the Hannover area onto the grates of freight locomotives which were being used to deliver supplies to the inhabitants of the Western Zones. Often there were also trains which transported freight for the American occupation forces from their coastal post in Bremerhaven to the American Zone.

When Golze tells of the transports' involuntary stops, the period of the black market and the nightly robbery of the trains by the needy people comes to life again. The thieves would jump up on the last cars and let the air out of the brake system on the curves where the train had to run slowly. The train would remain stopped, and until the brakemen had made the long walk back to solve the problem, there was time (considering the long trains caused by the shortage of locomotives) to break into the cars.

Karl-Heinz Golze never saw the Borsig factories again.

...but unfortunately never finished.

Diesel Locomotives

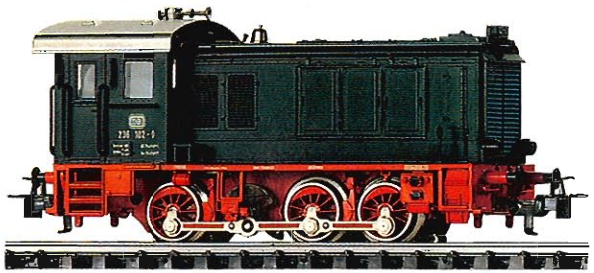
Digital Köf II small locomotives, photographed on the BRAWA Company's layout scene "Switchyard".

Digital locomotives can also be used on conventional layouts.

This locomotive is the result of a joint effort with the BRAWA Company, Waiblingen, Federal Republic of Germany.

3680 · Digital · Small Diesel-Hydraulic Locomotive · German Federal Railroad class 323 (Köf II) · 2 axles powered · Miniature, high efficiency motor · Increased pulling power by means of traction magnets · Special decoder with address that can be changed only at the factory · Cab illumination as a digitally controlled auxiliary function · Coupling hooks with preuncoupling feature · Length over buffers 7.4 cm (3")

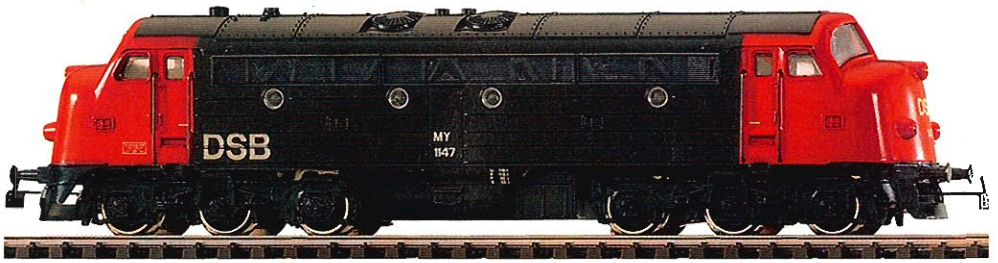
=7164



3646 · Digital

3146 · Diesel-Hydraulic Locomotive · German Federal Railroad class 236 · 3 axles powered · 2 traction tires · Illuminated triple headlight · Metal frame · RELEX couplers · Length over buffers 10.6 cm (4-3/16")

=7154 =7185 =60015



Denmark

3067 · General Purpose Diesel-Electric Locomotive · Danish State Railways (DSB) class MY 1100 · 3 axles powered · 4 traction tires · Illuminated triple headlight · Metal body and frame · Coupler hooks · Length over buffers 20.5 cm (8-1/16")

=7154 =7164 =60015

Belgium

3133 · General Purpose Diesel-Electric Locomotive · Belgian State Railways (NMBS/SNCB) class 54 · 3 axles powered · 4 traction tires · Illuminated triple headlight · Metal body and frame · Coupler hooks · Length over buffers 20.5 cm (8-1/16")

=7154 =7164 =60015

Diesel Locomotives

3065 · Diesel-Hydraulic Switch Engine with TELEX Couplers · German Federal Railroad class 260 · 3 axles powered · 2 traction tires · Illuminated triple headlight · Metal frame · Length over buffers 12 cm (4-¾")

⓪=7153 =7185 =60010

3665 · Digital

3072 · General Purpose Diesel-Hydraulic Locomotive · German Federal Railroad class 212 · 2 axles powered · 4 traction tires · Illuminated triple headlight · Prototypically narrow ends · Metal frame · RELEX couplers · Length over buffers 14.1 cm (5-9/16")

⓪=7154 =7164 =60010

3672 · Digital

3075 · General Purpose Diesel-Hydraulic Locomotive · German Federal Railroad class 216 · 2 axles powered · 4 traction tires · Illuminated triple headlight · Metal frame · RELEX couplers · Length over buffers 18.2 cm (7-3/16")

⓪=7154 =7164 =60015

3021 · Diesel-Hydraulic Express Locomotive · German Federal Railroad class 220 · 2 axles powered · 4 traction tires · Illuminated triple headlight · Metal body and frame · Coupler hooks with preuncoupler · Length over buffers 21 cm (8-¼")

⓪=7154 =7183 =60010

3141 · Diesel-Hydraulic Switch Engine · German Federal Railroad class 260 · 3 axles powered · 2 traction tires · Illuminated triple headlight · Metal frame · Coupler hooks with preuncoupler · Length over buffers 12 cm (4-3/4")

⓪=7153 =7185 =60010

3147 · General Purpose Diesel-Hydraulic Locomotive · German Federal Railroad class 212 · 2 axles powered · 4 traction tires · Illuminated triple headlight · Prototypically narrow ends · Metal frame · RELEX couplers · Length over buffers 14.1 cm (5-9/16")

⓪=7154 =7164 =60010

3674 · Digital

3074 · General Purpose Diesel-Hydraulic Locomotive · German Federal Railroad class 216 · 2 axles powered · 4 traction tires · Illuminated triple headlight · Metal frame · RELEX couplers · Length over buffers 18.2 cm (7-3/16")

⓪=7154 =7164 =60015

3081 · Diesel-Hydraulic Express Locomotive · German Federal Railroad class 220 · 2 axles powered · 4 traction tires · Illuminated triple headlight · Metal body and frame · Coupler hooks with preuncoupler · Length over buffers 21 cm (8-1/4")

⓪=7154 =7183 =60010

Diesel Locomotives

4060

3060

4129

3129

USA

3060 · Diesel-Electric Locomotive · General Motors EMD F 7 of the Atchison, Topeka & Santa Fe Railway · 2 axles powered · 4 traction tires · Illuminated dual headlight and number boards · Metal body and frame · Coupler hook with preuncoupler at front, RELEX coupler at rear · Length 17.5 cm (6-7/8")

◐ = 7154 = 7185 = 60015

USA

4060 · Diesel-Electric Locomotive (Dummy Unit) · Used with locomotive 3060 to form prototypical double unit · Illuminated dual headlight and number boards · Coupler hook with preuncoupler at front, coupler hook at rear · Length 17.5 cm (6-7/8")

= 7185 = 60015

USA

3129 · Diesel-Electric Locomotive · General Motors EMD F 7 of the Southern, Pacific Railroad · 2 axles powered · 4 traction tires · Illuminated dual headlight and number boards · Metal body and frame · Coupler hook with preuncoupler at front, RELEX coupler at rear · Length 17.5 cm (6-7/8")

◐ = 7154 = 7185 = 60015

USA

4129 · Diesel-Electric Locomotive (Dummy Unit) · Used with locomotive 3129 to form prototypical double unit · Illuminated dual headlight and number boards · Coupler hook with preuncoupler at front, coupler hook at rear · Length 17.5 cm (6-7/8")

= 7185 = 60015

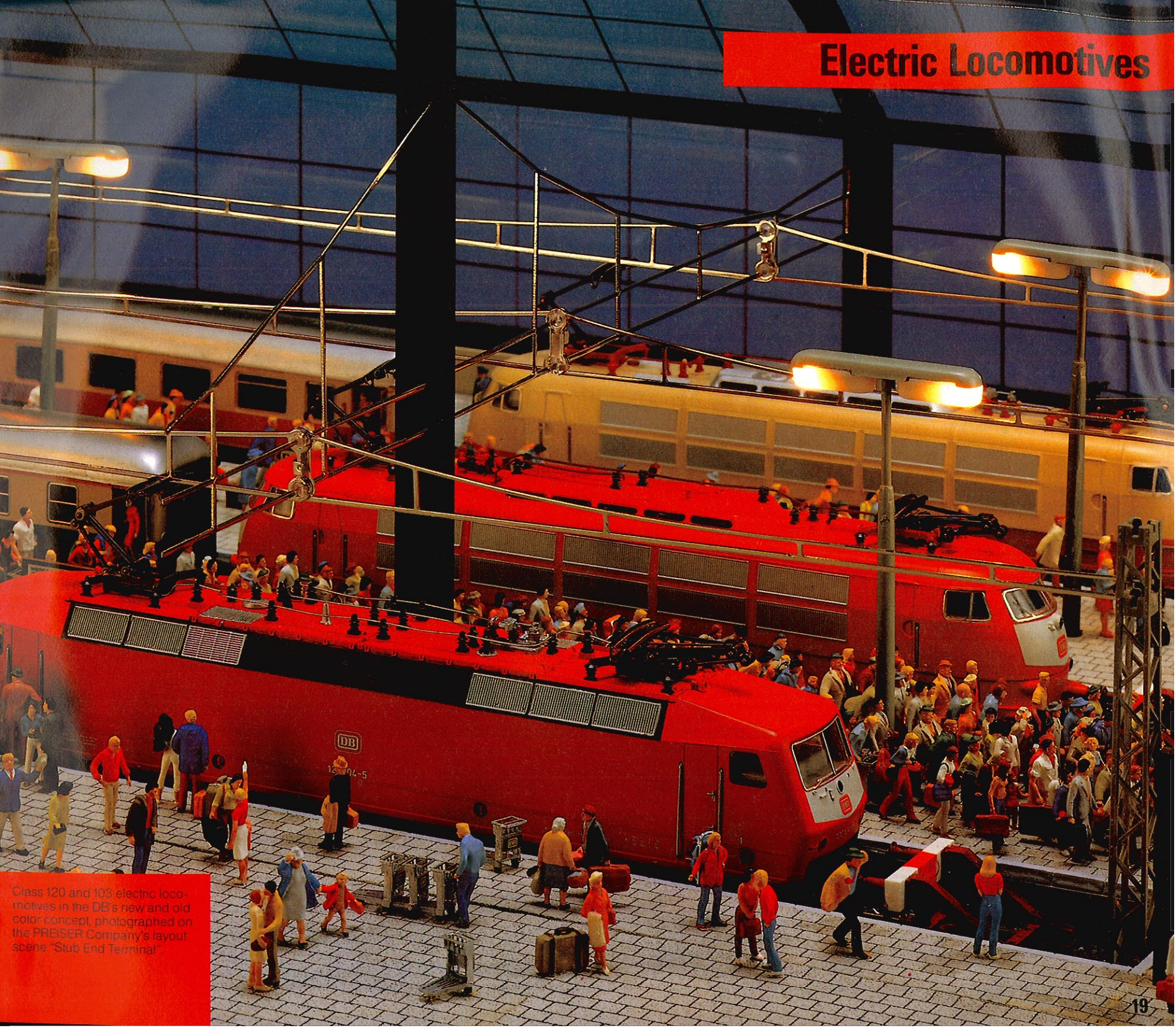
3080 · Industrial Switch Engine · 3 axles powered · 2 traction tires · Metal frame · Coupler hooks · Length over buffers 11.2 cm (4-3/8")

◐ = 7154 = 7185

3078 · Industrial Switch Engine · Type DHG 500 · 3 axles powered · 2 traction tires · Illuminated triple headlight · Metal frame · Coupler hooks · Length over buffers 11.2 cm (4-3/8")

◐ = 7154 = 7185 = 60015

Electric Locomotives



Class 120 and 103 electric locomotives in the DB's new and old color concept, photographed on the PREISER Company's layout scene "Stub End Terminal".

Electric Locomotives

3042 · Express Locomotive · German Federal Railroad class 111 · 2 axles powered · 4 traction tires · Illuminated triple headlight · Metal frame · RELEX couplers · Length over buffers 19.1 cm (7-½")

⓪ = 7153 ⌓ = 7164 ♀ = 60008

3642 · Digital

3355 · Electric Locomotive · German Federal Railroad class 111 · 2 axles powered · 4 traction tires · Triple headlight and dual red marker lights illuminated according to the direction of travel · Decals for destination boards included · Metal frame · RELEX couplers · Electronic reverse unit · Length over buffers 19.1 cm (7-½")

⓪ = 7153 ⌓ = 7164 ♀ = 60007 r
♀ = 60008 w

3655 · Digital

3357 · Express Locomotive · German Federal Railroad class 103 · 3 axles powered · 4 traction tires · Illuminated triple headlight · Metal frame · Coupler hooks · Electronic reverse unit · Length over buffers 21.9 cm (8-⅝")

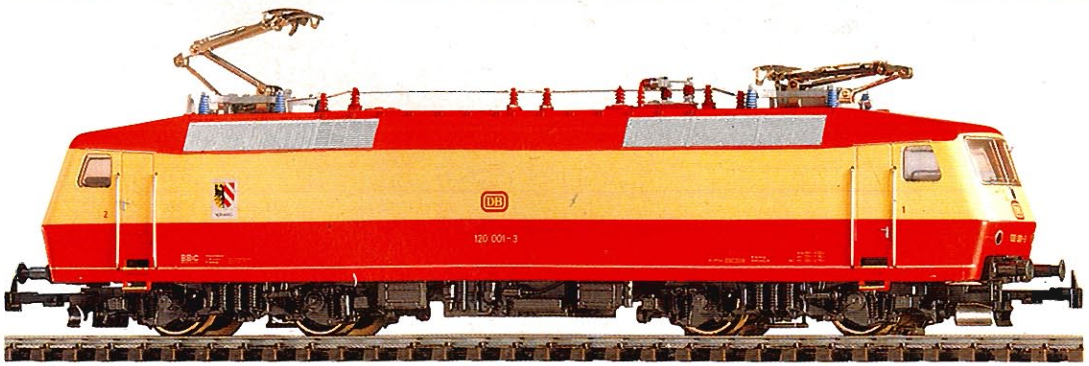
⓪ = 7153 ⌓ = 7164 ♀ = 60008

3657 · Digital

3153 · General Purpose Locomotive · German Federal Railroad class 120 · 2 axles powered · 4 traction tires · Illuminated triple headlight · Metal frame · Coupler hooks · Length over buffers 22.1 cm (8-¾")

⓪ = 7153 ⌓ = 7164 ♀ = 60015

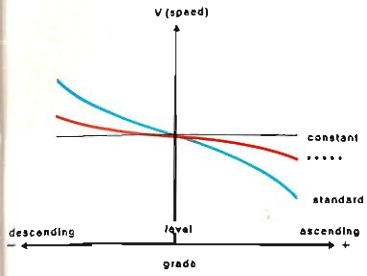
3653 · Digital



3558 · ★★★★★

3658 · Digital

N



★★★★★

Speed Control

Highest Efficiency in the Model

The DB's most powerful electric locomotive also achieves the highest degree of efficiency as model **3558** – thanks to its electronically controlled propulsion system. There are especially high reserves of speed and tractive effort available for use.

3558 · ★★★★★ · **Express Locomotive** · German Federal Railroad class 103 in new paint scheme · 3 axles powered · 4 traction tires · Five-pole high efficiency motor · Electronically controlled propulsion system · Adjustable maximum speed · Adjustable acceleration rate · Electronic reverse unit · Illuminated triple headlight, changes over with the direction of travel · Metal frame · Coupler hooks · Length over buffers 21.9 cm (8-5⁄8″)

=7153 =7164 =60008

3358 · **Express Locomotive** · Same as 3558, but with standard propulsion system without electronic control, adjustable maximum speed and acceleration rate

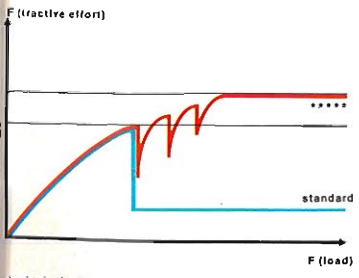
3658 · **Digital** · **Express Locomotive** · Same as 3358 · Headlights as digitally controlled auxiliary function

Digital locomotives can also be used on conventional layouts.

3553 · ★★★★★

3654 · Digital

N



★★★★★

Anti-wheel Slip Control

High-Tech in Mass production

The DB's most modern locomotive has undergone a series of changes from the class 120.0's prototypes to the mass production 120.1. Model **3553** reflects these changes in the roof details, buffer beams, and the trucks. Moreover, the electronically controlled Märklin propulsion system employs the same principle of function as the prototype 120.

3553 · ★★★★★ · **General Purpose Locomotive** · German Federal Railroad class 120.1 (mass production model) · 2 axles powered · 4 traction tires · Five-pole, high efficiency motor · Electronically controlled propulsion system · Adjustable maximum speed · Adjustable acceleration rate · Electronic reverse unit · Illuminated triple headlight, changes over with the direction of travel · Metal frame · Coupler hooks · Length over buffers 22.1 cm (8-1⁄16″)

=7153 =7164 =60008

3353 · **General Purpose Locomotive** · Same as 3553, but with standard propulsion system without electronic control, adjustable maximum speed and acceleration rate

3654 · **Digital** · **General Purpose Locomotive** · Same as 3353 · Triple headlight as digitally controlled auxiliary function

Digital locomotives can also be used on conventional layouts.

Electric Locomotives

3058 · Freight Locomotive · German Federal Railroad class 151 · 3 axles powered · 4 traction tires · Illuminated triple headlight · Metal frame · Coupler hooks · Length over buffers 22.2 cm (8-¾")

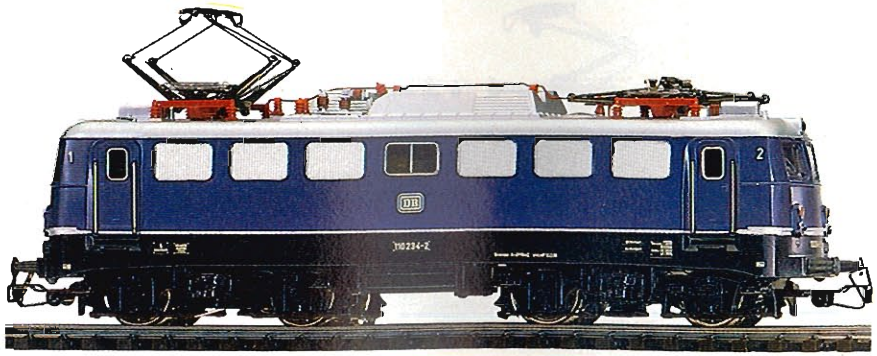
◐=7153 =7164 =60015

3156 · Freight Locomotive · German Federal Railroad class 140 · 2 axles powered · 4 traction tires · Illuminated triple headlight · Metal body and frame · Coupler hooks with preuncoupler · Length over buffers 18.1 cm (7-⅛")

◐=7153 =7164 =60015

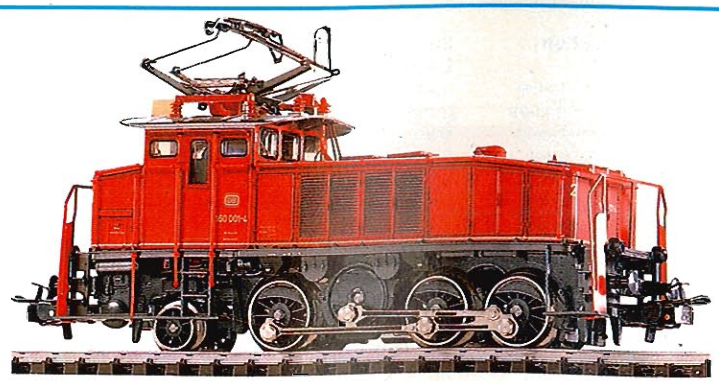
3039 · Express Locomotive · German Federal Railroad class 110 · 2 axles powered · 4 traction tires · Illuminated triple headlight · Metal body and frame · Coupler hooks with preuncoupler · Length over buffers 18.1 cm (7-⅛")

◐=7153 =7164 =60015



3157 · Electric Locomotive · German Federal Railroad class 160 · 3 axles powered · 2 traction tires · Illuminated triple headlight · Metal frame · RELEX couplers · Length over buffers 12.8 cm (5")

◐=7153 =7185 =60010



3629 · Digital

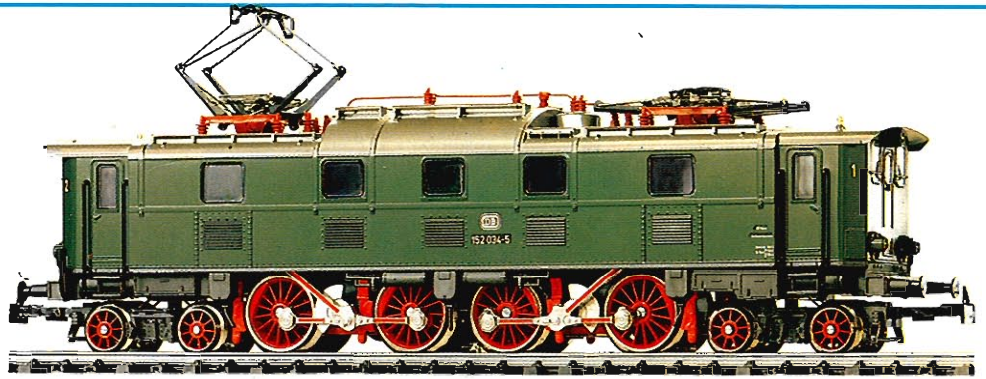
3329 · Electric Locomotive · German Federal Railroad class 191 · 3 axles powered · 4 traction tires · Illuminated triple headlight, changes over with the direction of travel · Three part metal body and frame · Automatic couplers · Electronic reverse unit · Length over buffers 19.9 cm (7-⅞")

⓪=7153 =7185 =60008

Only twelve units of the class E 91[9] heavy freight locomotive were ever built. They are the natural development from 34 locomotives, the E 91, which were first placed in service in 1925 for the Silesian mountain routes. The E 91[9] followed in 1929. Like their predecessors, they could haul up to 1420 tons up a 10% grade at 40 km/h (25 m.p.h.) with a continuous rating of 1,660 kilowatts.

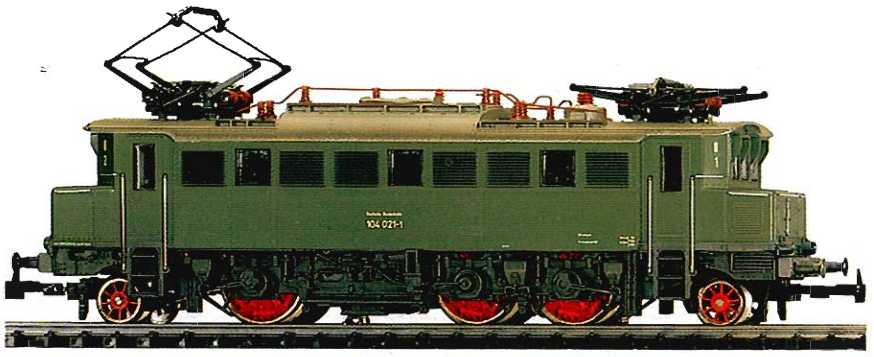
Six of them were still in use on the German Federal Railroad after the war. The German Federal Railroad's electric freight locomotive no. 191 099 was one of two of this class that were stored for "museum purposes" after being taken out of service in 1975. It is noteworthy that it was not restored to the condition it was in when last used on the German Federal Railroad, but rather to its original condition on the German State Railroad, where it was E 91 99 in service at Breslau.

After service in the Jubilee Parade in 1985, the locomotive was sent to Hallingen south of Freiburg.



3366 · Electric Locomotive · German Federal Railroad class 152 (Bavarian EP 5) · 2 axles powered · 4 traction tires · Illuminated triple headlight · Metal frame · Articulated frame enabling the locomotive to negotiate sharp curves · 2 sprung pilot trucks · Coupler hooks · Electronic reverse unit · Length over buffers 19.8 cm (7-⅞")

⓪=7153 =7164 =60008



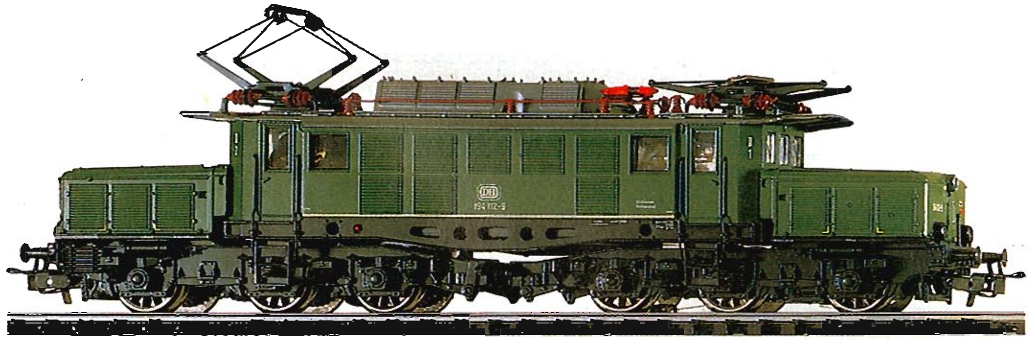
3049 · Express Locomotive · German Federal Railroad class 104 · 3 axles powered · 2 traction tires · Illuminated triple headlight · Metal frame · 2 sprung pilot trucks · Coupler hooks · Length over buffers 17.8 cm (7")

⓪=7153 =7185 =60015

Electric Locomotives

3322 · Freight Locomotive · German Federal Railroad class 194 · 3 axles powered · 4 traction tires · Illuminated triple headlight · Three part metal body and frame · RELEX couplers · Electronic reverse unit · Length over buffers 21 cm (8-¼")

=7153 =7164 =60010



Switzerland

3352 · Freight Locomotive "Crocodile" · Swiss Federal Railways (SBB) class Ce 6/8III · 3 axles powered · 4 traction tires · Triple headlight and 1 marker light, illuminated according to the direction of travel · Three part metal body and frame · Articulated construction enabling the locomotive to negotiate sharp curves · RELEX couplers · Electronic reverse unit · Length over buffers 23 cm (9-⅛")

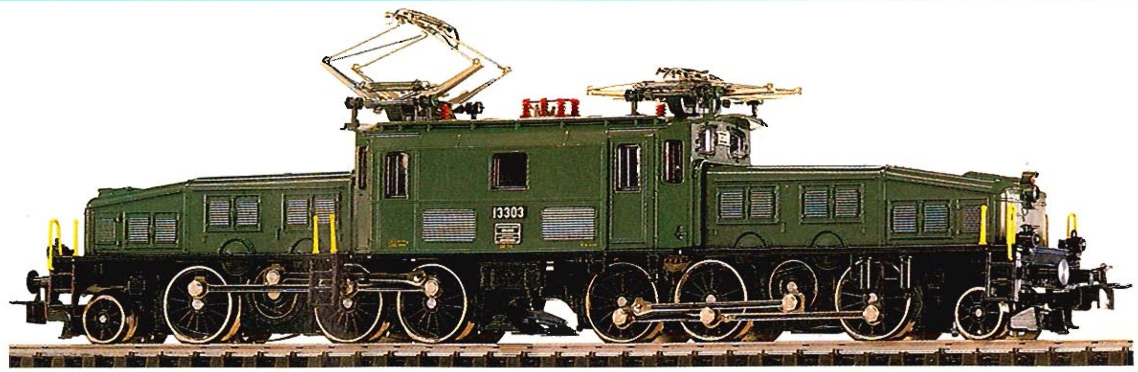
=7153 =7164 =60008

3652 · Digital

Switzerland

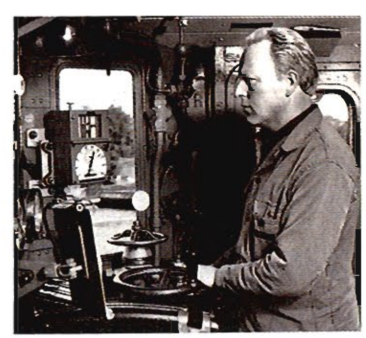
3356 · Freight Locomotive "Crocodile" · Swiss Federal Railways (SBB) class Be 6/8III · 3 axles powered · 4 traction tires · Illuminated triple headlight · Three part body · Metal frame · Articulated construction enabling the locomotive to negotiate sharp curves · RELEX couplers · Electronic reverse unit · Length over buffers 23 cm (9-⅛")

=7153 =7164 =60008



The book on the Crocodile

0356 · The Book about the "Crocodiles" · By H. S. Stammer · The most comprehensive publication on the famed Swiss "Crocodiles" with dates, facts, dramatic stories and interesting anecdotes · Detailed presentation of the various models which Märklin has produced in the last 50 years · 96 pages · Size 26.4 x 22 cm (10-¼" x 8-¾") · German text



3630 · Digital

Switzerland

3330 · Electric Locomotive · Swiss Federal Railways (SBB) class Re 4/4^{IV} · 2 axles powered · 4 traction tires · Illuminated triple headlight · Metal body and frame · Hinged rear-view mirrors · Coupler hooks · Electronic reverse unit · Length over buffers 18.1 cm (7-1/8")

⓪ = 7153 = 7164 = 60010

Switzerland

3623 · Digital · Electric Locomotive · Swiss Federal Railways (SBB) class Re 4/4^{IV} in experimental paint scheme · 2 axles powered · 4 traction tires · Illuminated triple headlight as digitally controlled auxiliary function · Metal body and frame · Coupler hooks · Length over buffers 18.1 cm (7-1/8")

⓪ = 7153 = 7164 = 60010

Digital Locomotives can also be used on conventional layouts.

Switzerland

3650 · Digital · General Purpose Locomotive · Swiss Federal Railways (SBB) class Ae 6/6 · 3 axles powered · 4 traction tires · Illuminated triple headlight as digitally controlled auxiliary function · Metal body and frame · Different municipal coats-of-arms and operating numbers included · Coupler hooks · Length over buffers 20 cm (7-7/8")

⓪ = 7153 = 7164 = 60008

Digital Locomotives can also be used on conventional layouts.

Switzerland

3332 · General Purpose Locomotive · Swiss Federal Railways (SBB) class Ae 6/6 in new paint scheme · 3 axles powered · 4 traction tires · Illuminated triple headlight · Metal body and frame · Different municipal coats-of-arms and operating numbers included · Coupler hooks · Electronic reverse unit · Length over buffers 20 cm (7-7/8")

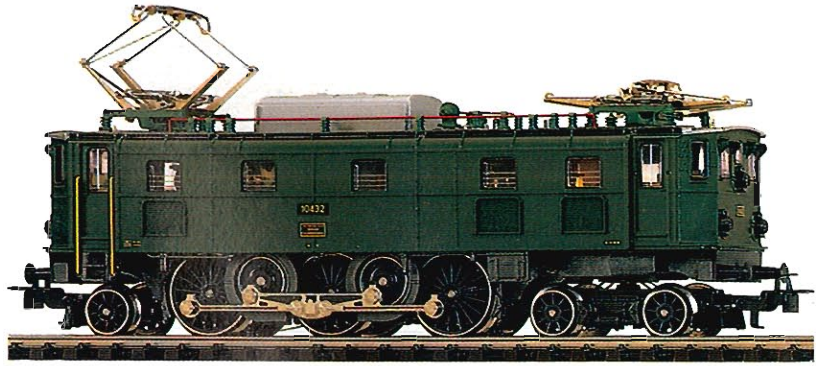
⓪ = 7153 = 7164 = 60008

Electric Locomotives

Switzerland

3167 · Express Locomotive · Swiss Federal Railways (SBB) class Ae 3/6^{II} · 3 axles powered · 2 traction tires · Illuminated triple headlight · Metal frame · Sprung pilot and trailing truck · RELEX couplers · Length over buffers 16 cm (6-5/16")

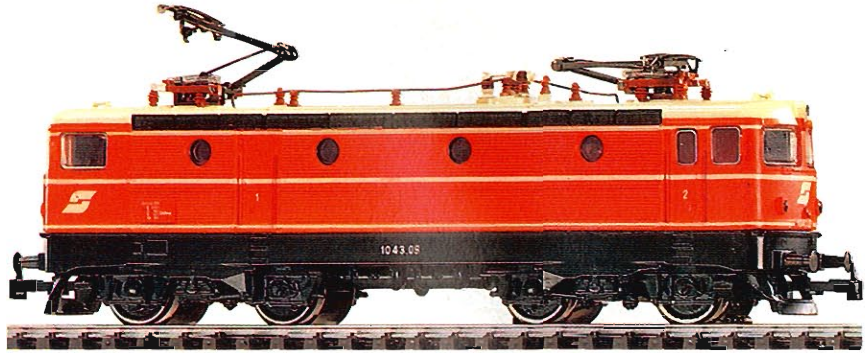
⓪=7153 ⌓=7185 ⚲=60015



Austria

3160 · General Purpose Locomotive · Austrian Federal Railways (ÖBB) class 1043 in new version · 2 axles powered · 4 traction tires · Illuminated triple headlight · Metal frame · Coupler hooks · Length over buffers 17.5 cm (6-7/8")

⓪=7153 ⌓=7164 ⚲=60015

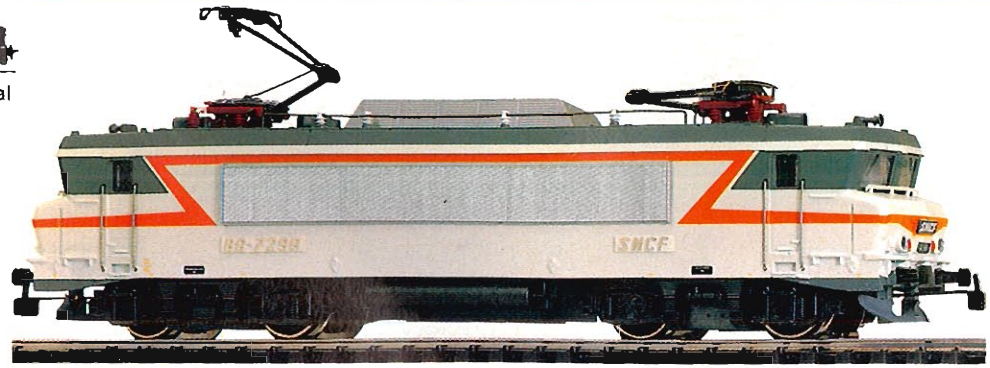


France

3325 · Electric Locomotive · French State Railways (SNCF) class BB 7200 · 2 axles powered · 4 traction tires · Illuminated dual headlight, changes over with the direction of travel · Metal body and frame · Coupler hooks · Electronic reverse unit · Length over buffers 20 cm (7-7/8")

⓪=7153 ⌓=7164 ⚲=60010

3625 · Digital



Netherlands

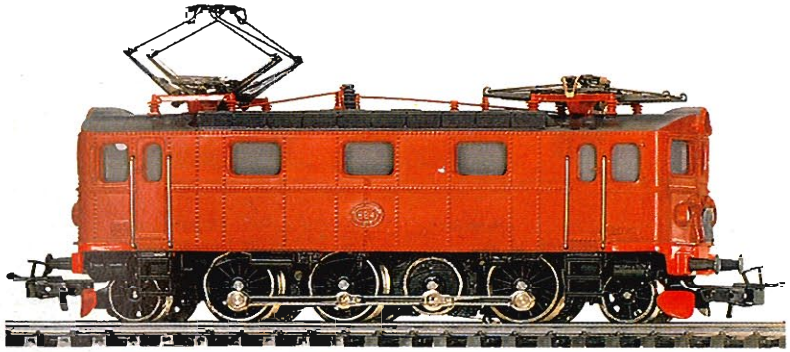
3326 · Electric Locomotive · Dutch Railways (NS) class 1600 · 2 axles powered · 4 traction tires · Illuminated triple headlight · Metal body and frame · Coupler hooks · Electronic reverse unit · Length over buffers 20 cm (7-7/8")

⓪=7153 ⌓=7164 ⚲=60019

Italy

3162 · General Purpose Locomotive · Italian State Railways (FS) class E 424 in new version · 2 axles powered · 4 traction tires · Illuminated dual headlight · Metal body and frame · Coupler hooks with pneumatic coupler · Length over buffers 17.5 cm (6-7/8")

⓪ = 7153 ⌓ = 7164 ♀ = 60015



Sweden

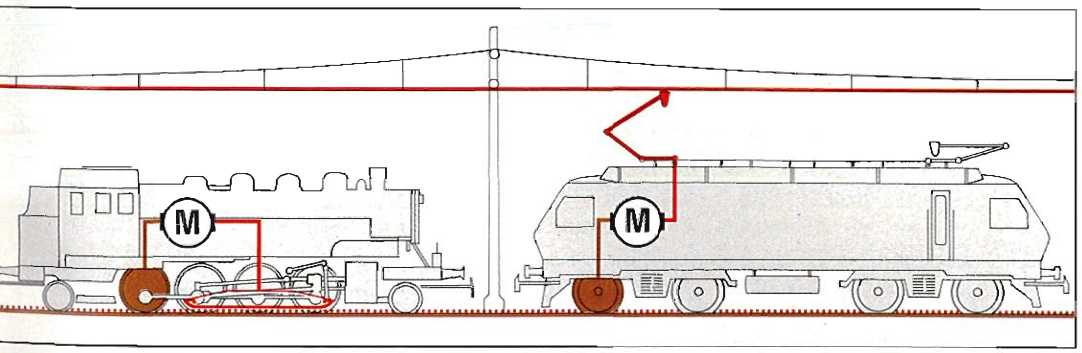
3030 · General Purpose Locomotive · Swedish State Railways (SJ) class Da · 3 axles powered · Jackshaft driven by gears · 2 traction tires · Illuminated triple headlight · Metal body and frame · RELEX couplers · Length over buffers 14.7 cm (5-3/4")

⓪ = 7153 ⌓ = 7185 ♀ = 60015

Sweden

3043 · General Purpose Locomotive · Swedish State Railways (SJ) class Rc1 · 2 axles powered · 4 traction tires · Illuminated four-position headlight · Metal frame · Coupler hooks · Length over buffers 17.5 cm (6-7/8")

⓪ = 7153 ⌓ = 7164 ♀ = 60015



Märklin electric locomotives can be powered prototypically from the catenary. With this two trains can be controlled independently on the same track. The Märklin catenary is easy to set up and there are no tricks to hooking it up.

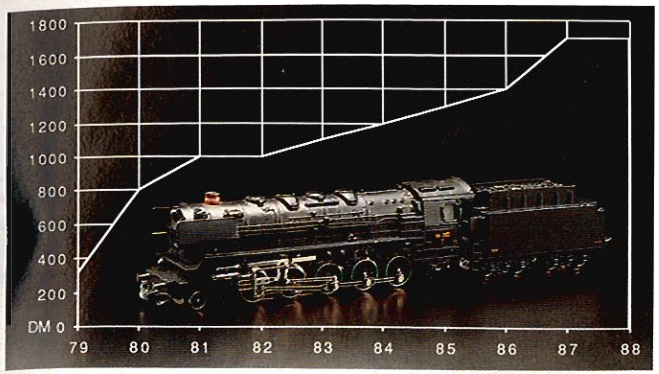
Catenary Operation in the Märklin HO System

Restore. Repair.
Lovingly, accurately and thoroughly.

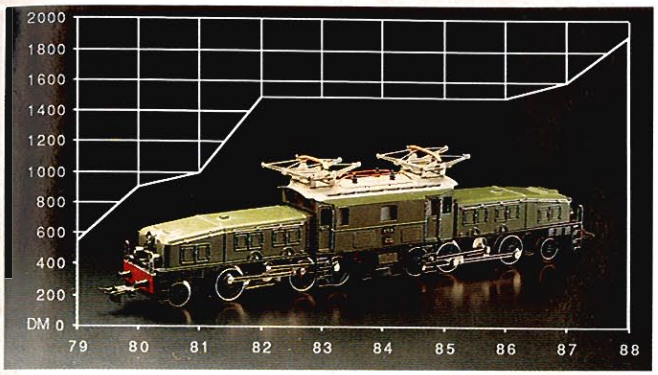
Collecting and caring for old Märklin models enjoys ever-increasing popularity. Our employees have the skills and know-how, based on decades of experience, to restore that older Märklin train to its original gleaming beauty. Of course, a cost estimate is provided before proceeding with the restoration.

In addition, the Märklin Service Center can perform repairs and inspections which your dealer may not be equipped to do.

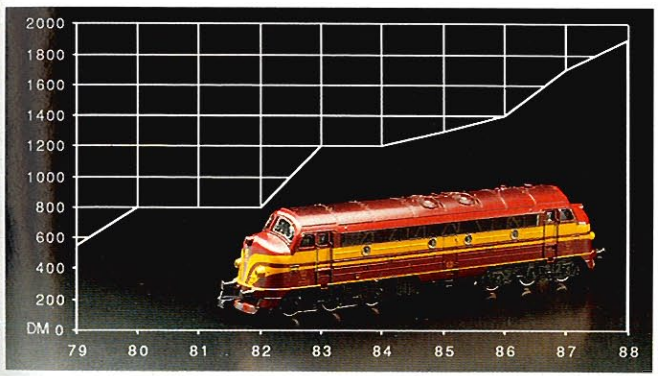
Märklin Service.
See your dealer for details.



Steam Locomotive 3045 .1



Electric Locomotive CCS 800 .4



Diesel Locomotive 3063 .2

Just as there is the "Michel" for postage stamps, there are also different catalogs for Märklin model railroads which give information about the collector values for locomotives and cars. These tables about the development of collector pieces in West German Marks from 1979–1988 were published in "Koll's Preis Katalog Märklin 00/H0 1988".

Passion on little wheels

Two beautiful hobbys are combined equally in Märklin model railroads – Playing and Collecting

The fascination with toys goes far beyond their original purpose. For decades, beauty, often rarity, or quite simply the wish to get back a part of childhood have turned them into a desired collector piece. Old tin toys as well as dolls or electric trains are on the list. And

75 percent play and collect

among them Märklin stands at the very top. Market researchers have discovered that around 75 percent of the adult model railroad enthusiasts pursue their hobby along two paths; they play and collect. A significant group even concentrates solely on collecting.

When old toys climbed in value among collectors at the end of the 1960's, they appeared at the beginning of the 1970's at auctions also. Since then they have brought sensational prices all over Europe. The renowned auction houses, Sotheby's and Christie's, included them in their programs several years ago. In Sweden a Märklin fire truck, made in 1922 and still fully functional, was sold at auction for the equivalent of DM 75,000. In London the model railroad layout of the former King Farouk of Egypt went for DM 55,000 at auction.

An example of a famous collector is Malcolm Forbes, publisher of well-known American magazines such as "Fortune" or "Business Week" and owner of the largest toy ship collection in the world with 299 pieces. Or Count Coluzzi in Switzerland who has specialized in large Märklin locomotives.

While old pieces from the turn of the century up to the prewar period often appear in the auction house catalogs abroad, in Germany there are special auctions for the "younger" railroad pieces of all gauges. Collecting H0 gauge has enjoyed great popularity in the last 15 years because it is within reach of everyone.

Great popularity in the last 15 years

In addition, there have been new collector catalogs each year in the last decade that give the market values for older and newer Märklin products.

A famous Märklin collector's piece in H0 scale is the "Northlander", a Canadian

From DM 380 to DM 2,200 and more

variation of the Dutch-Swiss TEE which is still in the current program. The Canadian train, 5,000 units which were sold in 1978 by the dealers for DM 380 each, trades today for

DM 2,200 and more. Then there are models which are produced for special occasions and which do not appear in the Märklin catalog. An example is the 50 units of a Swiss Federal Railways electric locomotive, based on the H0 model of the Ae 3/6, with a clear rather than a green body through which the built-in Digital decoder can be seen. It was manufactured in 1985 on the occasion of the introduction of the Märklin Digital System. Since then each commands a price of DM 1,500 which is still climbing.

How do you begin to collect? At first with the contents of your own layout or what a friend may have in the attic. A look in the collector catalogs shows if you have anything valuable. Then it would be interesting to assemble models from a particular historical period in order to make up a stylistically correct train in a glass case.

A start would be the TM 800 steam locomotive, made from 1949 to 1958 and a predecessor of a new Märklin item this year, the model of German Federal Railroad class 80 tank locomotive.

A precious piece under glass

The TM 800 in the least expensive version can be had in good condition for DM 150. Compared with its "grandchild", it may not satisfy the highest demands for scale fidelity, but it does given an impression of the character of toys from the 1950's and can be considered a precious item for display under glass. And if friends come to visit, it can be run without hesitation on the layout.

The passion has seized some collectors so that they include everything in their collection that has anything to do with Märklin. One of them,

An especially desirable Märklin model among collectors is the "Northlander". A limited series of 5,000 units of this train was produced in H0 scale in 1978.

Photo: "125 Years", 1984 a special edition of the Märklin-Magazin

who wishes to remain anonymous, has over, 1,000 locomotives in glass cases and even collects the ball point pens that Märklin distributes to its dealers.

Unfulfilled childhood dreams led him to his hobby. "I never had trains as a child." As a student he first bought a couple freight cars, then locomotives. "Twelve years ago I had 10 locomotives." Since then all new items and everything offered in the catalogs have been added. He managed to get hold of older models at auctions and swap meets. Now he has – with a few rare exceptions – everything produced by Märklin in H0 since the war.

Two large rooms in the apartment are filled with locomotives and trains. Homemade cases on the walls display the pieces in full splendor. Cabinets underneath conceal the duplicates and original boxes. The man, who naturally knows the value of his collection, says, "I am especially happy that I collected only one make right from the start."

The right make right from the start

Joachim Koll also shares this assessment. Koll, author and publisher of a catalog for the collector for over ten years, says, "The Märklin 00/H0 model railroad area, probably the most extensive, is preferred by many today." And that leads to his opinion that some models are not simply precision mechanical models made of metal and plastic, "but rather they are almost worth their weight in gold." Nevertheless, this does not detract from the play value. Even Koll confirms this, "Most model railroad enthusiasts today play and collect."

märklin
kalender

The unique calendar. Märklin under steam. From January to December 1989.

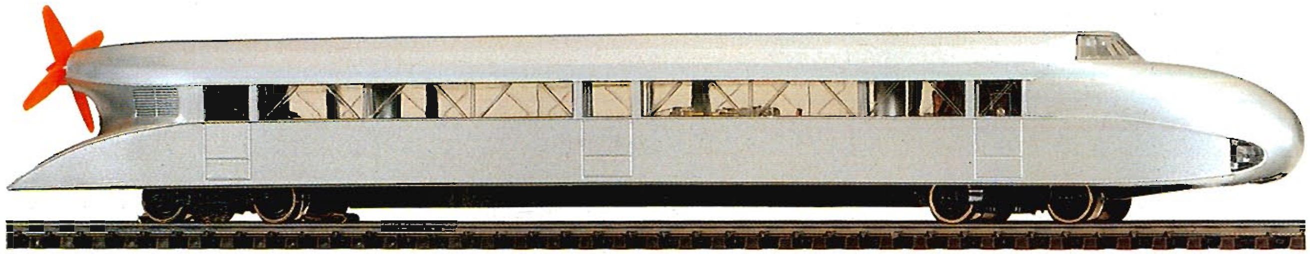
Available at your dealer.

ICE and Rail Zeppelin, photographed on the POLA Company's layout scene "Lombard Bridge in Hamburg".

Railcars

3077 · Rail Zeppelin · Based on Kruckenberg System · 2 axles powered · 4 traction tires · At approximately 4 volts the propeller is activated by a small motor and as more power is applied, the Zeppelin begins to move · Dual headlight at the front · Metal frame · Length 28.8 cm (11-3/8″)

=7154 =7164 =60015



The Rail Zeppelin of engineer Franz Kruckenberg set a record for rail vehicles on June 21, 1931 with 230 km/h (143.75 m.p.h.) between Hamburg and Berlin. This record held until 1954 when an French elelctric locomotive outdid it by 100 km/h (62.5 m.p.h.).

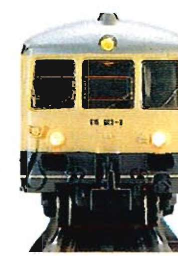
The design of the gentleman from Uetersen remained an oddity, however, because his technology was not considered suitable for mass production. It was a cigar-shaped vehicle whose body consisted of a framework of steel pipe covered with a fireproof, impregnated sail cloth.

The Rail Zeppelin was powered by a 600 hp aircraft motor which drove a huge propeller on the rear of the unit. Thanks to its design, the Rail Zeppelin weighed only 18.5 tons with a length of 25.3 meters (83 ft.) and proved itself by consuming only 70 liters (approx. 18.5 gal.) per 100 kilometers (62.5 miles).

Although there was no mass conversion to this form of rail propulsion, Kruckenberg and his supporters do merit recognition for gaining acceptance for the use of aerodynamics in railroad designs.

3028 · Electric Railcar · German Federal Railroad class 515 storage battery-powered railcar · 2 axles powered · 4 traction tires · Triple white headlights and dual red marker lights, illuminated according to the direction of travel · Interior details · Interior lighting · Metal frame · Coupler hooks · Length over buffers 24 cm (9-1/2″)

=7154 =7164 =60001 r
=60015 w



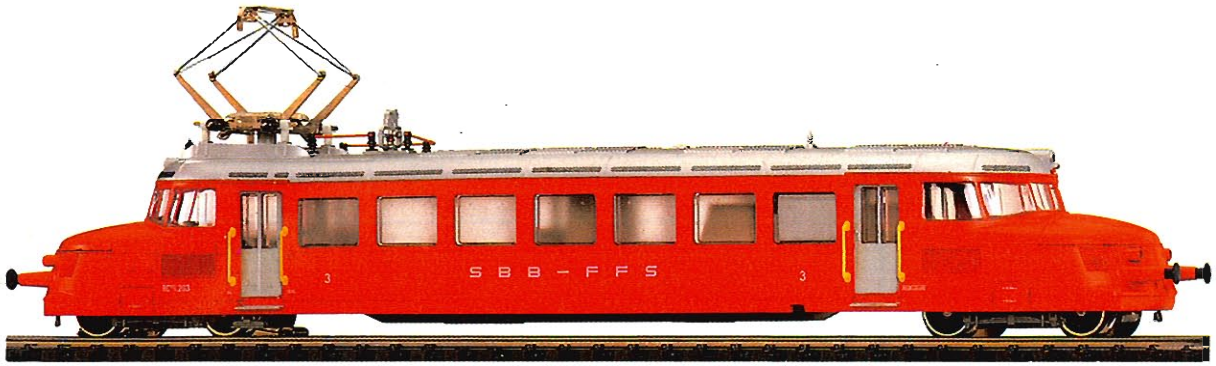
3016 · Railbus · German Federal Railroad class 795 · 1 axle powered · 2 traction tires · Illuminated triple headlight · Interior lighting · Metal frame · Special couplers providing close coupling · Length over buffers 14.7 cm (5-3/4″)

=7153 =7164 =60010

4018 · Railbus Trailer · German Federal Railroad class 995 · Red marker lights · Interior lighting · Special close coupler designed for railbus · Length over buffers 12 cm (4-3/4″)

=7175 =60010

4018 3016



3605 · Digital

Switzerland

3125 · Express Railcar · Swiss Federal Railways (SBB) class RBe 2/4 "Red Arrow" · Same paint scheme and details as the original on disply at the Swiss Transportation Museum in Lucerne · 2 axles powered · 4 traction tires · Illuminated triple headlight · Inset windows · Interior details · Metal body and frame · Length over buffers 25.7 cm (10")

⓪=7154 =7164 =60008

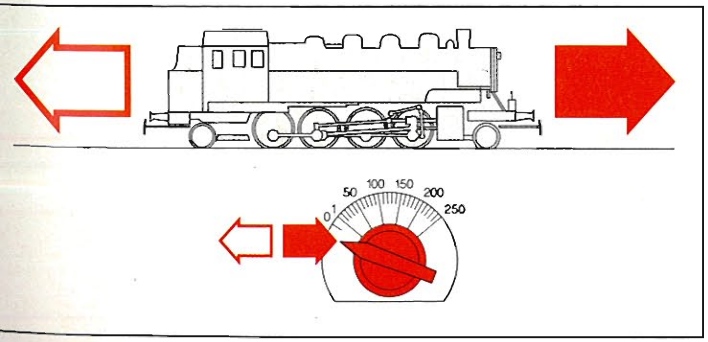
There were a total of ten lightweight express railcars with the nickname "Red Arrow" in Switzerland. Nine of them were built in the 1930's to fill gaps in the Swiss Federal Railways' schedules caused by lack of equipment. Two were initially diesel railcars. The tenth was a "Double Arrow" built from two railcars in 1939 as a salon railcar for state visitors. In tests it reached speeds of up to 150 km/h (93.75 m.p.h.).

The concept of individual railcars was intended to cover express feeder service with one man crews. Due to insufficient seating, it did not work out, even when the cars were equipped with standard couplers and buffers for trailing cars. The SBB rebuilt the diesel railcars for electric operation in the 1950's.

Excursion trips remained the principal assignment for the Red Arrows and in 1964 the last of their type disappeared from scheduled service. One of them, however, continues to run on Swiss tracks, even if no longer in the characteristic red paint scheme from which they get their name. This single car runs in the blue of the Oensingen-Balsthal Railroad in the Jura region. The RBe 2/4 1003, prototype of the Märklin model, was retired in January of 1968 and now stands in the Transportation Museum in Lucerne.

4028 · Control Car · For use with railcar 3028 · German Federal Railroad class 815 · When coupled to 3028, triple white headlight and dual red marker light illuminate according to direction of travel · Interior details · Interior lighting · Coupler loop at one end of car, coupler hook at other end · Length over buffers 24 cm (9-½")

=7164 =60001 r
=60015 w



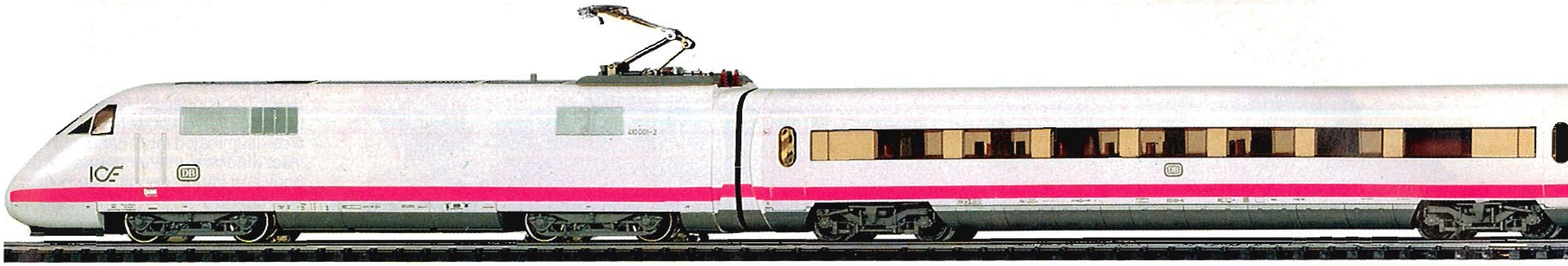
The direction is right in the Märklin H0 system

In the Märklin H0 system the direction of travel is determined in each locomotive and not in the track. The reverse unit as a "built-in engineer" works independently of the direction of other powered units, even when crossing over to different circuits. To reverse direction, a short impulse is given with the speed control knob on the "appropriate" transformer.

On standard locomotives a mechanical or electronically controlled reverse unit is used.

The direction reversing is built into the electronic circuit panel on locomotives with the new electronically controlled propulsion system (★★★★★).

On digital locomotives the built-in decoder controls the direction of travel in operation on conventional track circuits as well as in the Digital system.



The Gentle Giant

The Inter City Experimental as a Märklin model is distinguished by the greatest degree of power and extraordinary operating characteristics. The train of the future provides a very special model railroad experience on H0 track. With absolute quietness even at a scale 350 km/h (218.75 m.p.h.), the ICE glides elegantly and securely as a harmonious unit over a route.

3371 · ICE Railcar Train Set · German Federal Railroad class 410 high speed Inter City Experimental train · 2 motorized power end units · 2 open seating intermediate cars

4 axles powered · 8 traction tires · Metal power end unit frames · High efficiency Faulhaber motors · Triple headlight and dual red marker light, changes over with the direction of travel · Integrated electronics for direction reversing and synchronized control of both motors · Each power end unit with its own pickup shoe serving as electrical pickup for the entire train according to the direction of travel · Continuous electrical connections throughout the whole train

Close coupled snap connections with guide between all 4 cars · Prototypically moveable intermediate elements provide continuously seamless transition between cars · Interior details · Interior illumination · Train length 91.5 cm (36")

=7154 =7164 =60007 r
=60008 w

3671 · Digital

4071

3071 · TEE Railcar Train Set · Swiss Federal Railways (SBB) and Dutch Railways (NS) Trans-Europe-Express · 1 motorized power end unit · 1 dining car with 1st class open seating compartment and I control car with 1st class open seating compartment

3 axles powered · 4 traction tires · Metal frame · Triple headlight and dual red marker light, changes over with the direction of travel · Each end car with its own pickup shoe serving as electrical pickup for the entire train according to the direction of travel · Continuous electrical connections throughout the entire train

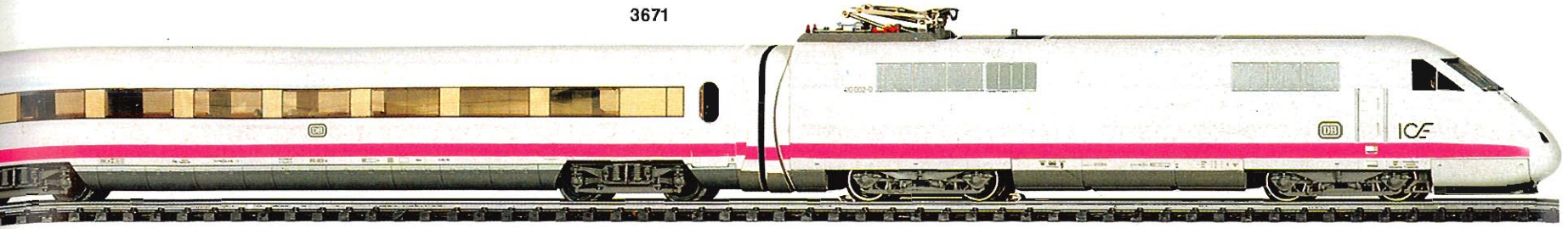
Close coupling plug connections as a straight drawbar between the 3 cars · Closely fitting, sprung corridor end connections · Train length 70 cm (27-5/8")

=7154 =7164 =60001 r
=7175 =60015 w

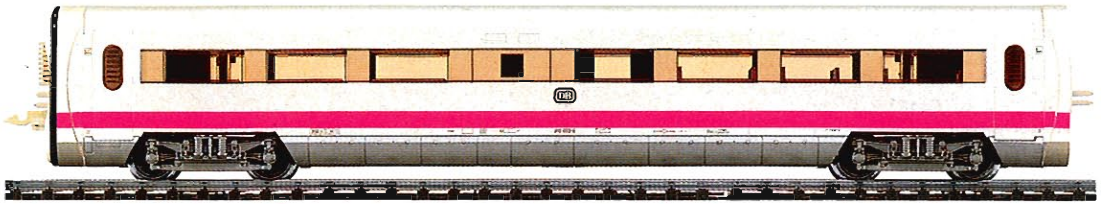
4071 · TEE Intermediate Car · 1st class compartment car · To be used with 3071 railcar train set · Close coupling plug connections and sprung corridor end connections for seamless appearance when used in the train · Continuous electrical connection · Length 23.3 cm (9-3/16")

The TEE train illustrated is composed of the three unit 3071 set and one 4071 intermediate car, the composition most often seen in use in the prototype. The four unit train measures 93,3 cm (36-3/4").

3371
3671



4171



4171 · ICE Intermediate Car · To be used with 3371 and 3671 railcar train sets · Close coupled snap connections with moveable intermediate element for seamless appearance when used in the train · Continuous electrical connection · Interior details · Interior illumination · Several intermediate cars can be used in the train · Length 24.5 cm (9-3/8")

=60008

3071

The still legendary image of the Trans-Europe-Express was shaped by five railcar train sets in the 1960's. They were jointly developed by the Swiss Federal Railways and the Dutch Railways.

Two 16 cylinder diesel generators in the six-axle power end unit produce current for the four electric traction motors in the outer axles of both trucks. They allow the train a top speed of 140 km/h (87.5 m.p.h.). The middle axles in each power truck serve to spread out the axle load.

The diesel-electric principle of propulsion was chosen because it was planned that the trains would operate between Amsterdam and Zurich as the TEE "Edelweiss". The route went via Basle, Luxemburg and Brussles under four different catenary power systems. A train powered by catenary would have required multiple power changes and the railcar concept would not have been achievable.

In comparison with electric traction the maintenance for the trains proved too expensive, however. Therefore, in 1976 four of the trains were overhauled and sold to Canada painted for the Ontario Northland Railway. The Märklin model of the "Northlander" of 1978 is today a very valuable and sought after collector's piece.

The "Bavaria Train", photographed on the POLA Company's layout scene "Winter Vacation in Upper Bavaria".


Bayern
E 44
21534
V

2861 · Beet Train · 1 diesel-hydraulic industrial switch engine of a sugar refinery · 2 E 017 and 2 E 020 gondolas of the German Federal Railroad as well as 1 Belgian gondola

3 axles on the locomotive powered · 2 traction tires · Illuminated triple headlight · Metal frame · Coupler hooks

Cars have removeable sugar beet load inserts · Individual car numbers · Weathered paint schemes · RELEX couplers

Diecast metal model of a farm tractor with load bed · Locomotive and cars in special edition · Not available separately · Train length 72 cm (28-3/8")

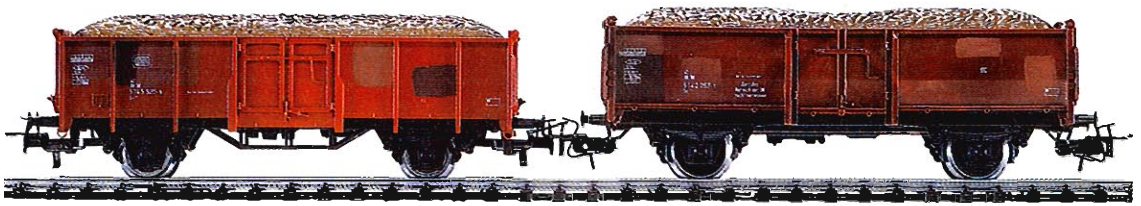
⓪ = 7154 ⌓ = 7185 ♀ = 60015

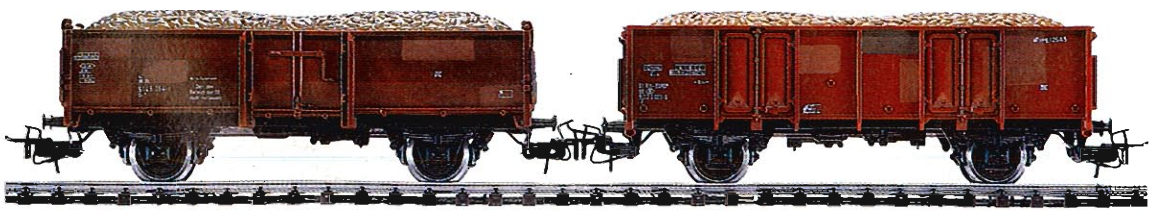
Every year in September, when the "compaign" to harvest beets begins for the farmers, beet trains are everywhere on the rails in and around the great agricultural areas. Trucks and tractors stand at freight stations and their drivers want to transfer their heavy loads as quickly as possible onto freight cars so that the sugar content does not diminish. The German Federal Railroad keeps several thousand gondolas (mostly two-axle types) ready for this purpose.

When gondolas are demoted to beet cars after years of carrying "higher value" freight, they are not allowed to be used to haul anything else. At this point they are usually viewed as being at the end of their careers.

One of the automated forms of loading is a rig that tips an entire trailer so that the important beets fall into the freight car; they are often unloaded with a strong water jet.

The cars carry the beets from the collection points to the large sugar refineries according to precise time schedules. There the trains are often brought by switch engines owned by the refinery to the unloading stations where the beets are processed and refined into sugar crystals.





2660 · Digital

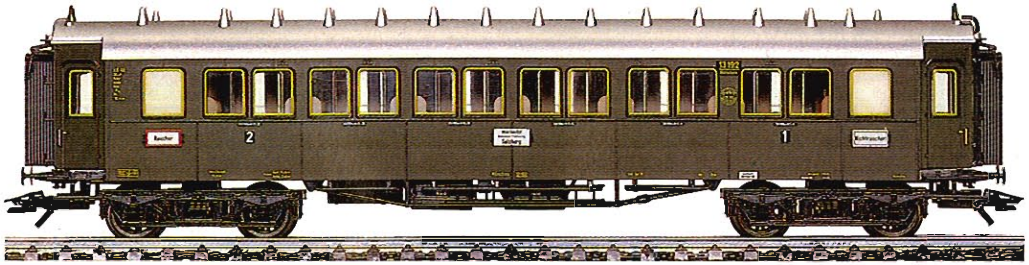
2860 · Express Train of the Former German State Railroad Company (DRG) · Design by the Bavarian Administrative Group around 1926 · 1 EP 5 (class E 52) electric locomotive, 1 express coach 1st/2nd class, 1 express coach 3rd class and 1 express train baggage car ·

Locomotive with foot plates at the ends · 3 axles powered · 4 traction tires · Illuminated triple headlight · Metal frame · Coupler hooks · Electronic reverse unit

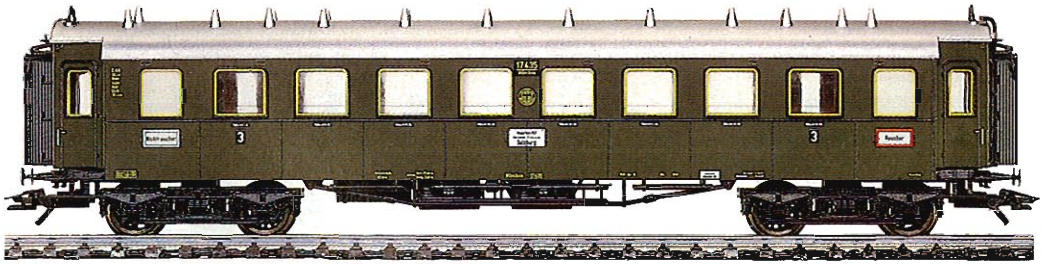
Cars have interior details · Baggage car has 4 sliding doors · Automatic close couplers · Equipped for installation of 7332 lighting kit

Locomotive and cars in special edition · Not available separately · Train length 85 cm (33-½")

0 = 7153 = 7164 = 60008

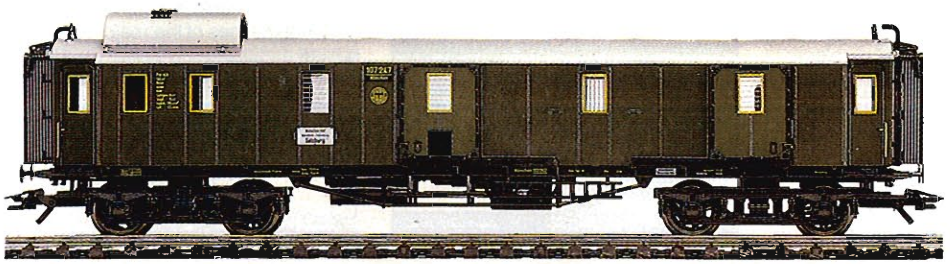


The cars are the result of a joint project with the TRIX Company of Nürnberg.



The Bavarian railways were among the pioneers in electrification in Germany. This was due to the geographical conditions of the mountainous province; Bavaria had large quantities of water power ready as a natural resource for electricity. The geography also placed heavy demands on locomotive performance.

Although one of the first new designs of the German State Railroad (founded in 1920), the 35 class EP 5 passenger train locomotives entered service in 1924 with provincial railroad numbers and were reclassified in 1927/28 as the E 52. Thus the brown EP 5 21534 first became the green E 52 34 and still later the 152 034, until it was returned to its original condition as a museum locomotive.



The cars of the Märklin train, built in 1902 and 1908, shaped the image of express trains on Bavarian long distance routes and elsewhere well into the State Railroad period.

The train will be produced in a one-time series only in 1988.

2862 · Demonstration Train for the German Federal Railroad's New Paint Scheme · 1 class 111 express locomotive, 1 Inter City car, 1 Inter Regio car, 1 City Bahn car and 1 S-Bahn car

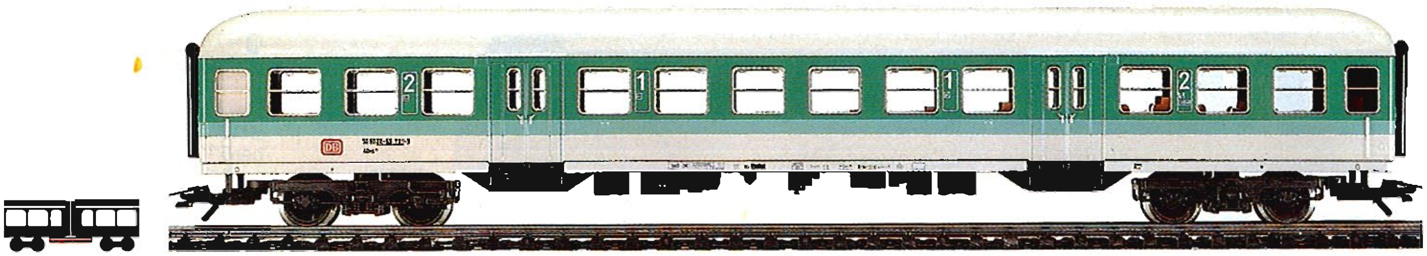
2 axles on the locomotive powered · 4 traction tires · Illuminated triple headlight · Metal frame · RELEX couplers

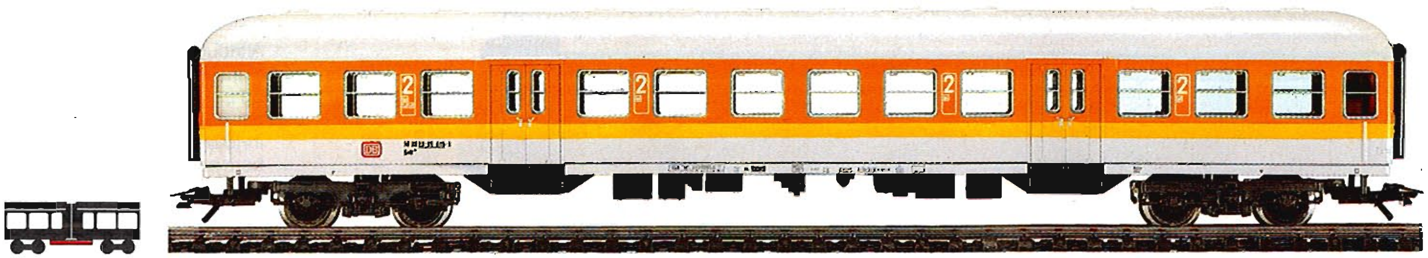
Cars have interior details · Automatic close couplers · Equipped for installation of 7330 lighting kit

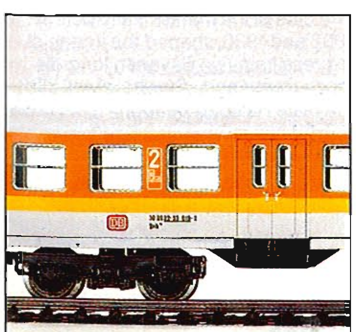
Locomotive and cars in special edition · Not available separately · Train length 130 cm (51-1⁄16")

=7153 =7164 =60008

2662 · Digital

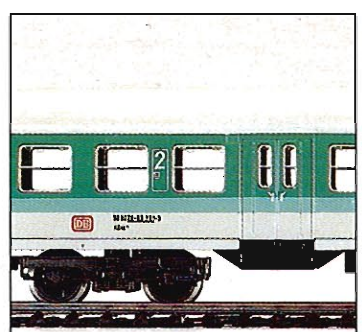






S-Bahn

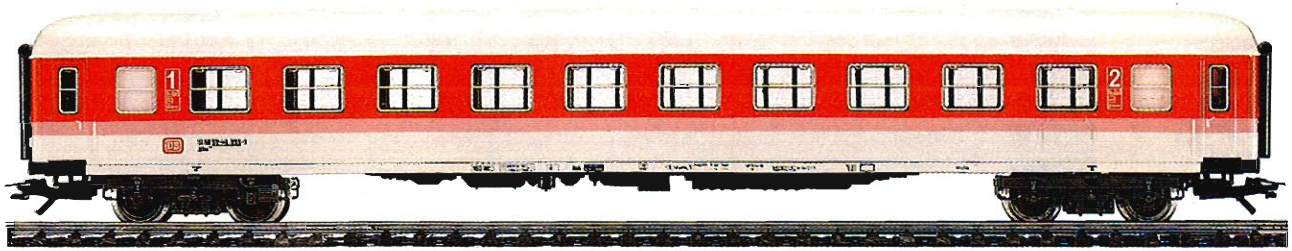
Like the basic color orange, the DB's future plans for the traffic within the large urban areas corresponds to the current, modern S-Bahn: Dedicated lines with numerous stops, high train frequency and cars with high volume seating and easy entry.

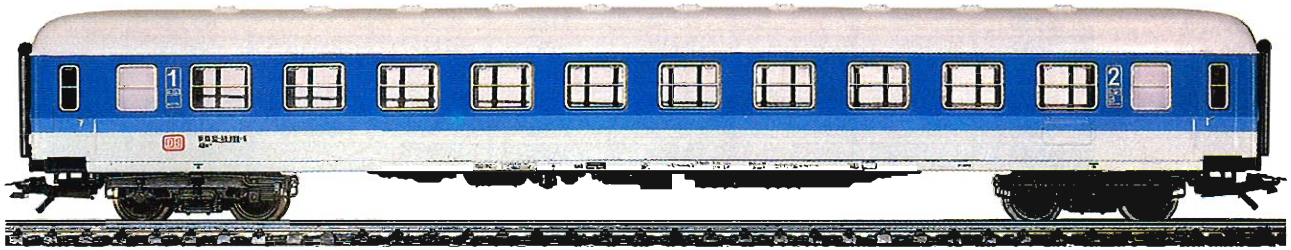


City Bahn

The basic color turquois accompanies the DB's new, successful concept for regional commuter traffic in the commuter zones of the major metropolitan areas: the City Bahn. Regional traffic is served with frequent schedules and newly designed, comfortably equipped commuter cars or with modern express railcars.

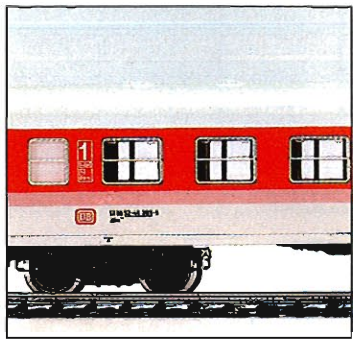
The train will be produced in a one-time series only in 1988.





Inter Regio

The DB wants to adapt the express train traffic between regions and medium-sized traffic centers to current demands with the Inter Regio system. Newly organized route networks, favorable travel times and a high standard of conveyance form the basis of the system. The rolling stock painted in blue will consist chiefly of modernized, comfortably equipped standard express train cars.



Inter City

Glowing red is the trademark characteristic for the DB's top services. Inter City and Euro City as a competitive, long distance route network link the German and European metropolitan areas together. The successful concept of speed, comfort and service will be retained almost unchanged in the new design. Modern, air conditioned open seating and compartment cars are used.

Locomotives

The color currently chosen by the DB for all new and newly painted locomotives is as highly individual as it is brilliantly simple: red. A white surface at the ends remains as a creative element and it is intended to improve recognizability. The final form for this "bib" has not been decided for the various types of locomotives, however.

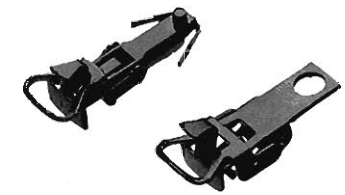
Spare Parts for Locomotives

The installation procedures for traction tires, pickup shoes, light bulbs and reverse unit springs are described in the instructions for use.

The table contains the most important spare parts for each locomotive and these parts can be ordered through your dealer.

7180 · ★★★★★ · Conversion Kit for High-Efficiency Motor with Electronic Control · For all Märklin locomotives with drum-style commutator motors · Gives the locomotives greater power, controlled speed characteristics, adjustable maximum speed, adjustable acceleration rate, and controlled tractive effort · Electronic reversing for the direction of travel and headlights is integrated into the kit · Contains all necessary components for the five-pole, high-efficiency motor, the electronic control circuit and all necessary wiring and mounting hardware · Operating instructions with wiring diagram

The conversion of locomotives to the new propulsion system requires a certain amount of experience and we recommend that this work be done by trained dealers. Locomotives converted by these dealers will be given a one year warranty on the motor and the electronic circuit.



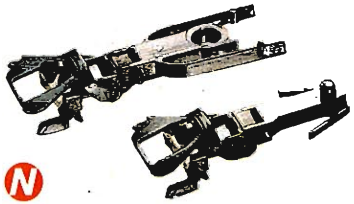
Catalog Number	Catalog Number ★★★★★	Catalog Number **Digital**	Traction Tires	Pickup Shoes	Panto-graphs	Light Bulbs	Brushes	Reverse Unit	Front Coupler	Rear Coupler
3000			7154	7185	–	60010	60030	20824	20001	20001
3003			7153	7185	–	60010	60030	20824	20214	70154
3016			7153	7164	–	60010	60030	20824	20989	20989
3021			7154	7183	–	60010	60030	20824	21166	21166
3028			7154	7164	–	60001	60030	21899	70412	70412
						60015				
3030			7153	7185	7218	60015	60030	20824	21128	21128
3039			7153	7164	7218	60015	60146	20824	21484	21484
3042		**3642**	7153	7164	7218	60008	60146	20824	70156	70156
3043			7153	7164	7218	60015	60030	20824	70412	70412
3049			7153	7185	7207	60015	60146	20824	70412	70412
3058			7153	7164	7218	60015	60146	20824	70412	70412
3060			7154	7185	–	60015	60030	20824	21583	21586
3065		**3665**	7153	7185	–	60010	60030	22970	21376	21376
									21377	21377
3067			7154	7164	–	60015	60030	20824	21783	21783
3071			7154	7164	–	60001	60030	22049	–	21929
				7175		60015				21951
										21954
3072		**3672**	7154	7164	–	60010	60030	20824	21842	21842
3074		**3674**	7154	7164	–	60015	60030	20824	70156	70156
3075			7154	7164	–	60015	60030	20824	70156	70156
3077			7154	7164	–	60015	60030	20824	–	–
3078			7154	7185	–	60015	60030	20824	20001	20001
3080			7154	7185	–	–	60030	20824	20001	20001
3081			7154	7183	–	60010	60030	20824	21166	21166
3082			7153	7164	–	60015	60146	20824	21843	21842
3084		**3684**	7153	7164	–	60015	60146	20824	21843	21842
3085			7152	7164	–	60010	60146	20824	–	21842
3087			7154	7185	–	–	60030	20824	20001	20001
3089			7152	7185	–	60015	60030	20824	–	70154
3092			7152	7185	–	60015	60030	20824	–	21842
3093			7152	7185	–	60015	60030	20824	–	21842
3095			7153	7185	–	60010	60030	20824	22532	21842
3096		**3696**	7153	7164	–	60015	60030	22970	24456	24456
									22897	22897
									22924	22924
3099			7152	7185	–	60015	60030	20824	22418	21842
3102			7153	7185	–	60015	60146	25220	21843	21842
3106			7153	7164	–	60015	60146	20824	24281	24281
3109		**3609**	7153	7164	–	60015	60146	20824	24281	24281
3125		**3605**	7154	7164	25640	60008	–	–	–	–

Catalog Number	Catalog Number ★★★★★	Catalog Number **Digital**	Traction Tires	Pickup Shoes	Panto-graphs	Light Bulbs	Brushes	Reverse Unit	Front Coupler	Rear Coupler
3129			7154	7185	–	60015	60030	20824	21583	21586
3133			7154	7164	–	60015	60030	20824	21783	21783
3141			7153	7185	–	60010	60030	20824	21411	21411
3146		**3646**	7154	7185	–	60015	60146	20824	70156	70156
3147			7154	7164	–	60010	60030	20824	21842	21842
3153		**3653**	7153	7164	7208	60015	60146	20824	70412	70412
3156			7153	7164	7218	60015	60146	20824	21484	21484
3157			7153	7185	7218	60010	60146	20824	21842	21842
3160			7153	7164	7218	60015	60030	20824	70412	70412
3162			7153	7164	7218	60015	60146	20824	21484	21484
3167			7153	7185	24800	60015	60146	20824	70156	70156
3304	**3504**	**3604**	7154	20182	–	60008	60146	–	70163	70163
3308			7153	7164	–	60010	60146	25220	24456	24460
3309			7153	7164	–	60010	60146	22970	24456	24460
									24457	24461
									22924	22925
3310		**3610**	7152	7164	–	60010	60146	25220	–	32540
3311	**3511**	**3611**	7152	28251	–	–	–	–	–	70163
3312			7153	7185	–	60019	60146	25220	21842	21842
3315		**3615**	7153	28027	–	60008	60146	–	21843	21842
3318	**3518**	**3618**	7152	7185	–	60008	60146	–	–	70163
3322			7153	7164	25530	60010	60030	25220	21842	21842
		3623	7153	7164	7219	60010	60146	–	24810	24810
3325		**3625**	7153	7164	7219	60010	60146	25220	24810	24810
3326			7153	7164	7219	60019	60146	25220	24810	24810
3329		**3629**	7153	7185	25783	60008	60146	25220	25776	25776
3330		**3630**	7153	7164	28049	60010	60146	25220	24810	24810
3332			7153	7164	25827	60008	60030	25220	21708	21708
		3650	7153	7164	25069	60008	60030	–	21708	21708
3352		**3652**	7153	7164	25953	60008	60146	25220	70156	70156
3353	**3553**	**3654**	7153	7164	23846	60008	60146	–	70412	70412
3355		**3655**	7153	7164	7247	60007	60146	25220	70156	70156
						60008				
3356			7153	7164	25460	60008	60146	25220	70156	70156
3357		**3657**	7153	7164	7247	60008	60146	25220	22313	22313
3358	**3558**	**3658**	7153	7164	23846	60008	60146	–	22313	22313
3366			7153	7164	25783	60008	60146	25220	70412	70412
3371		**3671**	7154	7164	25445	60007	–	–	–	–
						60008				
		3680	–	7164	–	–	–	–	–	–
4060			–	7185	–	60015	–	–	21583	21622
4129			–	7185	–	60015	–	–	21583	21622

Spare Parts for Locomotives

Locomotives which have been discontinued in the last 3 years:

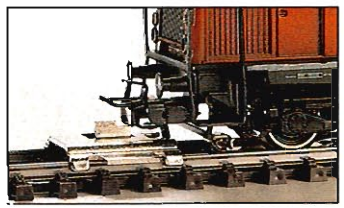
Catalog Number	Traction Tires	Pickup Shoes	Panto-graphs	Light Bulbs	Brushes	Reverse Unit	Front Coupler	Rear Coupler
3035	7153	7164	7218	60015	60146	20824	21484	21484
3041	7153	7164	7219	60015	60030	20824	70412	70412
3044	7154	7185	7219	60015	60030	20824	20001	20001
3066	7154	7164	–	60015	60030	20824	21783	21783
3104	7153	7185	–	–	60146	20824	20001	20001
3107	7153	7164	–	60015	60146	20824	24281	24281
3143	7154	7164	–	60015	60030	20824	21783	21783
3145	7154	7185	–	60015	60146	20824	70156	70156
3149	7153	7185	–	60010	60030	20824	21411	21411
3155	7153	7164	7218	60015	60146	20824	70156	70156
3163	7153	7164	7219	60015	60146	20824	70156	70156
3165	7153	7164	7218	60015	60146	20824	21773	21773
3168	7154	7164	7218	60015	60030	20824	21783	21783
3172	7153	7164	25827	60008	60146	20824	70156	70156
3313	7153	7185	–	60019	60146	25220	21842	21842
3323	7153	7164	7219	60010	60146	25220	70156	70156
3324	7153	7164	7218	60019	60146	25220	70156	70156
3327	7153	7164	7218	60019	60146	25220	70156	70156
3328	7153	7164	7219	60010	60146	25220	24810	24810
3346	7154	7185	–	60019	60146	25220	70156	70156
3350	7153	7164	25069	60008	60030	25220	21708	21708



7205 · Close Couplers for Cars and Locomotive without Guide · Interchangeable with standard Märklin **plastic** coupler · 10 couplers for locomotives (for 70156 and 70412) and 40 couplers for cars · Enables partial decrease in car spacing

7247 · Single Arm Pantograph · Type SBS 65 for modern locomotives · Interchangeable with 7218

7207 · Scheren Pantograph · Type SBS 10 for older design locomotives · Interchangeable with 7218



7001 · Coupler Gauge · For checking coupler height and position · Can be clipped to track

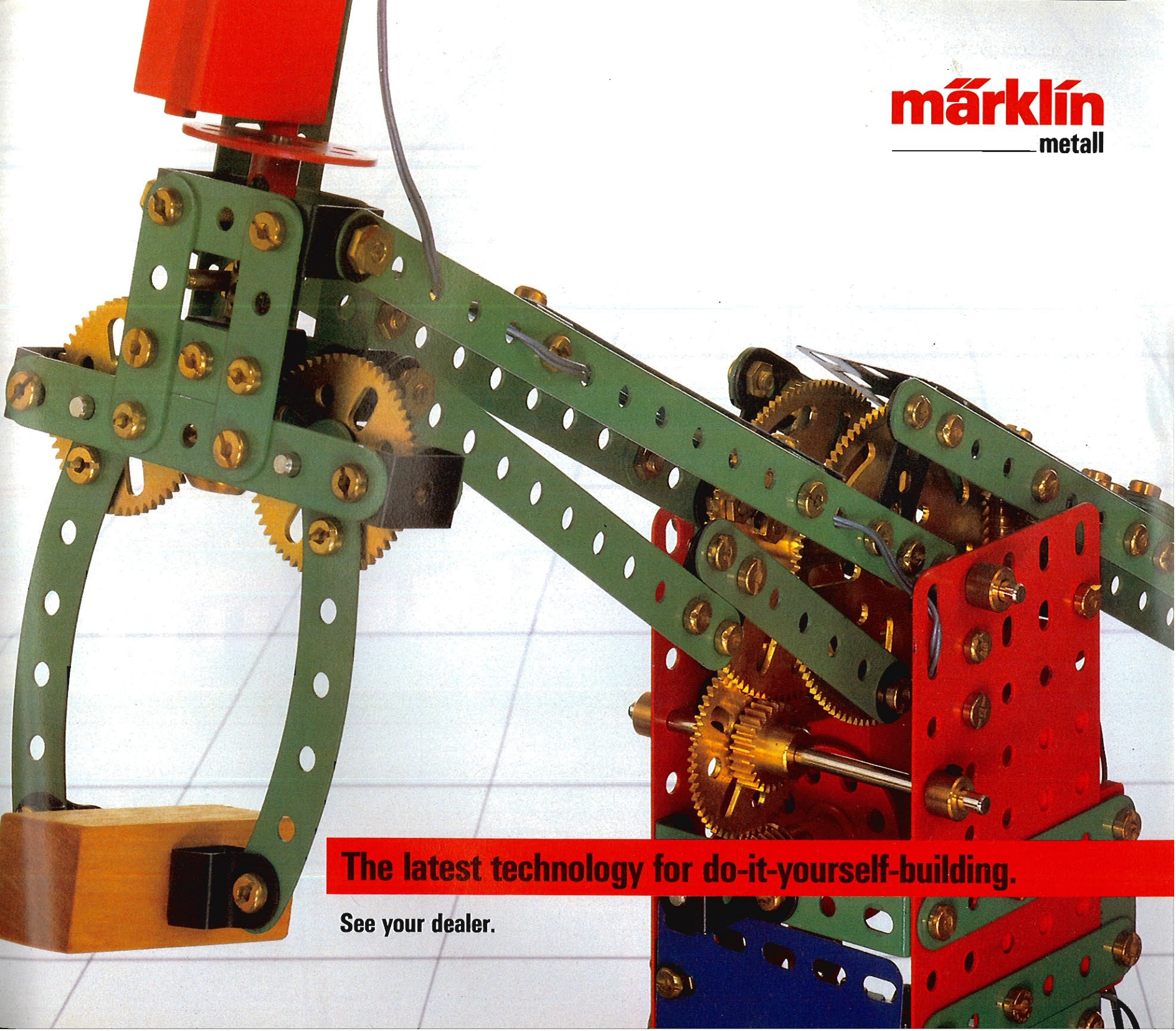
7194 · Reverse Unit Springs · Pack of 5 springs suitable for all conventional locomotives

7226 · Smoke Unit Kit · Includes smoke unit (for 3082, 3084, 3085, 3102, 3308, 3309, 3310, 3315, 3610, 3615 and 3684), extra smoke tube, cleaning wire, tweezers and a capsule of smoke fluid

0241 · Smoke Fluid · Plastic capsule refills for smoke unit kit 7226

7199 · Bottle of Oil · Contains 9 ml of a special oil for lubricating locomotives and cars

7224 · Rerailer · Facilitates the placing of multi-axle cars and locomotives on the track · Length 30 cm (1') · Height 2.5 cm (1")


märklin
metall
The latest technology for do-it-yourself-building.
See your dealer.

The "Rheingold" cars with class 18[4] express locomotive, photographed on the POLA Company's layout scene "Romantic Rhine Trip".

Passenger Cars

Car Set

Fine Metal

Metal as the basis for manufacturing passenger cars for toy and model railroads has a long tradition at Märklin. Evidence of this are the high collector values for legendary "Tin Plate" models, either hand painted as in the first decades of this century or lithographed sheet metal from the 1930's.

Today Märklin is the model railroad manufacturer which is developing thin sheet metal technology further and going against the competition with H0 models. It has been a number of years since details have been improved, such as embossed frames which give windows a realistic appearance instead of panes mounted from behind.

The thin sheet metal technology has received continuous further development and Märklin is doing everything to create a new standard of quality with it. In this connection the traditional "Rheingold" is being offered in order to present the new standard of the traditional technology. Naturally, the new cars are worlds apart from the collector's pieces of the prewar period. At the same time, the thin sheet metal technology will meet the model railroaders' criteria, and the metal character and thereby tangible fidelity to the prototype will be preserved.

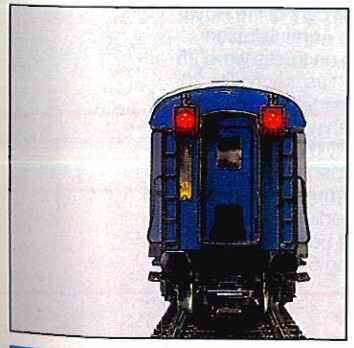
One of the advantages in using thin sheet metal as a raw material is that the coachwork is given its colors and lettering, before it is stamped and pressed into shape. Thanks to modern, precision tooling, it is possible to have exact coordination of the different decorative elements. Moreover, the "Rheingold" cars are provided with all of the attributes of modern model railroad cars. Among these are the close coupler kinetics, interior lighting with diodes, separately applied grab irons, roof vents and steps. It is not inconceivable that the tradition of metal as a raw material will be continued in the future with other series of passenger cars.

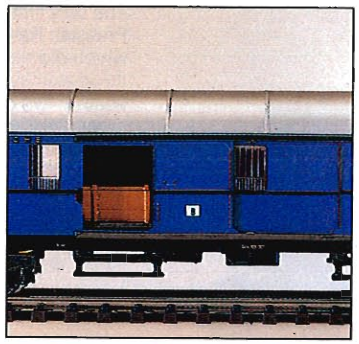
Sixty years ago, on May 15, 1928, the first luxury train with the name "Rheingold" traveled the 662 kilometers (413.75 miles) from the Hook of Holland through the Rhine Valley to Basle. There were a total of 26 specially built, 23.5 meter (approx. 77 ft.) long, cream and violet salon cars and they offered previously unknown luxury, freedom of movement and individual seating in 1st and 2nd class. They were also longer than all previous passenger cars.

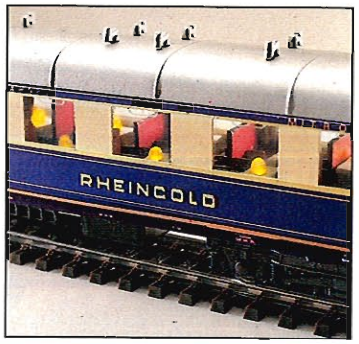
Long before the wave of steam locomotive nostalgia, the Bavarian class S 3/6 locomotives from the Munich Maffei factories had been considered aesthetically very successful for quite some time. For this reason and due to their great reserves of power, they were a natural choice to pull the "Rheingold" luxury train which was the German State Railroad's premier train. As the State Railroad class 18[4], the Pacifics, together with the long cars, offered the image of a perfect, uniform whole with their V-shaped cab and cone-shaped smoke box door as well as the massive low-pressure external cylinders.

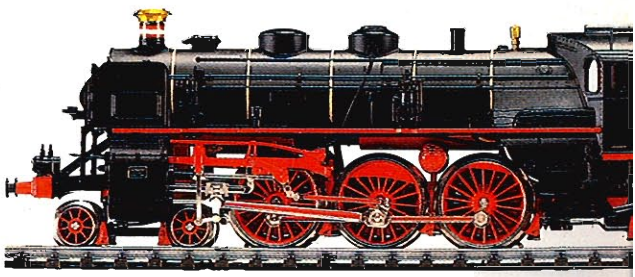
The Rheingold locomotives were initially stationed in Wiesbaden and later in Mainz, and were responsible for pulling the train between Mannheim and Zevenaar in Holland.

The train was taken out of service when the war broke out and it was not until 1951 with the DB that there was once again a "Rheingold". It was the last TEE (in Germany) taken out of service in 1987.









4228 · "Rheingold" Car Set · 5 long distance express cars of the former German State Railroad Company (DRG): 1 salon car SB 4ü 28 2nd class, 1 salon car SB 4ü K 28 2nd class with galley, 1 salon car SA 4ü 28 1st class, 1 salon car SA 4ü K 28 1st class with galley and 1 baggage car SPw 4ü 28

All metal car bodies · Interior details with illuminated table lamps · Baggage car with 4 sliding doors and illuminated marker lights · Maintenance-free LED's for all lighting · Continuous electrical connections between cars using special, rigid, plug-in close couplers · All cars have standard coupler pockets, the first and last cars have automatic close couplers

All cars in a special edition · Not available separately · Total length 131 cm (51-½")

=27150

The "Rheingold" cars reproduce the train as it looked in the 1930's. One of the most beautiful locomotives in use at the time, the DRG's class 18^4, is available as model **3518** to go with the train.

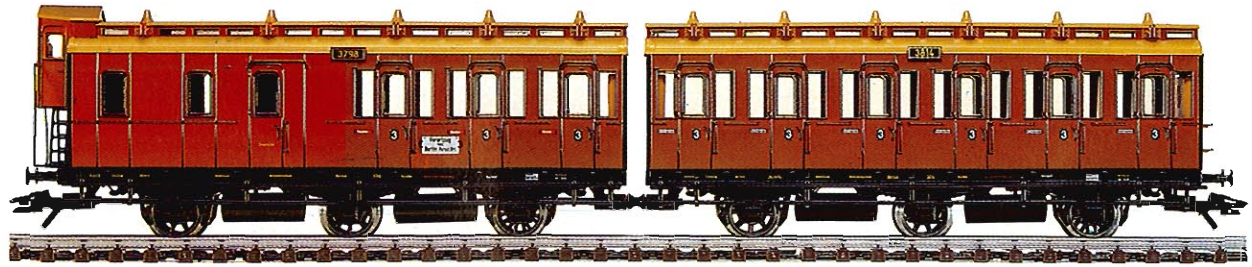
Compartment Cars

Royal Prussian Railroad Administration (KPEV)

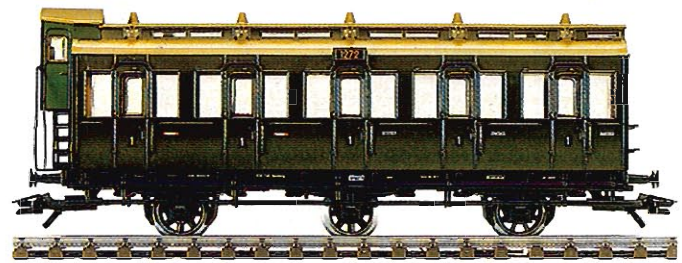
4207 · Double Compartment Car · B3/B3 for the Berlin Metropolitan Railroad · 2nd class · Interior details · Permanent close coupling between the car halves · Automatic close couplers at the car ends · Length 26.4 cm (10-3/8")

4208 · Double Compartment Car · C3/C3 with brakeman's cab for the Berlin Metropolitan Railroad · 3rd class · Interior details · Permanent close coupling between the car halves · Automatic close couplers at the car ends · Length 26.7 cm (10-1/2")

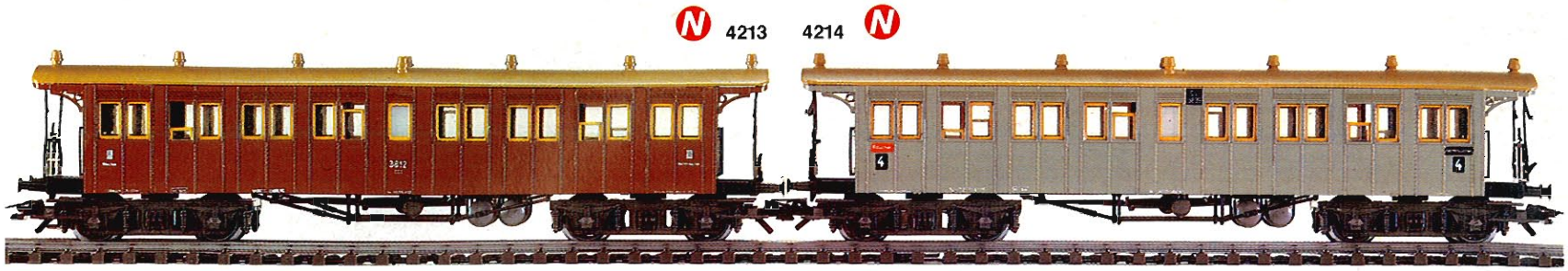
4209 · Double Compartment Car · C3/C3 P with baggage compartment for the Berlin Metropolitan Railroad · 3rd class · Interior details · Permanent close coupling between the car halves · Automatic close couplers at the car ends · Length 26.7 cm (10-1/2")



4206 · Compartment Car · A3 with brakeman's cab for the Berlin Metropolitan Railroad · 1st class · Interior details · Automatic close couplers · Length 13.8 cm (5-7/16")



The only first class cars of the Royal Prussian Railroad Administration which did not run on trucks were 25 three-axle single cars, each with 30 seats in five compartments for the main line from Berlin to Potsdam. They were used by members of the royal court and state guests. The cars ran only in the commuter trains to Potsdam – Wildpartk – Werder. Twenty of them were built between 1903 and 1913, the remaining 5 in 1915.



First class in all classes

The stylish open platform cars from the provincial railroad period form the appropriate train for the Royal Württemberg class C **(3511).** Like the "Beautiful Lady of Württemberg", the models bring together in modern technology the high demands for operational reliability and loving, delicate detailing.

Express Train Open Platform Cars from the Royal Württemberg State Railways (K.W.St.E.)

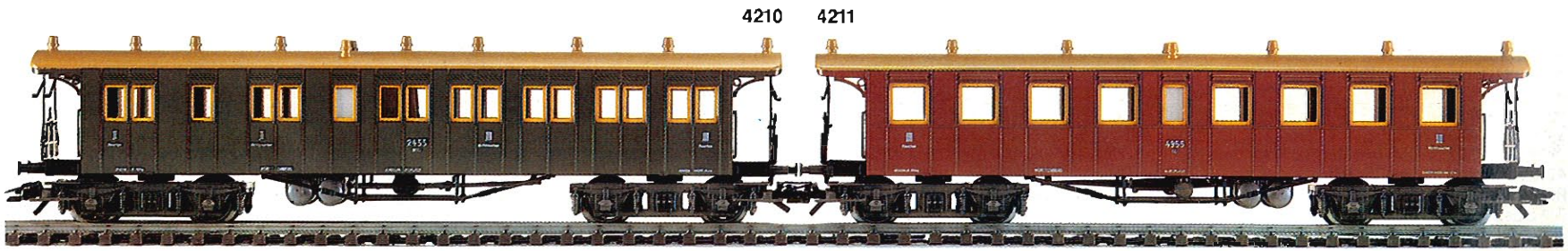
Stable body design with separate roof piece · Separately applied roof vents of turned metal · Foot plates and roof supports of etched metal · Interior details according to car type · Single piece car floors with numerous separately applied details: truss rods, brake rigging, gas tanks, etc. · Standard provincial railroad design trucks · Spoked wheels · Automatic close couplers · NEM 362 coupler pockets · All passenger cars equipped for installation of 7333 lighting kit

4210 · **Coach** · BC (BC4i Wü 00) · 2nd and 3rd class · Length 19.1 cm (7-½")

4213 · **Coach** · C, 1st design (C4i Wü 99) · 3rd class · Length 18.3 cm (7-3⁄16")

4214 · **Coach** · C4 (C4id Wü 99) · 4th class · Length 18.3 cm (7-3⁄16")

4211 · **Coach** · C, 2nd design (C4i Wü 01) · 3rd class · Length 18.3 cm (7-3⁄16")



4212 · **Baggage Car** · Gep (Pwi Wü 09) · With work area and pet compartment · Glassed-in coupola with interior details · Sliding doors · Length 13 cm (5-⅛")

Royal Bavarian State Railroad (K. BAY.STS.B.)

4135 · Coach · CCü · 3rd class · Interior details · Automatic couplers · Length 22 cm (8-5/8") · Equipped for installation of 7329 lighting kit

After World War I the position of the German provincial railroads became noticeably worse and there were loud demands for unification of the German railroad system under the control of the national government. The ratio of expenses to income on these systems was soon 2 : 1. The railroad budget for the provinces in 1919 had a deficit of 4.95 billion gold marks which climbed to 8 billion in 1920. In 1913 the provincial railroads had achieved a profit of one billion.

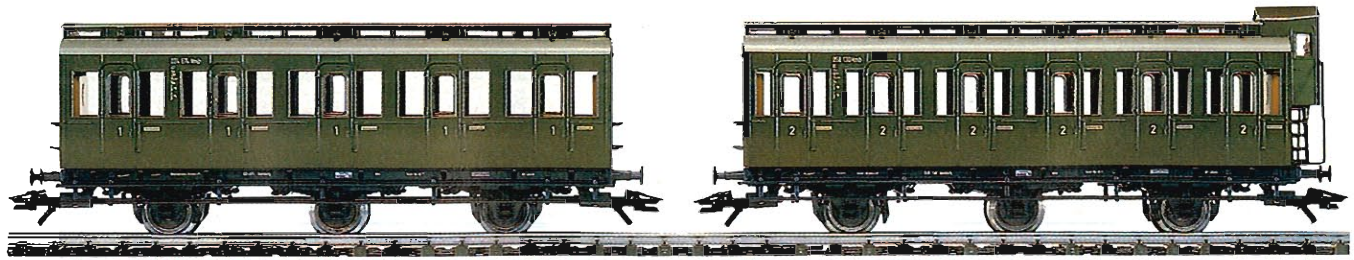
On April 1, 1920, the state agreement for "Nationalization" went into effect and eight provincial railroads were transferred to the national government. The railroad's financial situation did not thereby improve, however. In order to be able to function more efficiently, the authorities decided to work more rationally with the "standard design locomotives" and to make widespread use of new technologies.

In the area of rolling stock the situation remained colorful for quite a while. For example, there were trains consisting of individual compartment cars from Prussia, open seating cars from Württemberg and through corridor cars from Bavaria. Later, may of them were painted for the State Railroad. Even after World War II in a period of pressing shortages in rolling stock, there were cars in use which had their origins on a provincial railraod.

German Federal Railroad (DB)

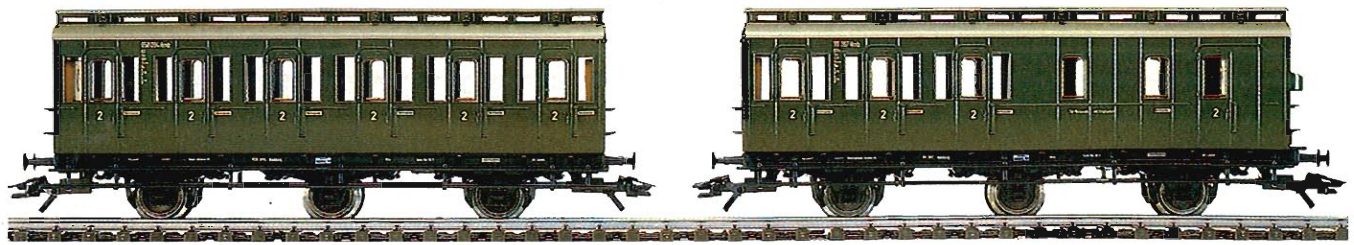
4200 · Compartment Car · A3 Pr 14 · 1st class · Interior details · Automatic close couplers · Length 13.5 cm (5-1/4")

4201 · Compartment Car with Brakeman's Cab · B3 Pr 11a · 2nd class · Interior details · Automatic close couplers · Length 13.8 cm (5-5/16")

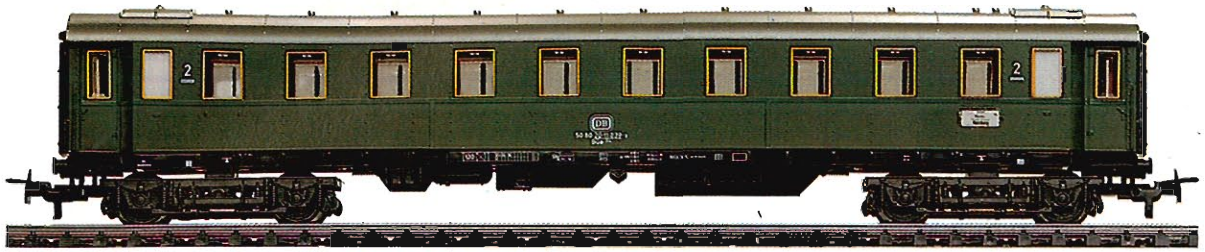


4202 · Compartment Car · B3 Pr 11b · 2nd class · Interior details · Automatic close couplers · Length 13.5 cm (5-1/4")

4203 · Compartment Car · B3tr Pr 14a · 2nd class for passengers with baggage · Interior details · Automatic close couplers · Length 13.8 cm (5-5/16")



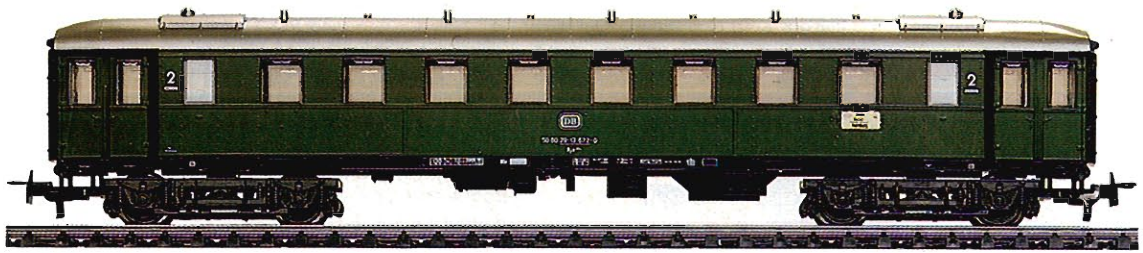
German Federal Railroad (DB)



4139 · Coach · Büe 354 · 2nd class · Interior details · Görlitz trucks · Automatic couplers · Length 24.3 cm (9-7⁄16") · Equipped for installation of 7329 lighting kit

4145 · Coach · Ayse 604 · 1st class · Interior details · Görlitz trucks · Automatic couplers · Length 24.3 cm (9-7⁄16") · Equipped for installation of 7329 lighting kit

4140 · Baggage Car · Düe 932 · Görlitz trucks · Automatic couplers · Length 22 cm (8-3⁄4") · Equipped for installation of 7329 lighting kit



4134 · Coach · Bye 664 · 2nd class · Interior details · Automatic couplers · Length 23 cm (9-1⁄16") · Equipped for installation of 7329 lighting kit

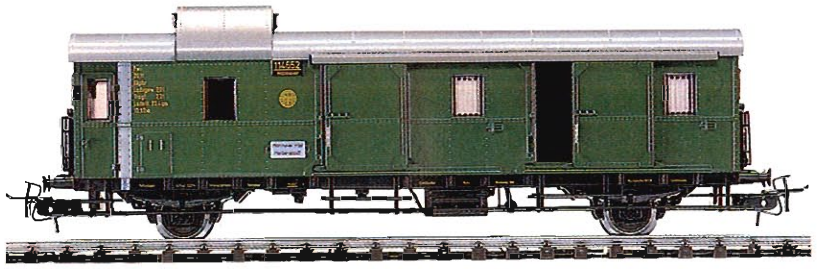
Passenger Cars

"Donnerbüchsen" – Standard Design Cars of the former German State Railroad Company (DRG)

4102 · Baggage Car · Pwi 30 · 4 sliding doors · Interior details · RELEX couplers · Length 16 cm (6-5/16")

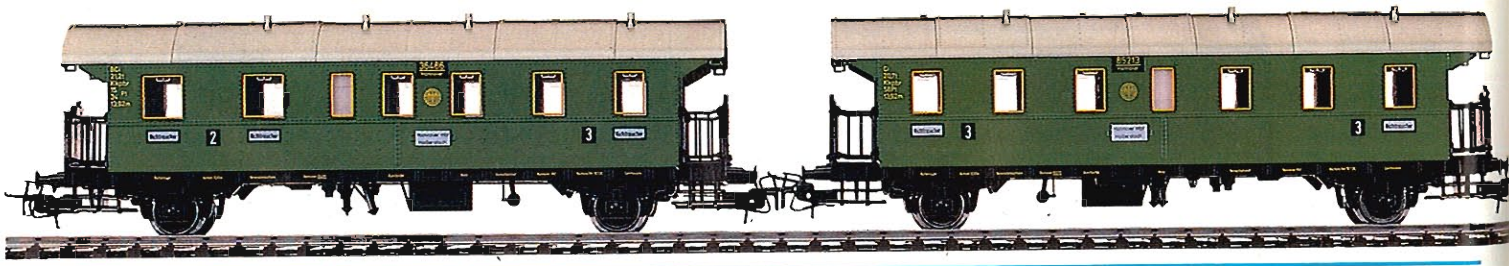
4103 · Baggage Car · Same as 4102, but with 2 illuminated marker lights · Maintenance-free LED's

=31051



4100 · Coach · BCi 29 · 2nd and 3rd class · Interior details · RELEX couplers · Length 16 cm (6-5/16")

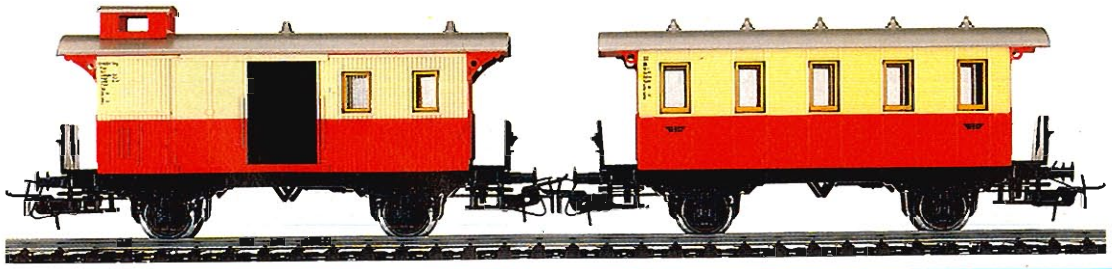
4101 · Coach · Ci 29 · 3rd class · Interior details · RELEX couplers · Length 16 cm (6-5/16")



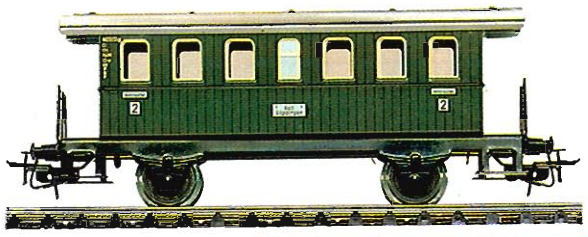
Cars of Privately Owned Railways

4108 · Baggage Car · With conductor's cupola · RELEX couplers · Length 11 cm (4-3/8") · Equipped for installation of 7323 lighting kit

4107 · Coach · Interior details · RELEX couplers · Length 11 cm (4-3/8") · Equipped for installation of 7323 lighting kit



4040 · Coach · 2nd class · RELEX couplers · Length 11.5 cm (4-1/2")

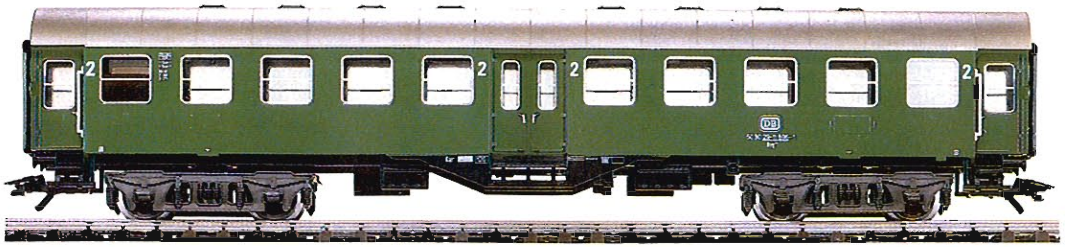


10 Million of the 4040 Car

The most successful car in the Märklin line, and thereby probably the model railroad car built in the largest quantities for all time is the little passenger car with the catalog number 4040. Since its introduction in 1960, well over 10 million of this car in the classic sheet metal construction have been produced. For countless model railroaders, it, along with the first train from a starter set, was the beginning of a great friendship.

German Federal Railroad (DB)

4131 · Coach · AByg 503 · 1st and 2nd class · Interior details · Automatic close couplers · Length 22.4 cm (8-¾") · Equipped for installation of 7329 lighting kit



4132 · Coach · Byg 515 · 2nd class · Interior details · Automatic close couplers · Length 22.4 cm (8-¾") · Equipped for installation of 7329 lighting kit

4133 · Coach with Baggage Compartment · BDyg 533 · 2nd class · Interior details · Automatic close couplers · Length 22.4 cm (8-¾") · Equipped for installation of 7329 lighting kit

After the end of the war, the railroad had thousands of obsolete passenger cars in its possession, some of which dated from the provincial railroad period. Some of them had suffered war damage or were worn out, others did not meet the requirements for the new mass transportation. The Federal Railroad modernized them in a large rebuilding program. The old car bodies were scrapped, the frames were overhauled, made to a standard length and used for "new" cars.

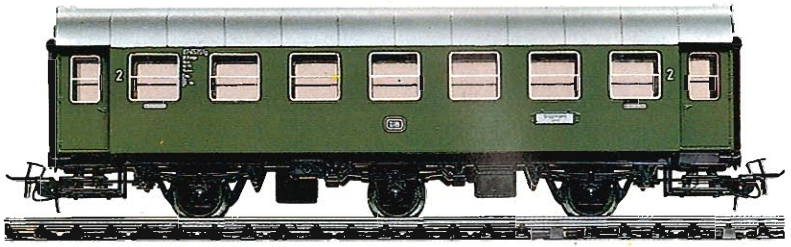
Upholstered seating in all classes was something quite new in addition to the materials used for the rebuilding program. The first 3-axle rebuild cars went into operation in 1954, the first 4-axle versions a year later. A total of 1,821 units of the standard 19.46 meter (63 ft. 10 in.) cars were assembled at different facilities. Many of the 4-axle units are still run today when there are not enough "Silverliners".

From 1959 to 1961, 339 of the type AByg 503 with 1st class compartment were manufactured. However, the largest number built was the Byg 515 with 72 seats in four 2nd class open seating areas. 666 units of it were built. In 1959 the maintenance facilities in Munich-Neuaubing delivered 127 type BDyg 533 cars in 2nd class with a baggage compartment.

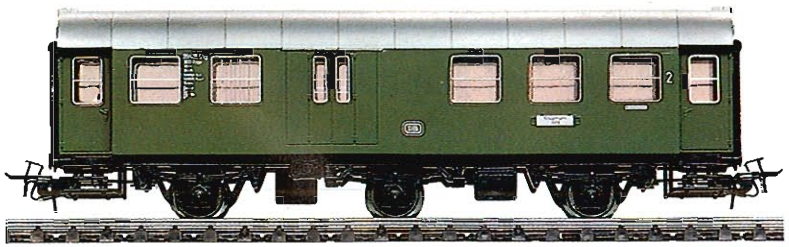
German Federal Railroad (DB)

4067 · Coach · AB 3 yge 756 · 1st and 2nd class · RELEX couplers · Length 15.2 cm (6") · Equipped for installation of 7074 lighting kit

4079 · Coach · B 3 yge 761 · 2nd class · RELEX couplers · Length 15.2 cm (6") · Equipped for installation of 7074 lighting kit



4080 · Coach with Baggage Compartment · BD 3 yge 766 · 2nd class · RELEX couplers · Length 15.2 cm (6") · Equipped for installation of 7074 lighting kit



The DB always operated 2 of the three-axle rebuild cars together in pairs. Like the four-axle units, the cars had originated from old passenger cars. It was possible to add a weather tight vestibule between the cars as with the express train cars, which speeded up the process of passengers entering and leaving the cars. After their entry into service in 1954, the three-axle rebuild cars were part of the commuter traffic image for a long time, often in trains together with the four-axle units or the Silverliners or old Prussian compartment cars.

Almost all of the Federal Railroad's locomotives have pulled the rebuild cars once in the latter's almost 30 year history. They were frequently seen behind tank locomotives of the classes 74, 75, 78 and 86. Locomotives with tenders in the classes 24, 38, 41 and 50 pulled commuter trains. Diesel locomotives in the classes 236 to the 212 and up to the 220 pulled and still pull today trains with rebuild cars in areas of the system without catenary, and in suburban trains it was electric locomotives of the classes 104, 110, 111, 140, 152 and even the 194.

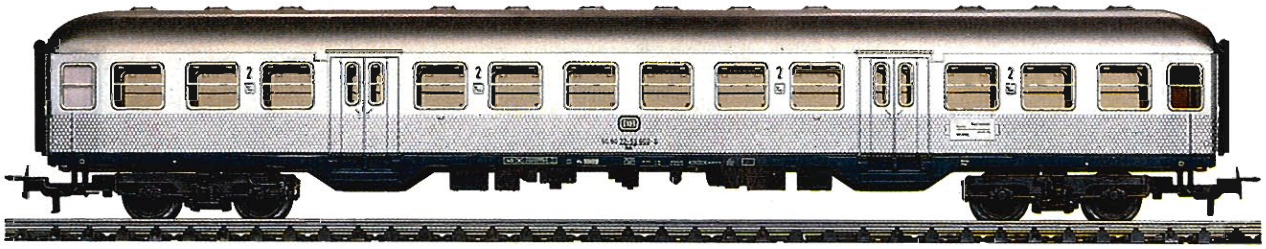
The Federal Railroad currently no longer uses the three-axle units in passenger trains, but many tourist railroads do. Many rebuild cars had to undergo a second rebuilding; they were converted to maintenance cars. They can be seen in many train stations on sidings in the Federal Railroad's turquois color.

Commuter Cars of the German Federal Railroad (DB)

4158 · Commuter Car · ABnrzb 704 · 1st and 2nd class · Interior details · Automatic couplers · Length 26.4 cm (10-3/8") · Equipped for installation of 7329 lighting kit

4255

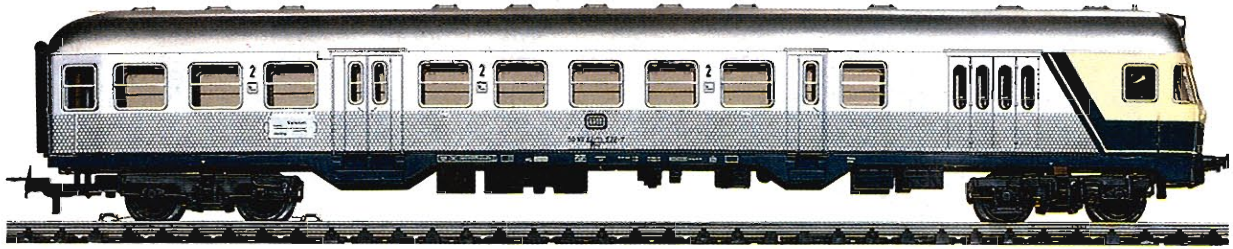
Equipped for installation of 7330 lighting kit



4159 · Commuter Car · Bnb 719 · 2nd class · Interior details · Automatic couplers · Length 26.4 cm (10-3/8") · Equipped for installation of 7329 lighting kit

4256

Equipped for installation of 7330 lighting kit



4160 · Commuter Car with Engineer's Cab · BDnf 735 · 2nd class with baggage area · Interior details · Headlights or marker lights illuminated according to direction of travel · Illuminated destination sign at the car end · Automatic coupler · Length 26.4 cm (10-3/8") · Equipped for installation of 7329 lighting kit

4257

Equipped for installation of 7330 lighting kit

When operated control car first, triple white headlights shine.

When operated control car last, dual red marker lights shine.

Commuter Cars of the German Federal Railroad (DB)

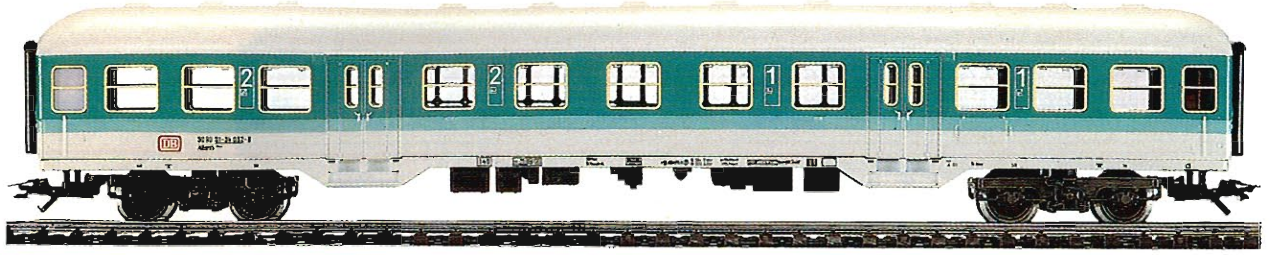
4183 · S-Bahn Coach · ABx 791 · 1st and 2nd class · Interior details · Automatic close couplers · Length 24.5 cm (9-¾") · Equipped for installation of 7330 lighting kit

4184 · S-Bahn Coach · Bx 794.1 · 2nd class · Interior details · Automatic close couplers · Length 24.5 cm (9-¾") · Equipped for installation of 7330 lighting kit

4185 · S-Bahn Coach with Engineer's Cab · Bxf 796.1 · 2nd class · Interior details · Headlights or marker lights illuminated according to direction of travel · Illuminated destination sign at the car end · Automatic close coupler · Length 25.3 cm (10-⅛") · Equipped for installation of 7330 lighting kit

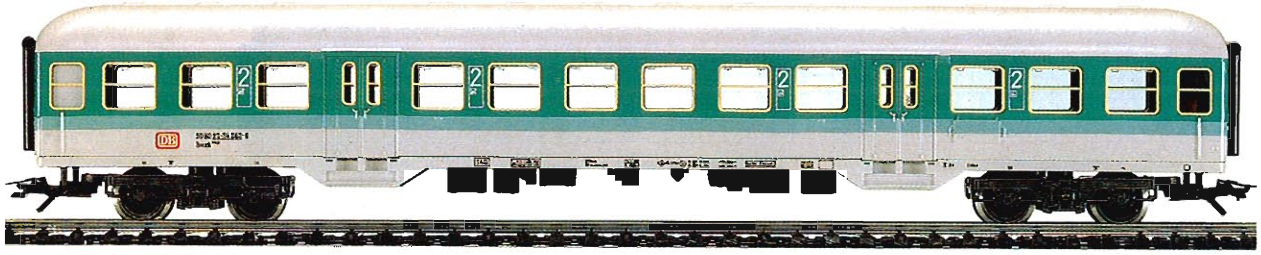
When operated control car first, triple white headlights shine.

When operated control car last, dual red marker lights shine.

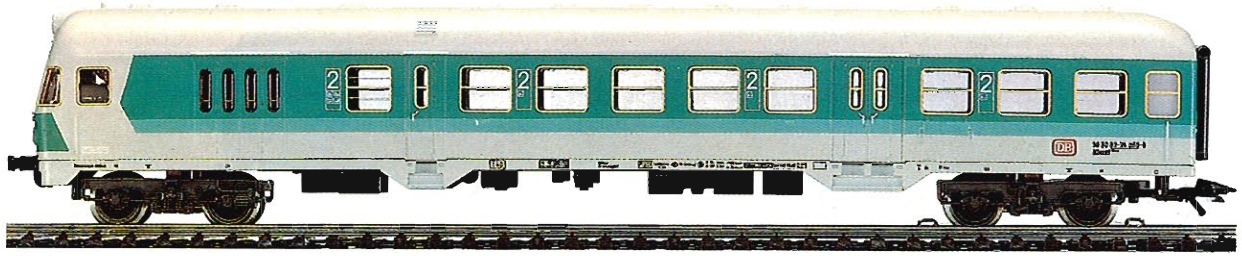


Commuter Cars of the German Federal Railroad (DB)

4258 · City Bahn Commuter Car · ABnrzb 704 · 1st and 2nd class · Interior details · Automatic close couplers · Length 26.4 cm (10-3/8") · Equipped for installation of 7330 lighting kit



4259 · City Bahn Commuter Car · Bnb 719 · 2nd class · Interior details · Automatic close couplers · Length 26.4 cm (10-3/8") · Equipped for installation of 7330 lighting kit

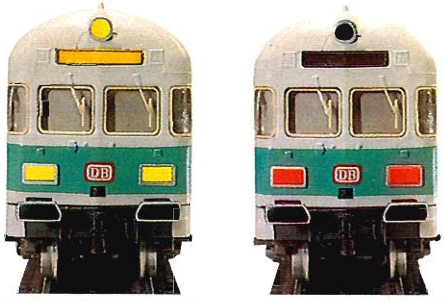


4260 · City Bahn Commuter Car with Engineer's Cab · BDnf 735 · 2nd class with general purpose area · Interior details · Headlights or marker lights illuminated according to direction of travel · Illuminated destination sign at the car end · Automatic close coupler · Length 26.4 cm (10-3/8") · Equipped for installation of 7330 lighting kit

With the yearly schedule change in May of 1987, the Federal Railroad not only painted 19 commuter cars in new colors, but also equipped them with totally new interiors. A modern design of open seating compartment with individual seating in both classes was installed.

Since late summer 1987, the cars have been used on the route Hamburg-Neugraben – Stade in a continuation of the City-Bahn concept successfully tried out between Cologne and Gummersbach. There the DB's City Bahn caused a double digit increase in the number of passengers and reduced the deficit on this route considerably.

City Bahn is not just modernized cars, but also regular frequent schedules, more parking spaces at the train stations, renovated station buildings and service at and on the train.



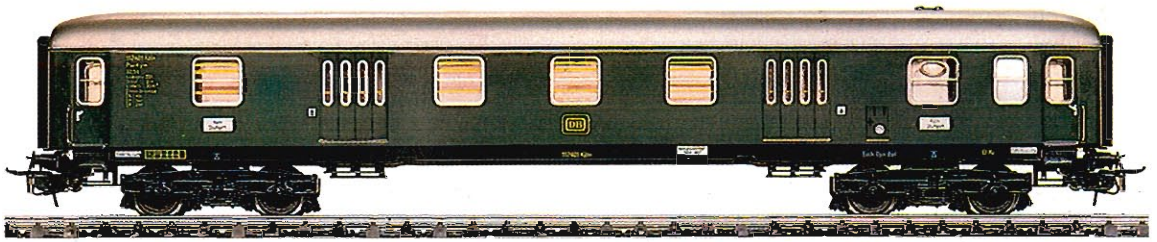
When operated control car first, triple white headlights shine.

When operated control car last, dual red marker lights shine.

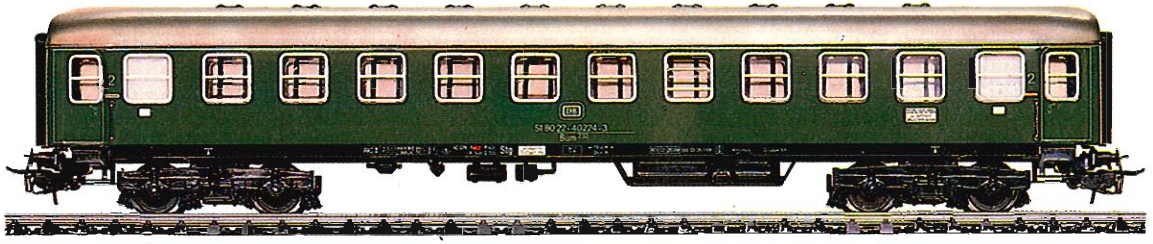
Passenger Cars 24 cm (9-½")

German Federal Railroad (DB)

4026 · **Baggage Car** · Dym 961 · Metal body · RELEX couplers · Length 24 cm (9-½") · Equipped for installation of 7077 lighting kit and 7198 pickup shoe



4052 · **Coach** · Büm 232 · 2nd class · Metal body · Interior details · RELEX couplers · Length 24 cm (9-½") · Equipped for installation of 7077 lighting kit and 7198 pickup shoe



4051 · **Coach** · Aüm 202 · 1st class · Metal body · Interior details · RELEX couplers · Length 24 cm (9-½") · Equipped for installation of 7077 lighting kit and 7198 pickup shoe

4053 · **Coach** · Same as 4051, but with illuminated marker lights · Maintenance-free LED's · Equipped for installation of 7077 lighting kit

=7175

German Sleeping and Dining Car Company (DSG)

4188 · **Dining Car** · WRümh 132 · Metal body · Interior details · RELEX couplers · Length 24 cm (9-½") · Equipped for installation of 7320 lighting kit

German Federal Railroad (DB)

4111 · **Coach** · Am 202 · 1st class · Metal body · Interior details · RELEX couplers · Length 24 cm (9-½") · Equipped for installation of 7077 lighting kit and 7198 pickup shoe

4112 · **Coach** · Bm 232 · 2nd class · Metal body · Interior details · RELEX couplers · Length 24 cm (9-½") · Equipped for installation of 7077 lighting kit and 7198 pickup shoe

German Sleeping and Dining Car Company (DSG)

4064 · **Sleeping Car** · WLABüm 174 · 1st and 2nd class · Metal body · RELEX couplers · Length 24 cm (9-½") · Equipped for installation of 7320 lighting kit

German Federal Railroad (DB)

4130 · **Sleeping Car** · WLABm 174 · 1st and 2nd class · Metal body · RELEX couplers · Length 24 cm (9-½") · Equipped for installation of 7320 lighting kit

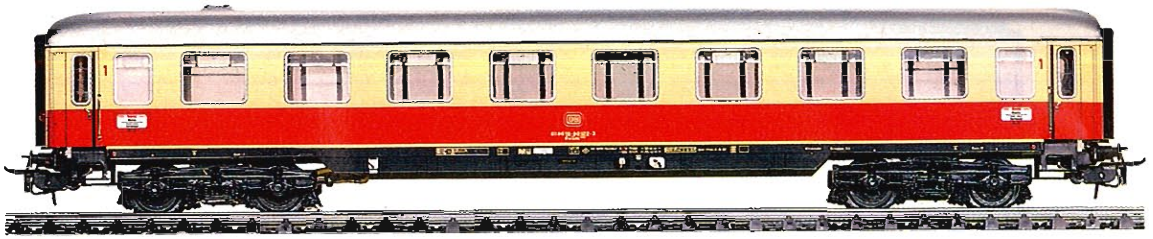
TEE/IC Passenger Cars 24 cm (9-½")

German Federal Railroad (DB)

4085 · TEE/IC Compartment Car · Avmh 111 · 1st class · Metal body · Interior details · RELEX couplers · Length 24 cm (9-½") · Equipped for installation of 7320 lighting kit

4089 · TEE/IC Compartment Car · Same as 4085, but with 2 illuminated marker lights · Maintenance-free LED's · With interior lighting 7320

=7175 =60015

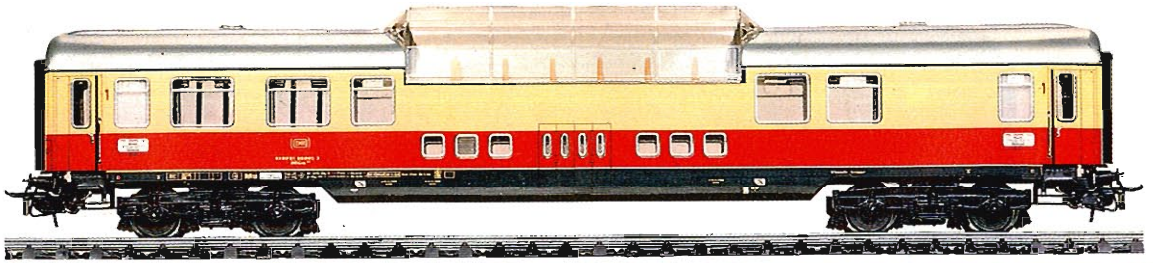


German Sleeping and Dining Car Company (DSG)

4087 · TEE/IC Dining Car · WRmh 132 · Metal body · Interior details · RELEX couplers · Length 24 cm (9-½") · Equipped for installation of 7320 lighting kit

German Federal Railroad (DB)

4090 · TEE Vista Dome Car · ADm 101 · 1st class · Metal body · Interior details · RELEX couplers · Length 24 cm (9-½") · Equipped for installation of 7322 lighting kit



7224 · Rerailer · Facilitates the placing of multi-axle cars and locomotives on the track · Length 30 cm (1') · Height 2.5 cm (1")

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Passenger Cars 27 cm (10-5/8")

German Federal Railroad (DB)

4091 · **Coach** · Am 203 · 1st class · Interior details · Automatic couplers · Length 27 cm (10-5/8") · Equipped for installation of 7329 lighting kit

4291

Equipped for installation of 7330 lighting kit

4092 · **Coach** · Bm 234 · 2nd class · Interior details · Automatic couplers · Length 27 cm (10-5/8") · Equipped for installation of 7329 lighting kit

4154 · **Coach** · Same as 4092, but with 2 illuminated marker lights · Maintenance-free LED's

=41494

4292

Same as 4092 · Equipped for installation of 7330 lighting kit

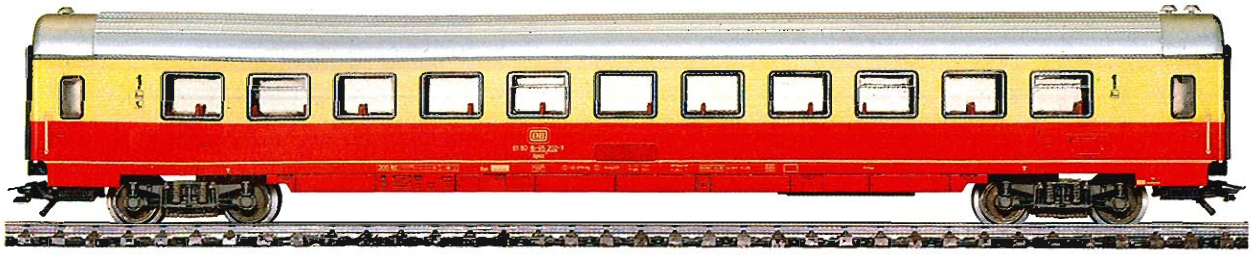
4093 · **Baggage Car** · Dm 902 · Sliding roll doors on both sides · Automatic couplers · Length 27 cm (10-5/8") · Equipped for installation of 7329 lighting kit

4293

Equipped for installation of 7330 lighting kit

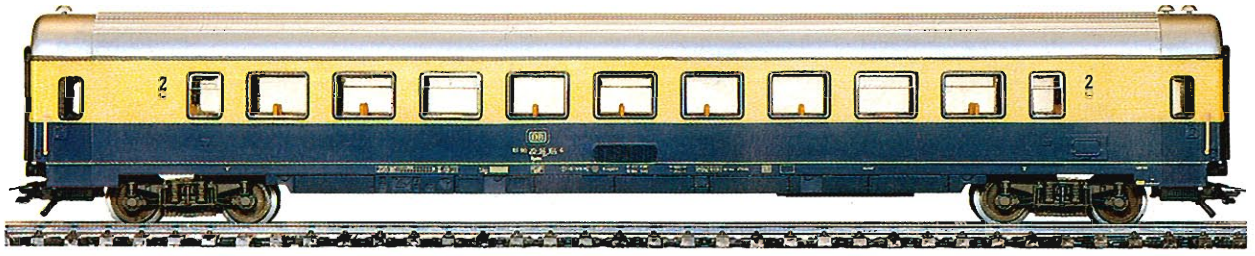
German Federal Post Office (DBP)

4157 · **Mail Car** · Postmrz 73076 · Interior details · Automatic couplers · Length 26.4 cm (10-3/8") · Equipped for installation of 7329 lighting kit



German Federal Railroad (DB)

4224 · IC Open Seating Car · Apmz 123.1 · 1st class · Interior details · Separately applied window frames · Automatic close couplers · Length 26.4 cm (10-3/8") · Equipped for installation of 7330 lighting kit



4225 · IC Open Seating Car · Bpmz 291.2 · 2nd class · Interior details · Separately applied window frames · Automatic close couplers · Length 26.4 cm (10-3/8") · Equipped for installation of 7330 lighting kit

The Apmz 123 and Bpmz 291 open seating cars are the most modern rolling stock in use for premium class long-distance traffic on the Federal Railroad. The Apmz, a 1st class car, was developed from the 2nd class car when additional cars were needed in 1985 for the newly created Intercity route from Hannover to Bremen or Oldenburg. It differs from its second class brother externally, aside from the color and class designation, only in the larger end windows. These windows were possible because the railroad did without luggage compartments in order to maintain a more comfortable seat spacing. The 51 seats are arranged in 2 + 1 rows. The Apmz is equipped with a telephone booth.

The 2nd class open seating car has 2 + 2 seating with two rows in the middle of the smoking and non-smoking areas facing each other and is the basic model for a multi-class concept. Various types of cars for both classes will be developed from it in order to keep costs down. The Bpmz has 80 seats, 75 in the version for handicapped passengers. Both cars are air-conditioned, of course, and can be operated at speeds up to 200 km/h (125 m.p.h.).

German Federal Railroad (DB)

4147 · IC Compartment Car · Avmz 207 (EUROFIMA A 9) · 1st class · Interior details · Automatic couplers · Length 26.4 cm (10-3/8") · Equipped for installation of 7329 lighting kit

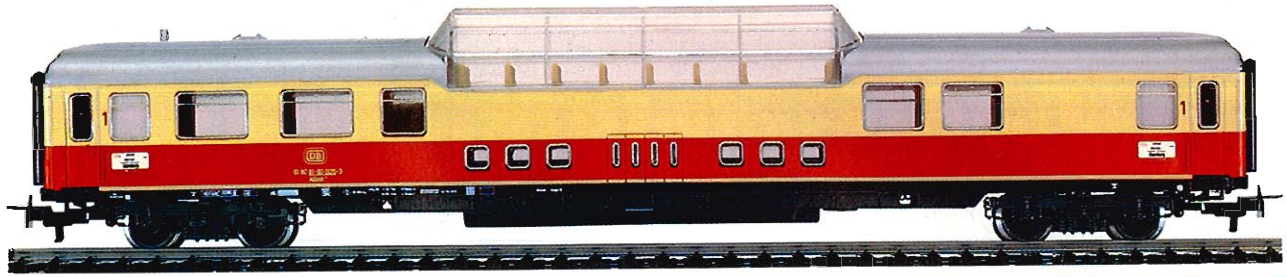
Special Passenger Train Cars

German Federal Railroad (DB)

4099 · TEE Vista Dome Car · ADm 101 · 1st class · Interior details · Automatic couplers · Length 27 cm (10-5/8") · Equipped for installation of 7329 lighting kit

4299

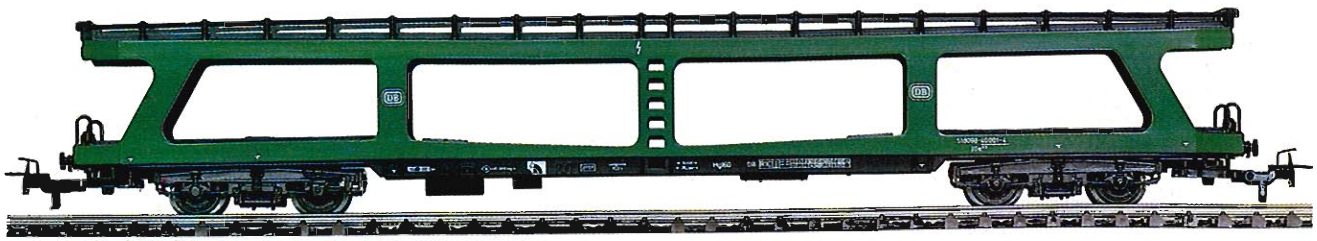
Equipped for installation of lighting kit

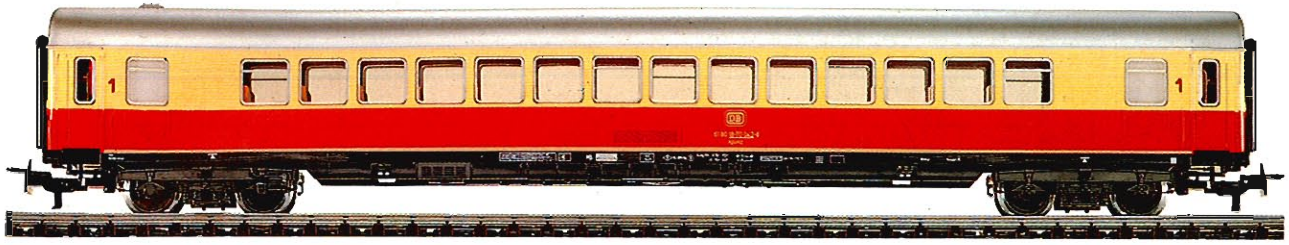


4175 · Entertainment Car · WGm 842.0 · Interior details · Automatic couplers · Length 27 cm (10-5/8") · Equipped for installation of 7329 lighting kit

4234 · Passenger Train Auto Carrier · DDm 915 · Loaded with 8 Wiking automobiles · RELEX couplers · Length 26.4 cm (10-3/8")

4084 · Passenger Train Auto Carrier · DDm 915 · Without automobiles · RELEX couplers · Length 26.4 cm (10-3/8")





German Federal Railroad (DB)

4096 · TEE/IC Open Seating Car · Apmz 121 · 1st class · Interior details · Automatic couplers · Length 27 cm (10-5/8") · Equipped for installation of 7329 lighting kit

4296

Equipped for installation of 7330 lighting kit

4295

Same as 4095 · Equipped for installation of 7330 lighting kit

4095 · TEE/IC Compartment Car · Avmhz 111 · 1st class · Interior details · Automatic couplers · Length 27 cm (10-5/8") · Equipped for installation of 7329 lighting kit

4098 · TEE/IC Compartment Car · Same as 4095, but with 2 illuminated marker lights · Maintenance-free LED's

⇦ = 41494

4298

Same as 4098 · Equipped for installation of 7330 lighting kit

4097 · TEE/IC Dining Car · WRmh 132 · Interior details · Automatic couplers · Length 27 cm (10-5/8") · Equipped for installation of 7329 lighting kit

4297

Equipped for installation of 7330 lighting kit

4153 · TEE/IC Dining Car · WRmz 135 · Interior details · Automatic couplers · Length 27 cm (10-5/8") · Equipped for installation of 7329 lighting kit

4294

Equipped for installation of 7330 lighting kit

The digital vista dome car is here:

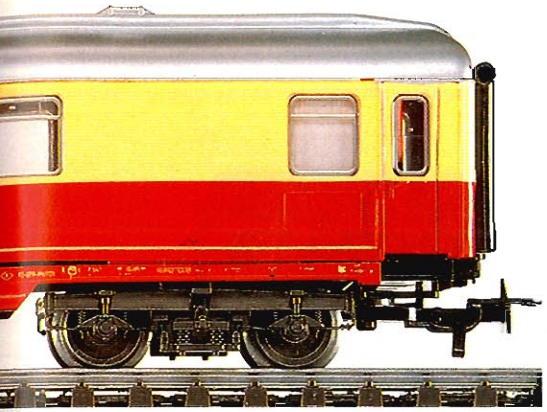
Lights on, Lamps on! Have your waiter serve during the trip.

Interior Lighting

When it becomes dark, brightly lit trains travel through the night. Now you can turn the interior lighting on and off by digital remote control. Also during the trip, of course.

Table Lighting

Would you like to have it a little more subdued? Then turn the table lamps on. Little LED's on the individual tables create such a congenial atmosphere.



4999 · Digital · Vista Dome Car with Functions · ADm 101 of the Swiss travel agency Mittel-Thurgau, used on the German Federal Railroad · 1st class · Interior with figures · Automatic couplers · Length 27 cm (10-5/8")

Built-in decoder for remote-controlled digital functions:
- Waiter serves the passengers in the entire vista dome area
- Ceiling lights in the compartments can be turned on and off
- Table lamps can be turned on and off

Functions are activated in the Digital system with the Control 80 f functions/ locomotive throttle control unit (6036) when the car is in motion or standing still

=41494 =60015

The waiter serves

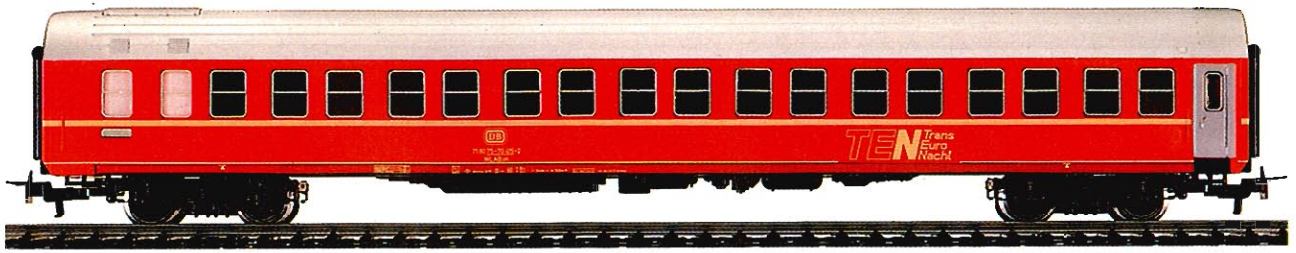
What is a dining car without a waiter to bring food and drink to each table at your wish? Your waiter even serves during the trip. Enjoy the view just like the passengers.

Function: The press of a button is all that is needed

Lights on, lights off, table lamps on, table lamps off. Waiter, please serve. A press of a button is all that is needed to control each of these functions from a central position with the new Control 80 f Digital control unit.

German Federal Railroad (DB)

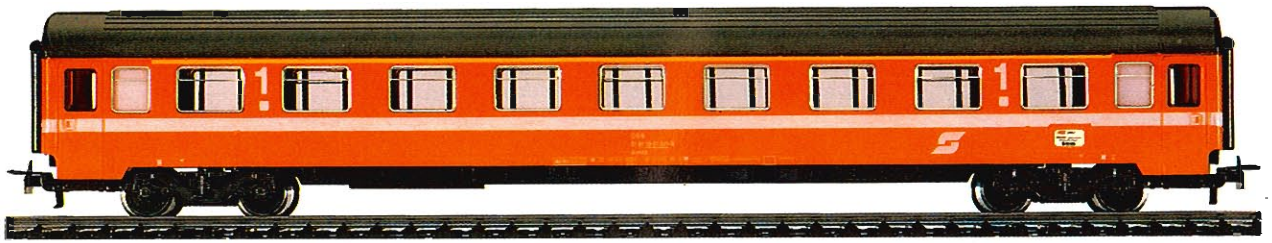
4150 · Sleeping Car · WLABsmh 166 for the TEN car pool · 1st and 2nd class · Interior details · Automatic couplers · Length 27 cm (10-5/8") · Equipped for installation of 7329 lighting kit



Austrian Federal Railways (ÖBB)

Austria

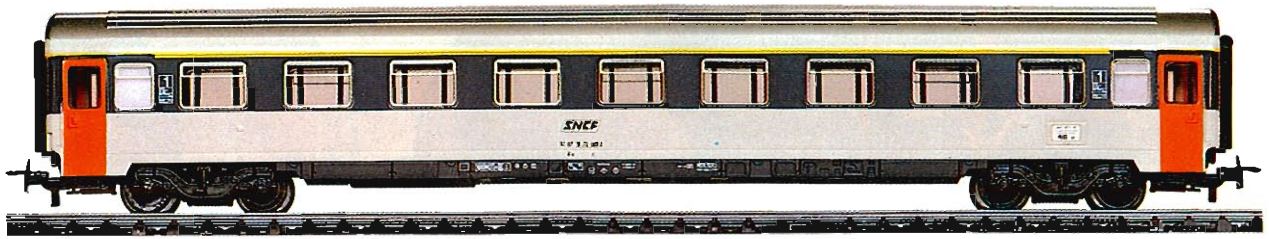
4149 · Coach · Amoz (EUROFIMA A 9) · 1st class · Interior details · Automatic couplers · Length 26.4 cm (10-3/8") · Equipped for installation of 7329 lighting kit



French State Railways (SNCF)

France

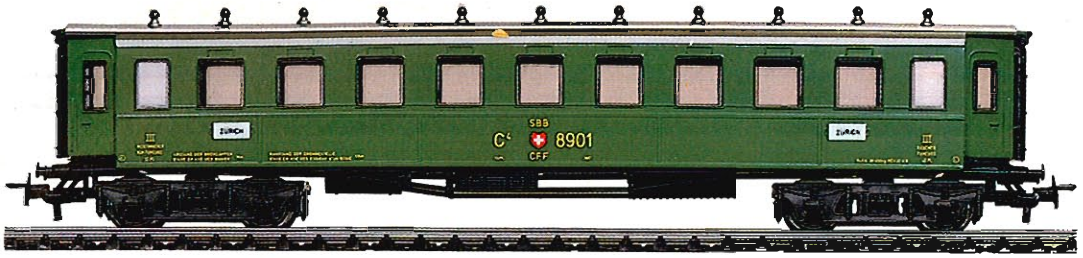
4161 · Coach · A 9 u (EUROFIMA) · 1st class · "Corail" color scheme · Interior details · Automatic couplers · Length 26.4 cm (10-3/8") · Equipped for installation of 7329 lighting kit



Belgian State Railways (NMBS/SNCB)

Belgium

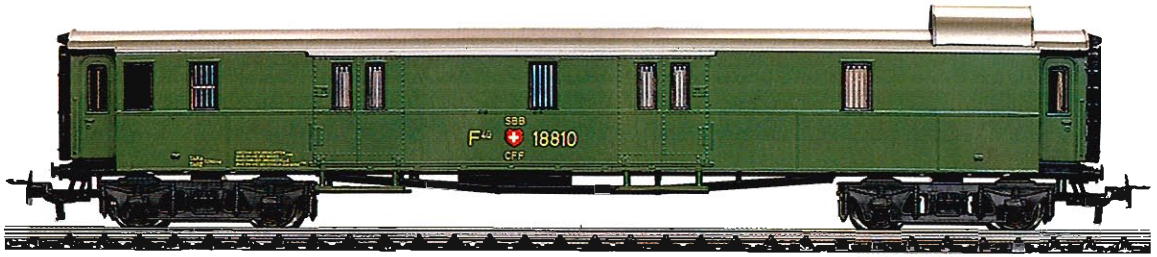
4166 · Coach · B 11 (EUROFIMA) · 2nd class · Interior details · Automatic couplers · Length 26.4 cm (10-3/8") · Equipped for installation of 7329 lighting kit



Swiss Federal Railways (SBB)

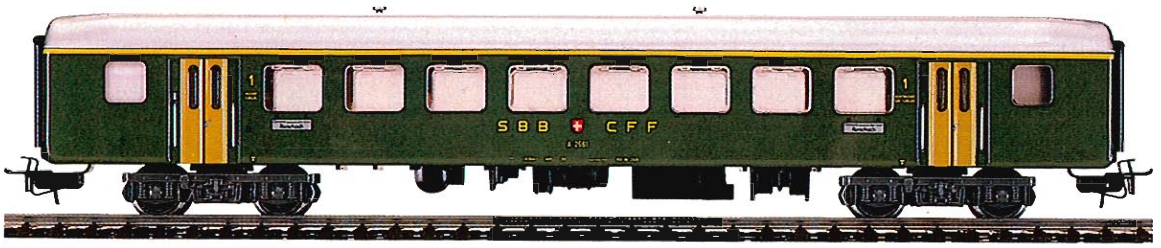
Switzerland

4138 · **Coach** · Older C4ü · 3rd class · Interior details · Automatic couplers · Length 22.2 cm (8-¾") · Equipped for installation of 7329 lighting kit



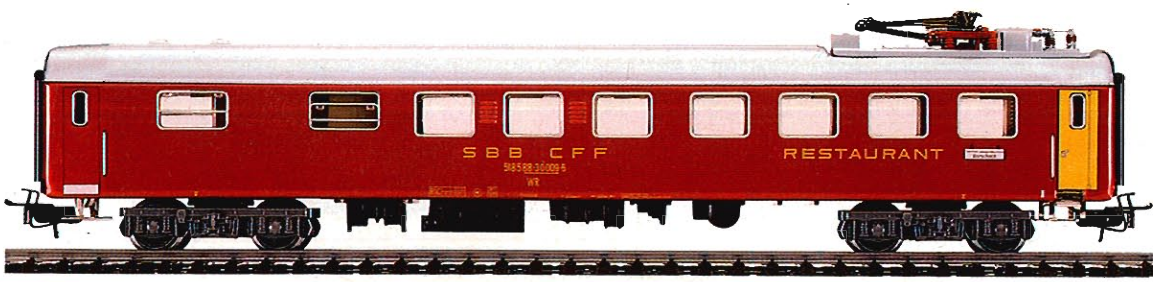
Switzerland

4146 · **Baggage Car** · Older F4ü · Automatic couplers · Length 23.2 cm (9") · Equipped for installation of 7329 lighting kit



Switzerland

4066 · **Coach** · A, standard type II · 1st class · Metal body · RELEX couplers · Length 24 cm (9-½") · Equipped for installation of 7320 lighting kit



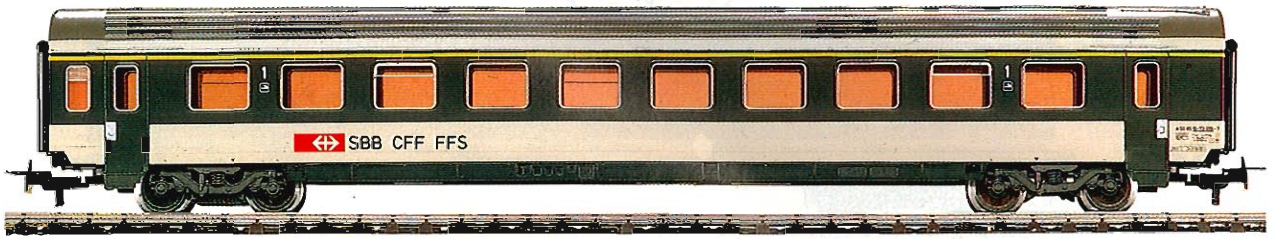
Switzerland

4068 · **Dining Car** · WRm, type RIC · Metal body · RELEX couplers · Length 24 cm (9-½") · Equipped for installation of 7077 lighting kit

Swiss Federal Railways (SBB)

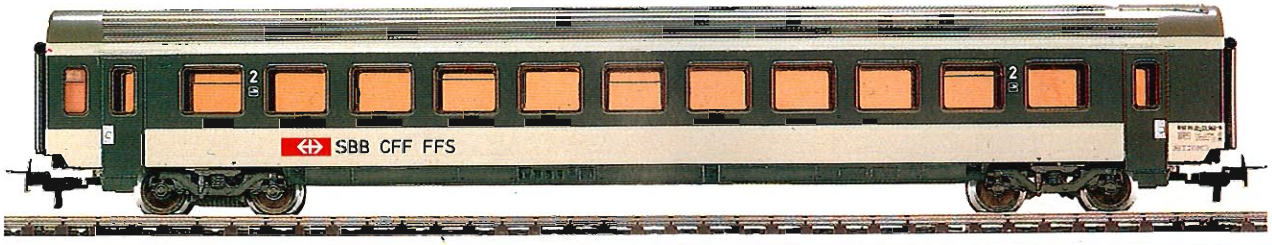
Switzerland

4123 · **Coach** · A, standard type IV · 1st class · Interior details · Automatic couplers · Length 26.4 cm (10-3/8") · Equipped for installation of 7329 lighting kit



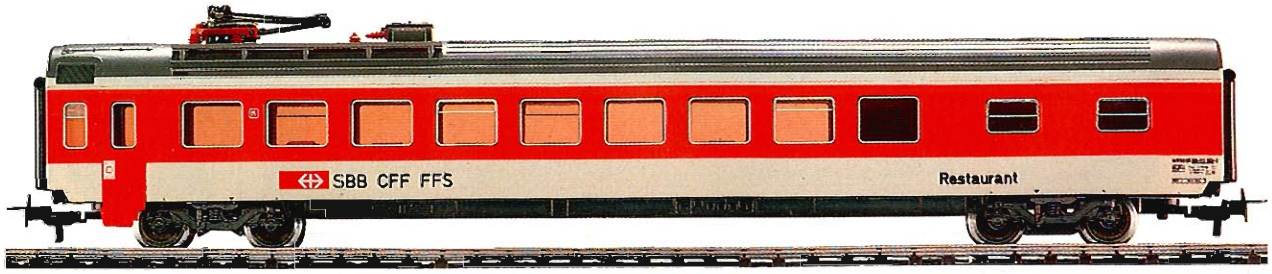
Switzerland

4124 · **Coach** · B, standard type IV · 2nd class · Interior details · Automatic couplers · Length 26.4 cm (10-3/8") · Equipped for installation of 7329 lighting kit



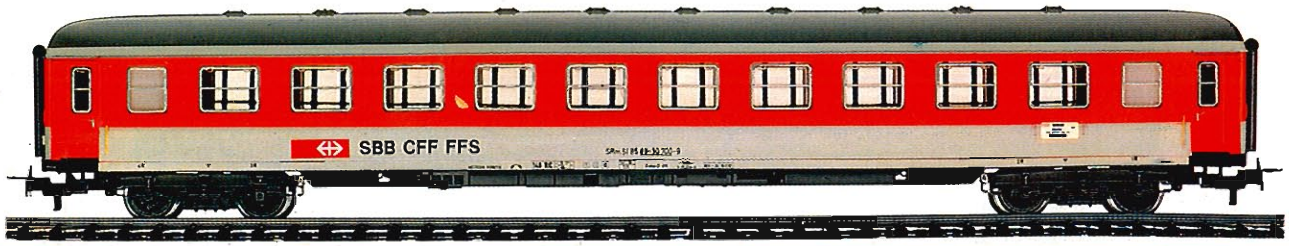
Switzerland

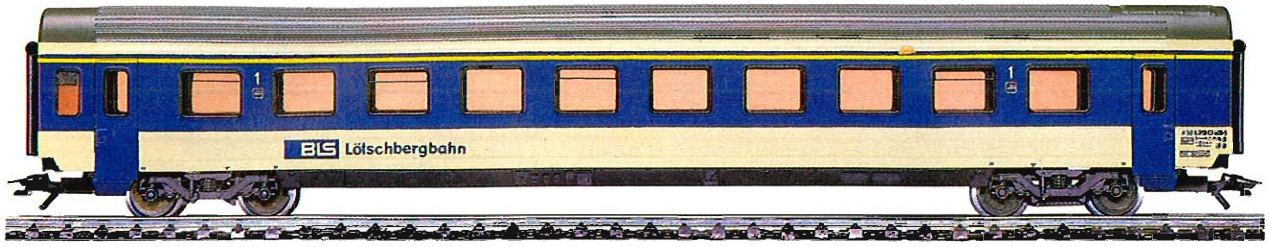
4125 · **Dining Car** · WR, standard type IV · Interior details · Automatic couplers · Length 26.4 cm (10-3/8") · Equipped for installation of 7329 lighting kit



Switzerland

4180 · **Entertainment Car** · SRm "Cafeteria" · Interior details · Automatic couplers · Length 27 cm (10-5/8") · Equipped for installation of 7329 lighting kit

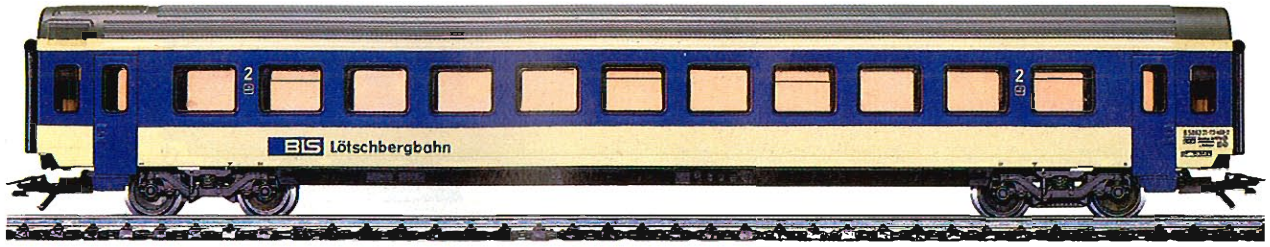




Bern Alps Railroad Company
Bern Lötschberg Simplon (BLS)

Switzerland

4218 · **Coach** · SBB standard type IV A · 1st class · Interior details · Automatic close couplers · Length 26.4 cm (10-3/8") · Equipped for installation of 7330 lighting kit



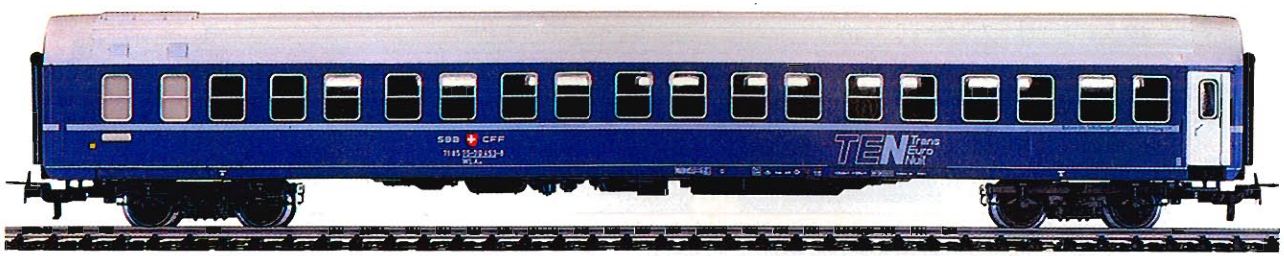
Switzerland

4219 · **Coach** · SBB standard type IV B · 2nd class · Interior details · Automatic close couplers · Length 26.4 cm (10-3/8") · Equipped for installation of 7330 lighting kit

Swiss Federal Railways
(SBB)

Switzerland

4168 · **Slumber Coach** · Bcm type UIC-Z1 · 2nd class · Interior details · Automatic couplers · Length 26.4 cm (10-3/8") · Equipped for installation of 7329 lighting kit



Switzerland

4182 · **Sleeping Car** · WLABm, type RIC T2S for the TEN car pool · 1st and 2nd class · Interior details · Automatic couplers · Length 27 cm (10-5/8") · Equipped for installation of 7329 lighting kit

Swedish State Railways (SJ)

Sweden

4072 · **Coach** · B 1 · 2nd class · RELEX couplers · Length 24.4 cm (9-5/8") · Equipped for installation of 7197 lighting kit

Sweden

4073 · **Dining Car** · R 1 · RELEX couplers · Length 24.4 cm (9-5/8") · Equipped for installation of 7197 lighting kit

The shortest connection between the mainland and Scandinavia is the 19 kilometer (11.88 miles) ferry line between Puttgarden and Rødby in Denmark. It is called the Vogelfluglinie (Route of the Crow's Flight) after the route of the migratory birds to the south.

The technological Vogelfluglinie was put into operation in May of 1963. One of its most remarkable structures is the arched bridge over the Fehmarnsund. Called the "Kleiderbügel" ("Coat Hanger") because of its appearance, it was the first, permanent connection for rail and road traffic between the mainland and the Baltic island of Fehmarn.

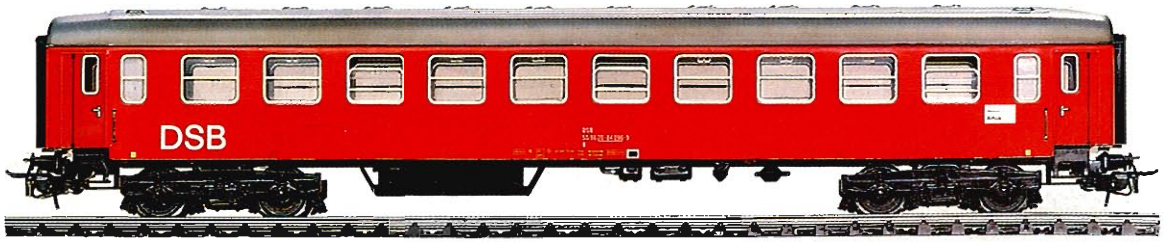
Numerous Scandinavian passenger cars come to Germany and German cars go to Scandinavia by ferry in international trains. The routes are not electrified and German and Danish diesel locomotives are used.

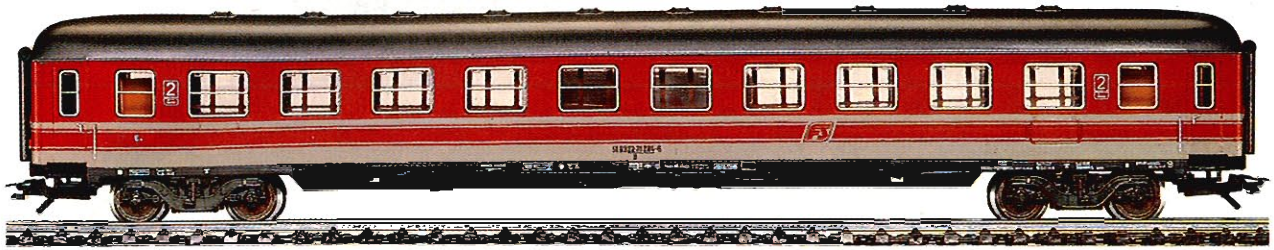
The constantly increasing ferry traffic requires not only an expansion of the facilities on land, but also the use of larger ferry ships. Thus, the German Federal Railroad put a new ship, the "Karl Carstens", in operation for the 1986 summer schedule. This new ferry is the largest in use on the Vogelfluglinie with a weight of 13,700 tons. It has space for 14 passenger cars on 405 meters (1,328 feet) of track; the automobile deck is laid out for 156 cars.

Danish State Railways (DSB)

Denmark

4045 · **Coach** · B 2300 · 2nd class · Metal body · RELEX couplers · Length 24 cm (9-1/2") · Equipped for installation of 7077 lighting kit and 7198 pickup shoe





Italian State Railways (FS)

Italy

4189 · **Coach** · B, type UIC-X · 2nd class · Interior details · Automatic close couplers · Length 27 cm (10-5/8") · Equipped for installation of 7330 lighting kit

As a member of the International Railroad Association (UIC), the Italian State Railroad has participated in a joint development program for modern express passenger cars. A result has been the proven UIC-X coaches which have been manufactured since 1961.

These 26.4 meter (86 ft. 7 in.) cars correspond for the most part to the types used by the German Federal Railroad. Of course, the newer series have several noticeable design changes. Hence, today the longitudinal frame members have a skirting and FIAT type trucks are used.

The cars are used in express train traffic in Italy and in international long distance traffic. In the 1980's the previously simple gray color is being replaced by the new, more attractive design of the FS.

Dutch Railways (NS)

Netherlands

4117 · **Coach** · A, type E · 1st class · Metal body · Various advertising slogans included · RELEX couplers · Length 24 cm (9-1/2") · Equipped for installation of 7320 lighting kit

Netherlands

4165 · **Intercity Car** · 2nd class · Interior details · Automatic couplers · Length 26.4 cm (10-3/8") · Equipped for installation of 7329 lighting kit

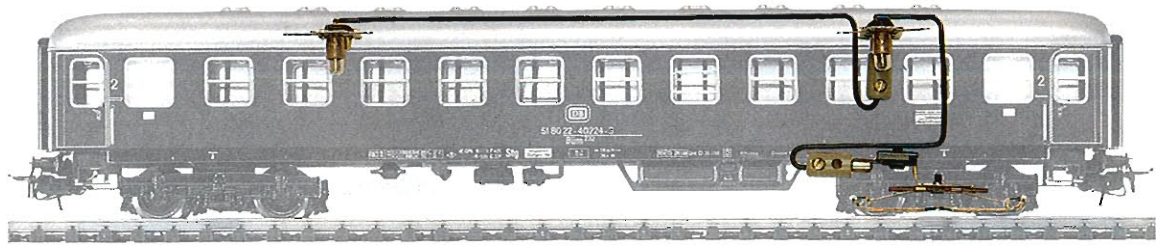
Car Lighting

7077 · **Interior Lighting Kit** · For 4026, 4045, 4051–4053, 4068, 4111 and 4112 cars · Has socket for connecting additional lighting kits · With bulb
=60000

7198 · **Pickup Shoe** · For 7077 interior lighting kit
=7175

7077

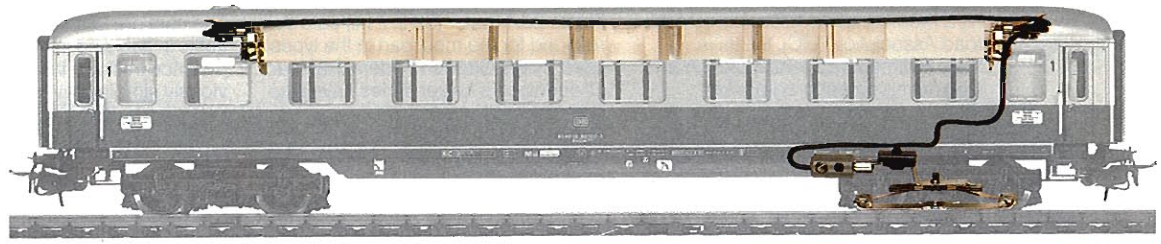
7077 7198



7320 · **Interior Lighting Kit** · For 4064, 4066, 4085, 4087, 4117, 4130 and 4188 cars · Consists of 7198 pickup shoe, light diffuser, 2 lamp sockets and 2 bulbs
=7175 =60015

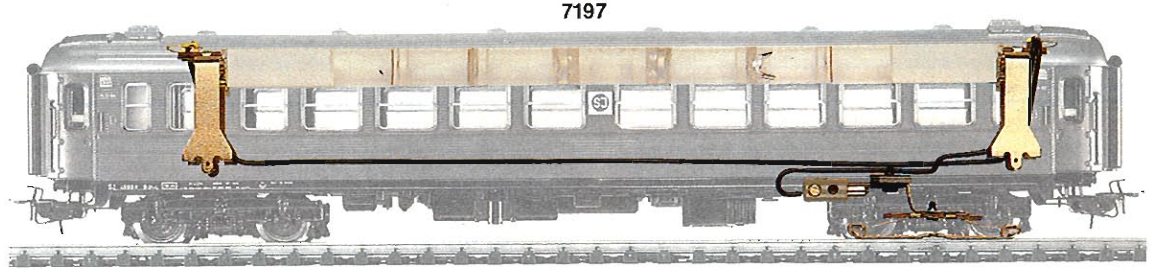
7322 · **Interior Lighting Kit** · Same as 7320, but without light diffuser · For 4090 car
=7175 =60015

7320



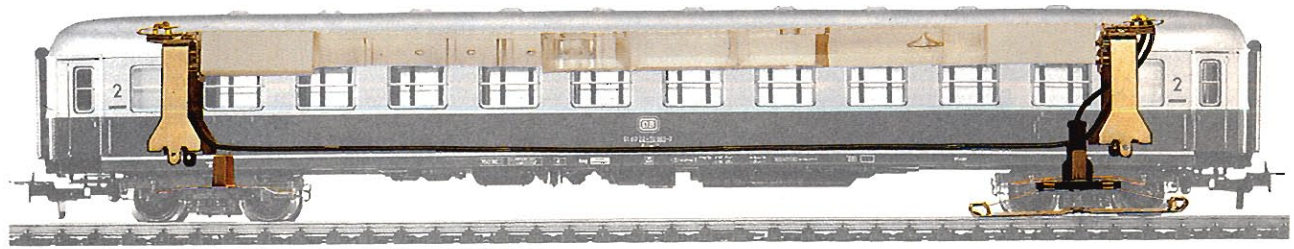
7197 · **Interior Lighting Kit** · For 4072 and 4073 cars · Consists of 7198 pickup shoe, light diffuser, 2 lamp sockets and 2 bulbs
=7175 =60015

7197



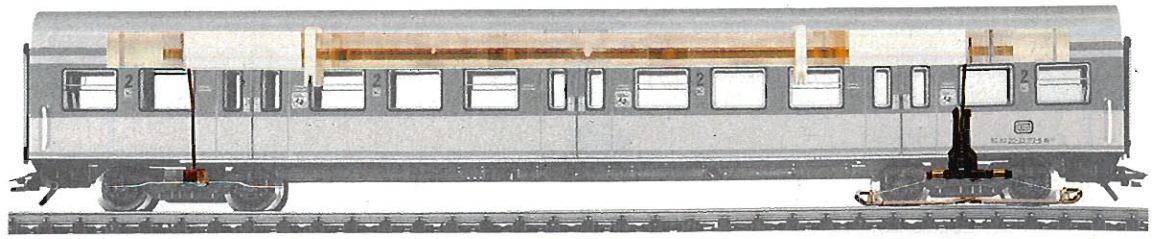
7329 · **Interior Lighting Kit** · For 4091–4093, 4095–4099, 4123–4125, 4131–4135, 4138–4140, 4145–4147, 4149, 4150, 4153, 4154, 4157–4161, 4165, 4166, 4168, 4175, 4180 and 4182 cars · Consists of pickup shoe, telescoping light diffuser, 2 lamp sockets and 2 bulbs
=41494 =60015

7329

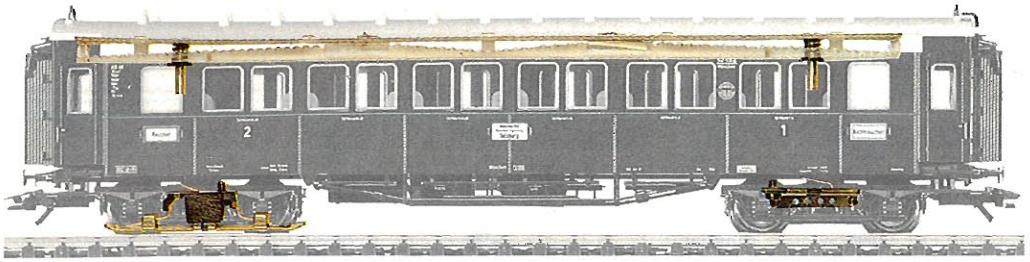


7330 · **Interior Lighting Kit** · For 4183–4185, 4189, 4218, 4219, 4224, 4225, 4255–4260, 4291–4298 as well as the cars in the 2662 and 2862 trains · Consists of pickup shoe, light diffuser with lamp sockets and 2 bulbs
=41810 =60008

7330

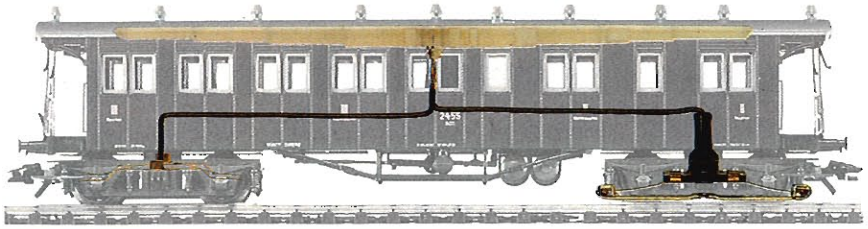


7332



7332 · **Interior Lighting Kit** · For the cars in the 2660 and 2860 trains · Consists of pickup shoe and light diffuser with 2 bulbs

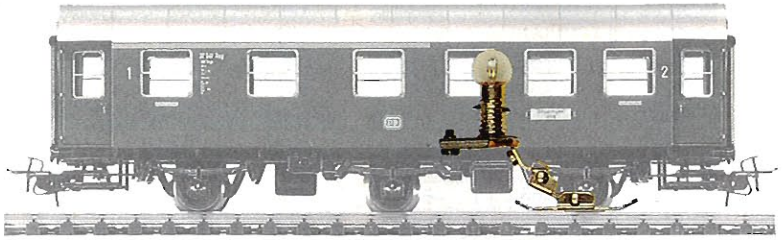
7333



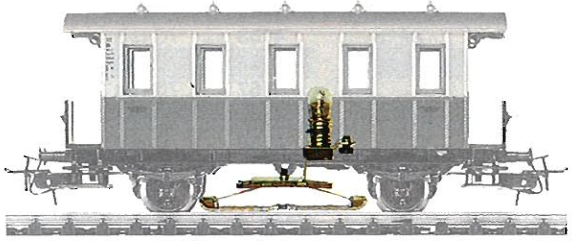
7333 · **Interior Lighting Kit** · For 4210, 4211, 4213 and 4214 cars · Consists of pickup shoe, light diffuser, lamp socket and bulb

=27756 =60008

7074



7323



7074 · **Interior Lighting Kit** · For 4067, 4079 and 4080 cars · Consists of pickup shoe with lamp socket and bulb · Has socket for connecting additional lighting kits

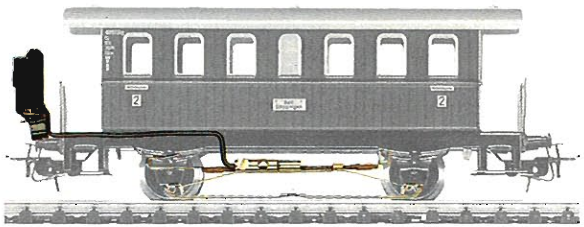
=60020

7323 · **Interior Lighting Kit** · For 4107 and 4108 cars · Consists of pickup shoe with lamp socket and bulb

=7175 =60010

7079

7079 7076



7079 · **End Marker Light** · Clips onto buffer · Only for cars with metal buffers · With bulb · 7074, 7076 or 7198 required for hookup

=60001 (red)

7076 · **Pickup Shoe** · For 7079 end marker light · Fits 4040 car

0225 0226

Interior Details

0225 · **Interior Detailing Kit** · For 4045, 4066, 4067, 4072, 4073, 4079, 4080, 4117 and other cars · Consists of 18 double seats, 6 single seats and 2 restrooms

0226 · **Set of Figures** · For adding to interior detailing · 10 seated passengers · All figures hand-painted in several colors

Spare Parts for Cars

Couplers

Catalog number	Coupler	Truck with Coupler
4018	21 005	–
4026	–	30 339
4028	70 412	–
4040	70 154	–
4045	–	30 339
4051	–	30 339
4052	–	30 339
4053	–	30 339
4064	–	30 339
4066	–	30 547
4067	32 540	–
4068	–	30 547
4071	21 951	–
	21 954	–
4072	–	30 417
4073	–	30 417
4079	32 540	–
4080	32 540	–
4084	70 157	–
4085	–	30 339
4087	–	30 339

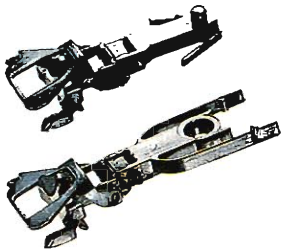
Catalog number	Coupler	Truck with Coupler
4089	–	30 339
4090	–	30 339
4091	70 158	–
4092	70 158	–
4093	70 158	–
4095	70 158	–
4096	70 158	–
4097	70 158	–
4098	70 158	–
4099	70 158	–
4100	32 540	–
4101	32 540	–
4102	32 540	–
4103	32 540	–
4107	32 540	–
4108	32 540	–
4111	–	30 339
4112	–	30 339
4117	–	30 417
4123	70 158	–
4124	70 158	–
4125	70 158	–
4130	–	30 339

Catalog number	Coupler	Truck with Coupler
4131	70 163	–
4132	70 163	–
4133	70 163	–
4134	70 158	–
4135	70 158	–
4138	70 158	–
4139	70 158	–
4140	70 158	–
4145	70 158	–
4146	70 158	–
4147	70 158	–
4149	70 158	–
4150	70 158	–
4153	70 158	–
4154	70 158	–
4157	70 158	–
4158	70 158	–
4159	70 158	–
4160	70 158	–
4161	70 158	–
4165	70 158	–
4166	70 158	–
4168	70 158	–

Catalog number	Coupler	Truck with Coupler
4171	25 434	–
	25 402	–
4175	70 158	–
4180	70 158	–
4182	70 158	–
4183	70 163	–
4184	70 163	–
4185	70 163	–
4188	–	30 339
4189	70 163	–
4200	70 163	–
4201	70 163	–
4202	70 163	–
4203	70 163	–
4206	70 163	–
4207	70 163	–
4208	70 163	–
4209	70 163	–
4210	70 163	–
4211	70 163	–
4212	70 163	–
4213	70 163	–
4214	70 163	–

Catalog number	Coupler	Truck with Coupler
4218	70 163	–
4219	70 163	–
4224	70 163	–
4225	70 163	–
4228	70 163	–
4234	70 157	–
4255	70 163	–
4256	70 163	–
4257	70 163	–
4258	70 163	–
4259	70 163	–
4260	70 163	–
4291	70 163	–
4292	70 163	–
4293	70 163	–
4294	70 163	–
4295	70 163	–
4296	70 163	–
4297	70 163	–
4298	70 163	–
4299	70 163	–

All spare parts can be ordered through your dealer.



7205 · Close Couplers for Cars and Locomotives without Guide · Interchangeable with standard Märklin **plastic** coupler · 10 couplers for locomotives and 40 couplers for cars (for 70 157 and 70 158) · Enables a partial decrease in car spacing

7203 · Close Couplers · 50 pieces · For installation on cars and locomotives with standard coupler pockets (NEM 362) and guides · Compatible with standard couplers (NEM 360)

Couplers

Catalog number	Coupler	Truck with Coupler
4410	70 157	–
4411	70 157	–
4412	70 157	–
4413	70 157	–
4414	70 157	–
4415	70 157	–
4423	70 157	–
4424	70 157	–
4428	70 157	–
4429	70 157	–
4430	70 157	–
4431	70 157	–
4432	70 157	–
4436	70 157	–
4437	70 157	–
4440	70 157	–
4441	70 157	–
4442	70 157	–
4460	70 157	–
4465	70 157	–
4473	70 157	–
4474	70 157	–
4475	70 157	–
4481	70 157	–
4563	–	32 289

Catalog number	Coupler	Truck with Coupler
4564	–	32 311
4574	–	32 570
4610	70 154	–
4612	70 154	–
4613	70 154	–
4617	70 154	–
4618	70 154	–
4619	70 154	–
4624	–	32 339
4626	–	32 339
4631	21 842	–
4633	32 540	–
4635	21 842	–
4639	70 154	–
4643	32 399	–
4644	32 540	–
4650	32 399	–
4651	32 399	–
4663	32 399	–
4664	32 540	–
4665	70 154	–
4671	70 154	–
4674	70 157	–
4675	70 157	–
4676	70 157	–
4677	70 157	–

Catalog number	Coupler	Truck with Coupler
4679	70 157	–
4680	70 157	–
4682	70 157	–
4684	70 157	–
4685	70 157	–
4687	70 157	–
4689	70 157	–
4690	70 157	–
4691	–	32 339
4692	70 157	–
4693	70 157	–
4694	32 540	–
4695	70 157	–
4696	70 157	–
4697	70 157	–
4698	70 157	–
4699	70 157	–
4700	70 157	–
4710	70 157	–
4718	70 157	–
4748	32 402	–
4750	32 540	–
4761	70 154	–
4780	70 157	–
4781	70 157	–

Pickup Shoes and Light Bulbs

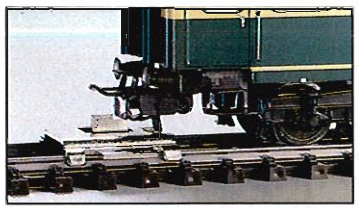
Catalog Number	Pickup Shoe	Light Bulb
4018	7175	60 010
4028	7164	60 001
	–	60 015
4053	7175	–
4089	7175	60 015
4098	41 494	–
4103	31 051	–
4154	41 494	–
4160	31 100	–
4171	–	60 008
4185	31 545	–
4257	31 100	–
4260	31 100	–
4298	41 494	–
4411	41 494	60 015

Pantographs

Catalog Number	Pantograph
4068	7219
4125	7219
4153	31 101
4294	31 101

7204 · Reproduction Prototype Couplers · 50 pieces · For installation on cars and locomotives with standard coupler pockets (NEM 362) and guides for fixed train compositions

7001 · Coupler Gauge · For checking coupler height and position · Can be clipped to track



7224 · Rerailer · Facilitates the placing of multi-axle cars and locomotives on the track · Length 30 cm (1″) · Height 2.5 cm (1″)

7199 · Bottle of Oil · Contains 9 ml of a special oil for lubricating locomotives and cars

"Newborn Welfare" refrigerator car for milk, provincial railroad freight cars and Prussian compartment cars, photographed on the BRAWA Company's layout scene "Berlin Viaducts".


1558
Oberrh. Weininteressenten
Actien-Gesellsch. Rosheim
Württemberg
W22236
Württemberg
502055
D.

Provincial Railroad Freight Cars

Royal Prussian Railroad Administration (KPEV)

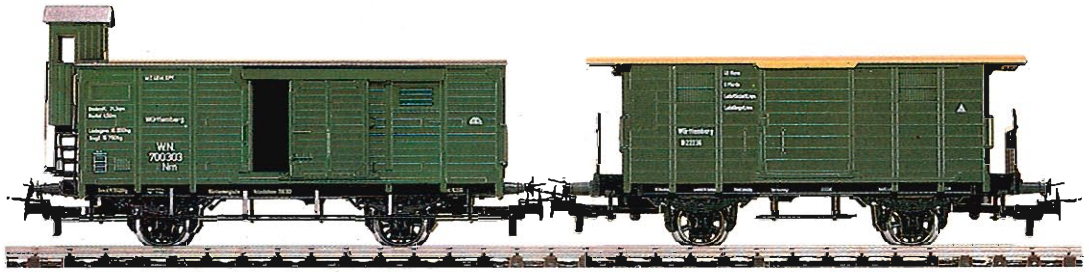
4781 · Milk Refrigerator Car · Privately owned car of the city of Berlin's Newborn Welfare Program · Side handrails separately applied · RELEX couplers · Length 11 cm (4-5/16″)

Beginning in about 1910 the city of Berlin maintained a supply network which distributed fresh milk daily to needy mothers. The milk was brought from municipal property, the Albertshof near Bernau, in special milk refrigerator cars to a central distribution point. The car was run in the Berlin Metropolitan Railroad's compartment passenger trains to insure speedy transport.

Royal Württemberg State Railways (K.W.St.E)

4679 · Boxcar with Brakeman's Cab · Class Nm as used on Württemberg branch lines around 1910 · Sliding doors · RELEX couplers · Length 11 cm (4″)

4685 · Boxcar · Ni · Brakeman's platform · RELEX couplers · Length 10.7 cm (4-3/16″)

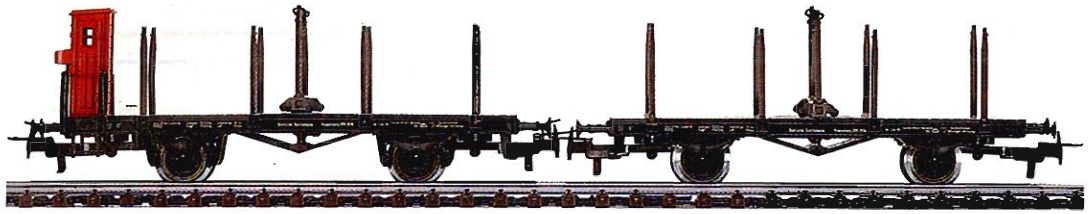


4780 · Beer Car · Private car of the Cluss Brewery, Heilbronn, Germany · RELEX couplers · Length 11 cm (4-3/8″)

4677 · Beer Car · Private car of the Württemberg-Hohenzollern Brewery English Gardens, Stuttgart, Germany · RELEX couplers · Length 11 cm (4-3/8″)

4675 · Tank Car · Private car of the "Olex" Oil Company · Brakeman's cab, walkways and ladders separately applied · RELEX couplers · Length 10.1 cm (4″)

4674 · Tank Car · Private car of the German-American Oil Company · Brakeman's cab, walkways and ladders separately applied · RELEX couplers · Length 10.1 cm (4″)



Former German State Railroad Company (DRG)

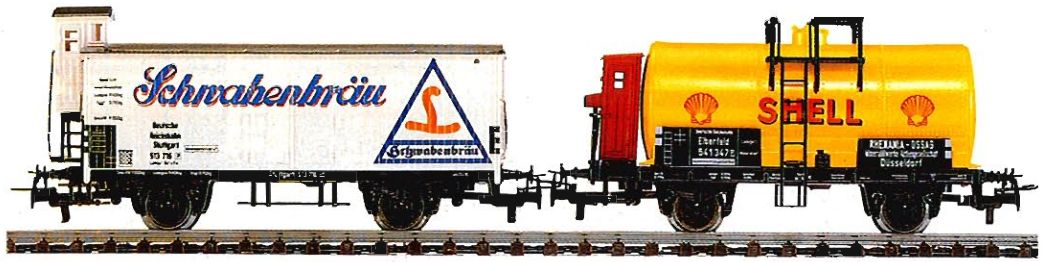
4697 · Flat Car with Pivoting Load Cradle · H 10 with brakeman's cab · 8 removeable stakes · Pivoting load cradle with chain · RELEX couplers · Length 11.5 cm (4-½")

4684 · Flat Car with Pivoting Load Cradle · H 10 without brakeman's cab · 8 removeable stakes · Pivoting load cradle with chain · Supplements 4697 to form prototypical timber transport car · RELEX couplers · Length 10.7 cm (4-3/16")

4696 · Gondola · O 10 with brakeman's cab · RELEX couplers · Length 10.1 cm (4")

4692 · Boxcar · Gr 20 "Kassel" · Sliding doors · RELEX couplers · Length 10.5 cm (4-⅛")

4695 · Boxcar · G 10 with brakeman's cab · Sliding doors · RELEX couplers · Length 11 cm (4-⅜")



4680 · Beer Car · Private car of the Leicht "Schwabenbräu" Brewery, Stuttgart, Germany · RELEX couplers · 11 cm (4-⅜")

4676 · Tank Car · Private car of the German Shell Oil Company · Brakeman's cab, walkways and ladders separately applied · RELEX couplers · Length 10.1 cm (4")

Swiss Federal Railways (SBB)

Switzerland

4428 · Refrigerator Car · Private car for Ovomaltine · RELEX couplers · Length 11.5 cm (4-½")

German Federal Railroad (DB)

4414 · Refrigerator Car · Ibbls for transporting bananas · RELEX couplers · Length 11.5 cm (4-½")

4437 · Beer Car · Private car for the Badischer Staatsbrauerei Rothaus AG · RELEX couplers · 11.5 cm (4-½")

4436 · Beer Car · Private car for the C. Dinkelacker Brewery, Stuttgart, Germany · RELEX couplers · Length 11.5 cm (4-½")

4415 · Refrigerator Car · Ichqs-u 377 · RELEX couplers · Length 11.5 cm (4-½")

4429 · Beer Car · Private car for Staufen Bräu · RELEX couplers · Length 11.5 cm (4-½")

4413 · Dump Car · Bucket can be tipped to either side manually and locked in a stationary middle position · RELEX couplers · Length 11.5 cm (4-½")

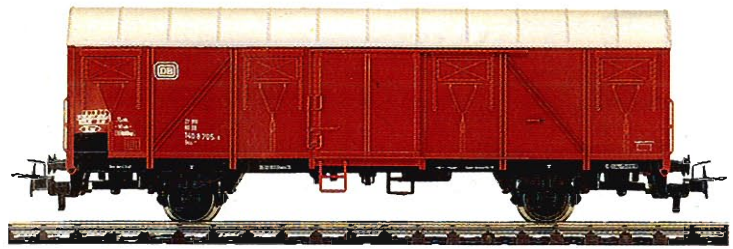
4432 · Wine Car · Privately owned · RELEX couplers · Length 11.5 cm (4-½")

German Federal Railroad (DB)

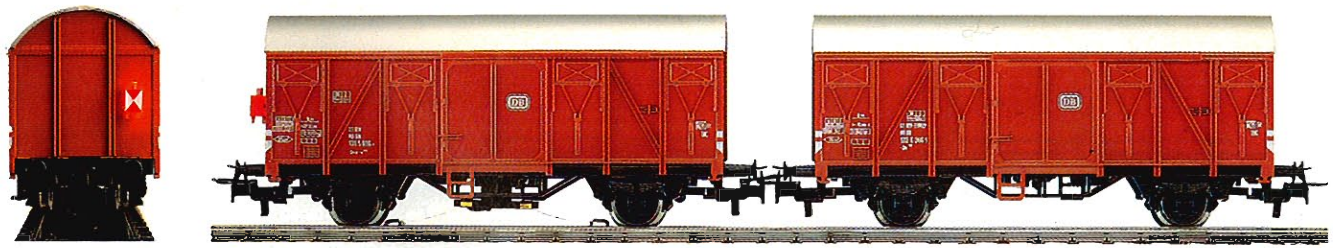
4699 · Freight Baggage Car · Pwg Pr014 · Sliding doors · RELEX couplers · Length 9.8 cm (3-7/8")

4700 · Boxcar · Glmhs 50 (Gbs 245) with wooden plank walls · RELEX couplers · Length 14.2 cm (5-5/8")

In the 1950's the German Federal Railroad built over 12,000 new boxcars, each 12.5 meters long, (41 ft.) in a large building program. With its wide sliding doors and side loading and ventilating hatches, this type of car is suitable for various types of bulk freight and less-than-carload-freight. The first series (than the Glmhs 50) was built with wooden plank walls; most cars (today the Gos 245) have metal smooth side walls, however.



4710 · Boxcar · Gos 245 with metal smooth side walls · RELEX couplers · 14.2 cm (5-5/8")



4411 · Boxcar · Gs-uv 213 · With electrical pickup and illuminated marker light · RELEX couplers · Length 11.5 cm (4-1/2")

= 41494 = 60015

4410 · Boxcar · Gs 210 · RELEX couplers · Length 11.5 cm (4-1/2")

The sales slogan "Fahrrad am Bahnhof" ("Bike at the Station") has been well received on the Austrian Federal Railways. In order to be ready for sudden demand from travel groups, local events, etc., the ÖBB has converted some type Gs boxcars into rolling bike rental depots. Depending on the demand, these cars can be added to charter trains and transported to where the bikes are needed.

Austrian Federal Railways (ÖBB)

Austria

4412 · Boxcar · For carrying bicycles · RELEX couplers · Length 11.5 cm (4-1/2")

Flat Cars

German Federal Railroad (DB)

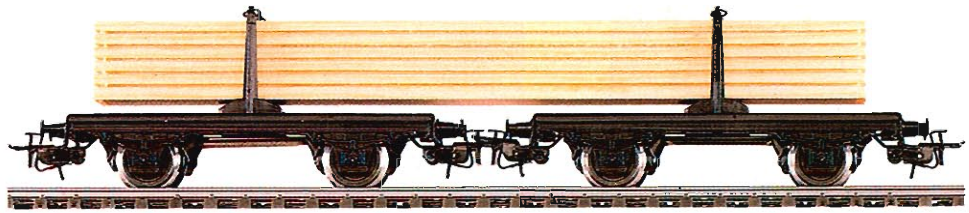
4423 · Low-Sided Gondola · Kklm 505 · RELEX couplers · Length 11.5 cm (4-½")

4474 · Low-Sided Gondola · Rlmms · Loaded with Wiking bulldozer and front end loader · RELEX couplers · Length 16 cm (6-5/16")

4424 · Low-Sided Gondola · Kklm 505 · Loaded with Wiking bulldozer · RELEX couplers · Length 11.5 cm (4-½")

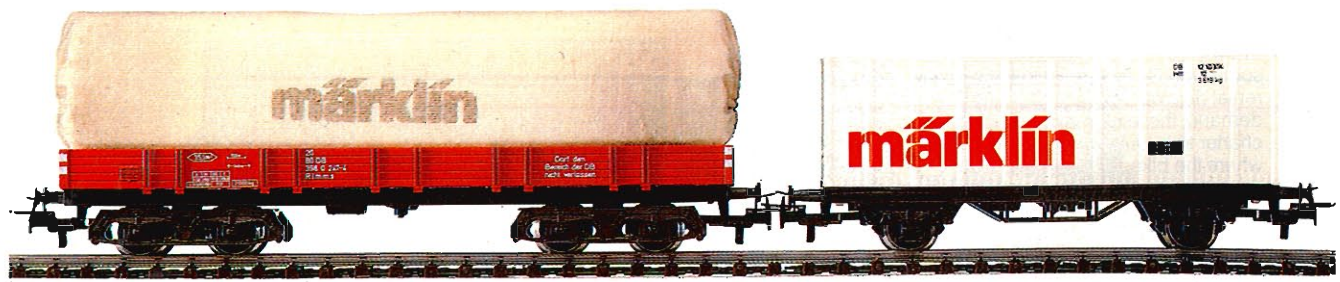
4473 · Low-Sided Gondola · Rlmms · RELEX couplers · Length 16 cm (6-5/16")

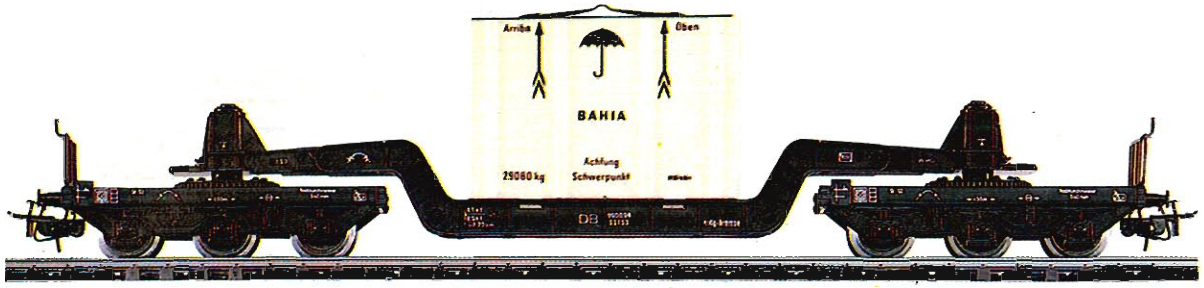
4665 · Lumber Car · 2 part · With load of finished lumber · RELEX couplers · Length 19.5 cm (7-¾")



4475 · Low-Sided Gondola · Rlmms · With tarpaulin · RELEX couplers · Length 16 cm (6-5/16")

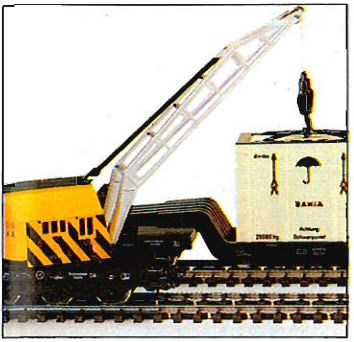
4481 · Container Car · Märklin · Loaded with a container · RELEX couplers · Length 11.5 cm (4-½")



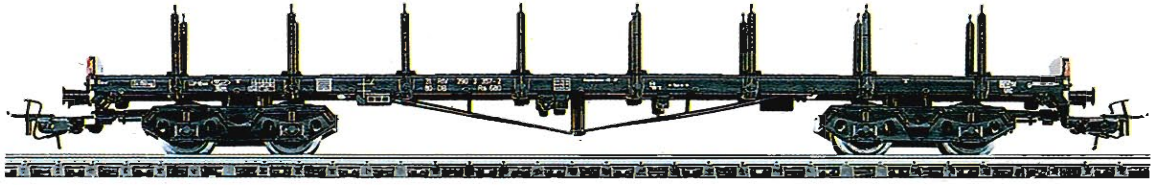


German Federal Railroad (DB)

4618 · Depressed-Center Flat Car · Uaai · Metal construction · Loaded with an overseas crate · RELEX couplers · Length 25 cm (9-⅞")



4671 · Crane Car · With rotating crane, moveable boom and boom supports · Hook operates manually · RELEX couplers · Length 8.3 cm (3-¼") · (4423 low-sided gondola recommended as support for the crane boom during transport)



4663 · Flat Car · Rs 680 · Collapsible stakes · Metal body · RELEX couplers · Length 22.7 cm (9")

4617 · Depressed-Center Flat Car · Uaai · Metal construction · Loaded with a transformer · RELEX couplers · Length 25 cm (9-⅞")

Gondolas

German Federal Railroad (DB)

4465 · **Gondola** · E 040 · RELEX couplers · Length 11.5 cm (4-½")

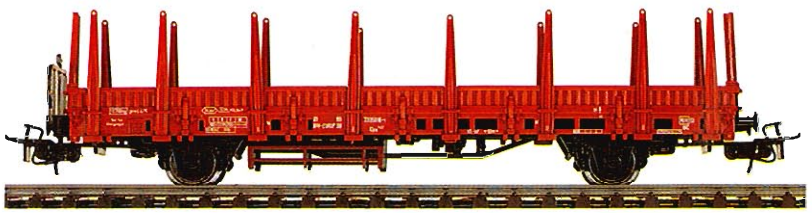
Dutch Railways (NS)

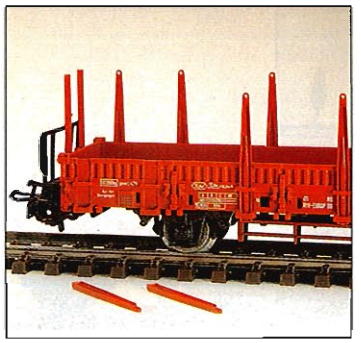
Netherlands

4639 · **Gondola** · E · Metal frame · RELEX couplers · Length 11.5 cm (4-½")

German Federal Railroad (DB)

4694 · **Flat Car** · Kbs 443 · Removeable slakes · RELEX couplers · Length 15.7 cm (6-3/16")





4430 · **Gondola** · El-u 061 · RELEX couplers · Length 11.5 cm (4-½")

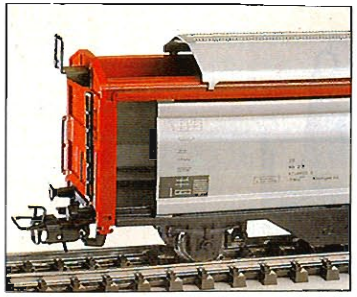
4431 · **Gondola** · El-u 061 · With removeable coal load · RELEX couplers · Length 11.5 cm (4-½")

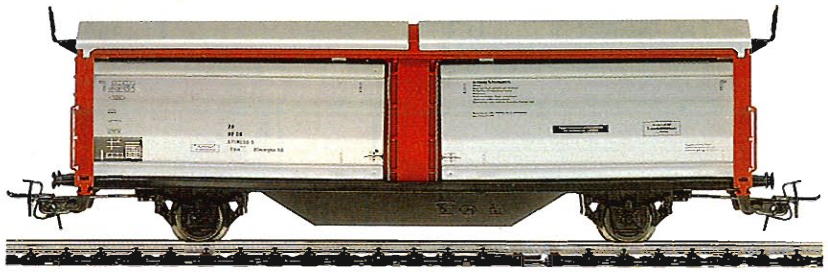
4690 · **Gondola** · Eaos 106 · RELEX couplers · Length 16.1 cm (6-½")

The type Eaos cars are gradually replacing the conventional two-axle gondolas due to the former's greater capacity. Different kinds of freight such as stone, coal, pulp wood, ballast, barrels and bales are transported in these cars. Weather sensitive freight can also be carried in the Eaos gondolas because the sides are equipped with rings to which tarpaulins can be tied down.

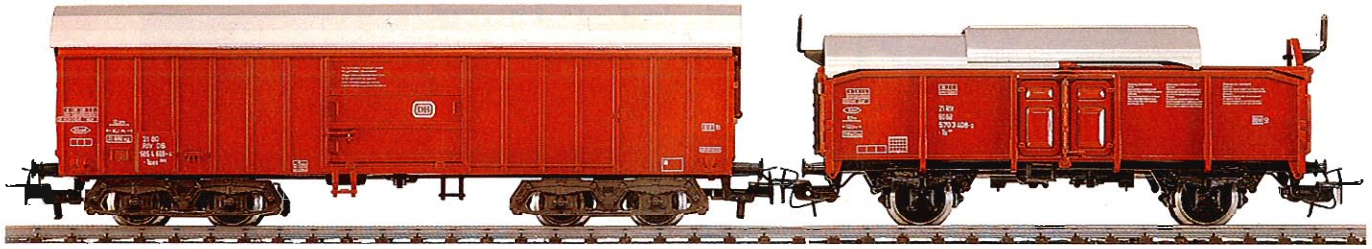
Special Design Freight Cars

German Federal Railroad (DB)



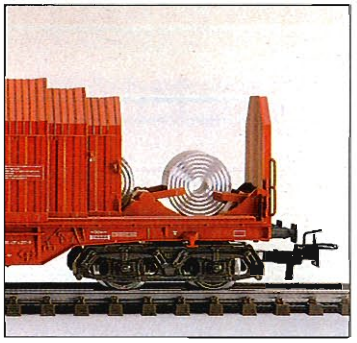


4633 · Freight Car with Sliding Walls and Roof · Tbis 870 · Roof halves and side walls slide to either end · RELEX couplers · Length 15.7 cm (6-3/16″)



4460 · Boxcar with Tilting Roof · Taems 890 · RELEX couplers · Length 16 cm (6-5/16″)

4619 · Covered Gondola · Tms 851 · Sliding roof halves · Metal frame · RELEX couplers · Length 11.5 cm (4-1/2″)



4693 · Telescoping Freight Car · Shimms 708 · Fixed end walls · 3 telescoping body covers which can be slid to both ends of the car · 5 load bays with adjustable restraint arms · 3 steel coils as freight · RELEX couplers · Length 13.8 cm (5-3/8″)

4613 · Auto Carrier · Metal frame, body and loading ramp · Loaded with 4 Wiking automobiles · RELEX couplers · Length 11.5 cm (4-1/2″)

4612 · Auto Carrier · Metal frame, body and loading ramp · Without automobiles · RELEX couplers · Length 11.5 cm (4-1/2″)

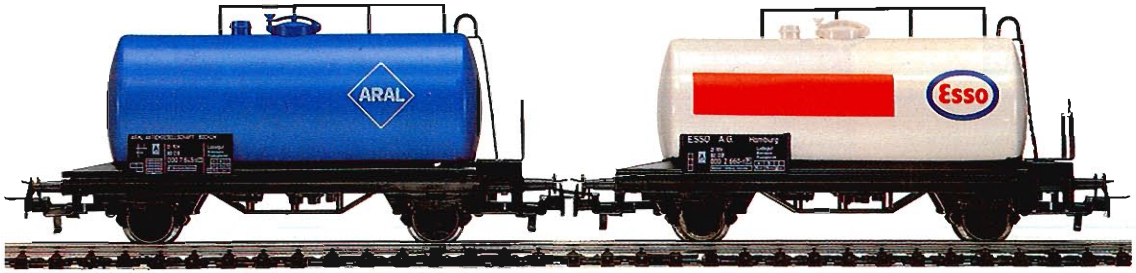
Two auto carriers form a prototypical double unit.

Tank Cars

German Federal Railroad (DB)

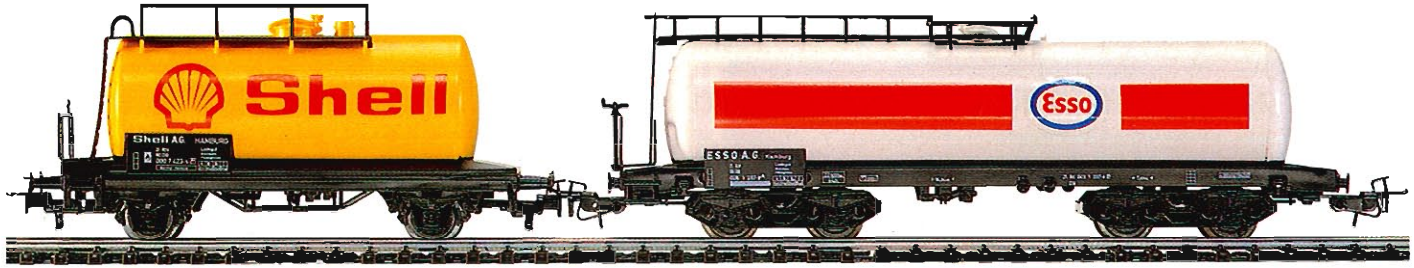
4440 · **Tank Car** · Aral · RELEX couplers · Length 11.5 cm (4-½")

4441 · **Tank Car** · Esso · RELEX couplers · Length 11.5 cm (4-½")



4442 · **Tank Car** · Shell · RELEX couplers · Length 11.5 cm (4-½")

4650 · **Tank Car** · Esso · RELEX couplers · Length 16.4 cm (6-½")



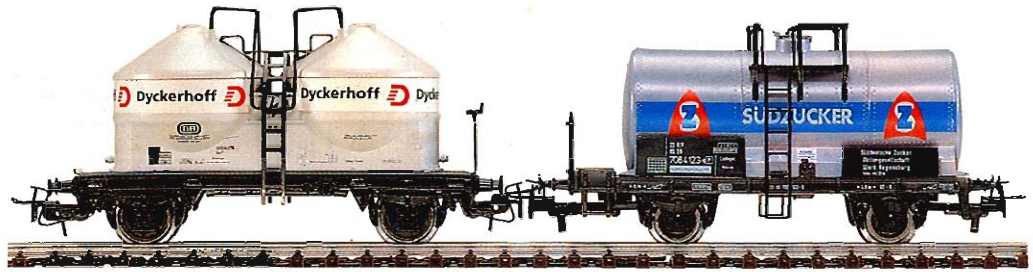
4644 · **Tank Car** · Standard design tank car for BP · RELEX couplers · Length 10 cm (4")

4651 · **Tank Car** · Shell · RELEX couplers · Length 16.4 cm (6-½")

4750 · **Tank Car** · Standard design tank car for Texaco · RELEX couplers · Length 10 cm (4")

4643 · **Tank Car** · Aral · RELEX couplers · Length 16.4 cm (6-½")

German Federal Railroad (DB)



N

4761 · Container Car · Ucs 908 · Lettered for Dyckerhoff Cement, Wiesbaden, Germany · Metal frame · RELEX couplers · Length 10 cm (4″)

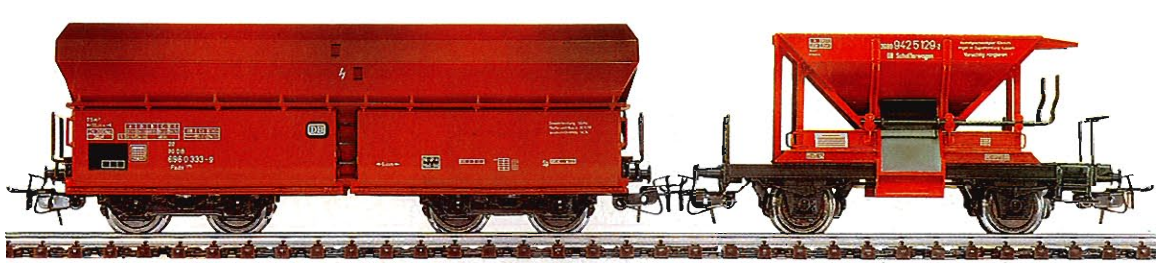
4682 · Molasses Tank Car · Private car of the Südzucker Company · Brakeman's platform, walkways and ladders separately applied · RELEX couplers · Length 10.1 cm (4″)

4664 · Container Car · Lgjs 598 container car · Loaded with 2 removeable TFG containers · RELEX couplers · Length 15.6 cm (6-⅛″)

4631 · Side-Unloading Hopper Car · Fc 090 · Metal frame · Unloading hatches can be opened manually or by remote control using an uncoupler track · RELEX couplers · Length 11.2 cm (4-⅜″)

4626 · High Capacity Covered Hopper Car · Tad-u 961 · Metal frame · All roof hatches open · RELEX couplers · Length 13.3 cm (5-¼″)

4635 · Multi-Section Dump Car · F-z 120 · Metal frame · Buckets can be tipped by releasing the middle latch · RELEX couplers · Length 10.5 cm (4-⅛″)



4624 · High Capacity Hopper Car · Fals 176 saddle-bottomed car · Metal frame · RELEX couplers · Length 13.3 cm (5-¼″)

4610 · Ballast Car · Maintenance car · Metal frame · Unloading hatches can be opened manually · RELEX couplers · Length 9.5 cm (3-¾″)

Swiss Freight Cars

Swiss Federal Railways (SBB)

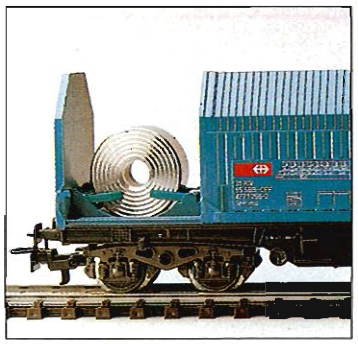
Switzerland

4698 · **Boxcar** · H h k with brakeman's cab · Sliding doors · RELEX couplers · Length 14 cm (5-½")

4691 · **High Capacity Hopper Car** · Private car of the Juracement Company, Aarau · Metal frame · Dual language lettering (German, French) · RELEX couplers · Length 13.3 cm (5-¼")

Switzerland

4687 · **Telescoping Freight Car** · Shimms · Fixed end walls · 3 telescoping body covers which can be slid to both ends of the car · 5 load bays with adjustable restraint arms · 3 steel coils as freight · RELEX couplers · Length 13.8 cm (5-⅜")



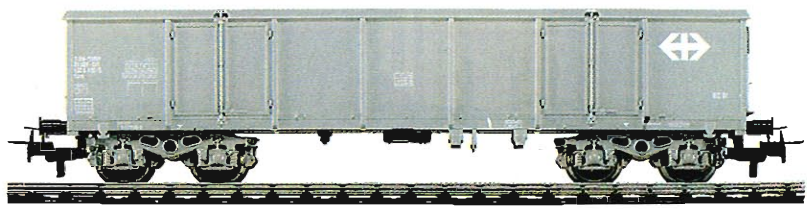
Switzerland

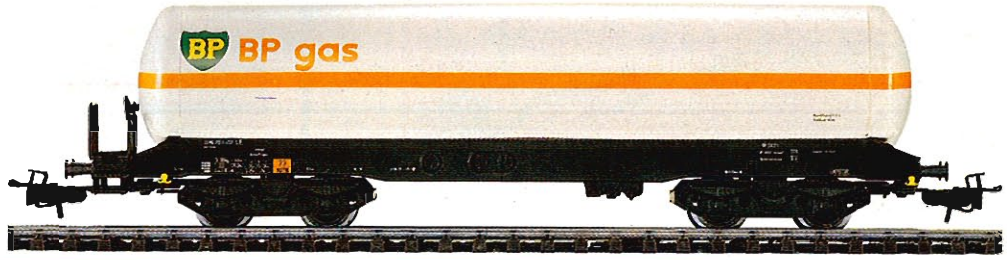
4718 · **Gondola** · Eaos · RELEX couplers · Length 16.1 cm (6-⅛")

The Swiss Federal Railways (SBB) have undertaken a remarkable color experiment with freight cars. Several four-axle gondolas of the UIC standard class Eaos have been painted fuchsia. An entire series of Shimms telescoping cars have been painted clear blue. The object of the experiment is to try new paint schemes for freight cars which will improve the railroad's image in freight traffic.

Switzerland

4689 · **Gondola** · Eaos · RELEX couplers · Length 16.1 cm (6-⅛")





Danish State Railways (DSB)

Denmark

4748 · Pressurized Gas Tank Car · BP Gas · RELEX couplers · Length 19.5 cm (7-¾")

Chesapeake & Ohio Railway (C & O)

USA

4564 · Boxcar · Metal body · Catwalk and ladders separately applied · Sliding doors · Trucks with flexible side frames · RELEX couplers · Length 18.4 cm (7-¼")

American railroads are quite a bit different from their European counterparts. This is reflected in the fact that American railroad builders had practically unlimited space in which to build; hence, the rolling stock is considerably larger in size than in Europe. As a rule, freight cars ride on two two-axle trucks.

Union Pacific Railroad (UP)

USA

4574 · Gondola · Trucks with flexible side frames · RELEX couplers · Length 17 cm (6-⅝")

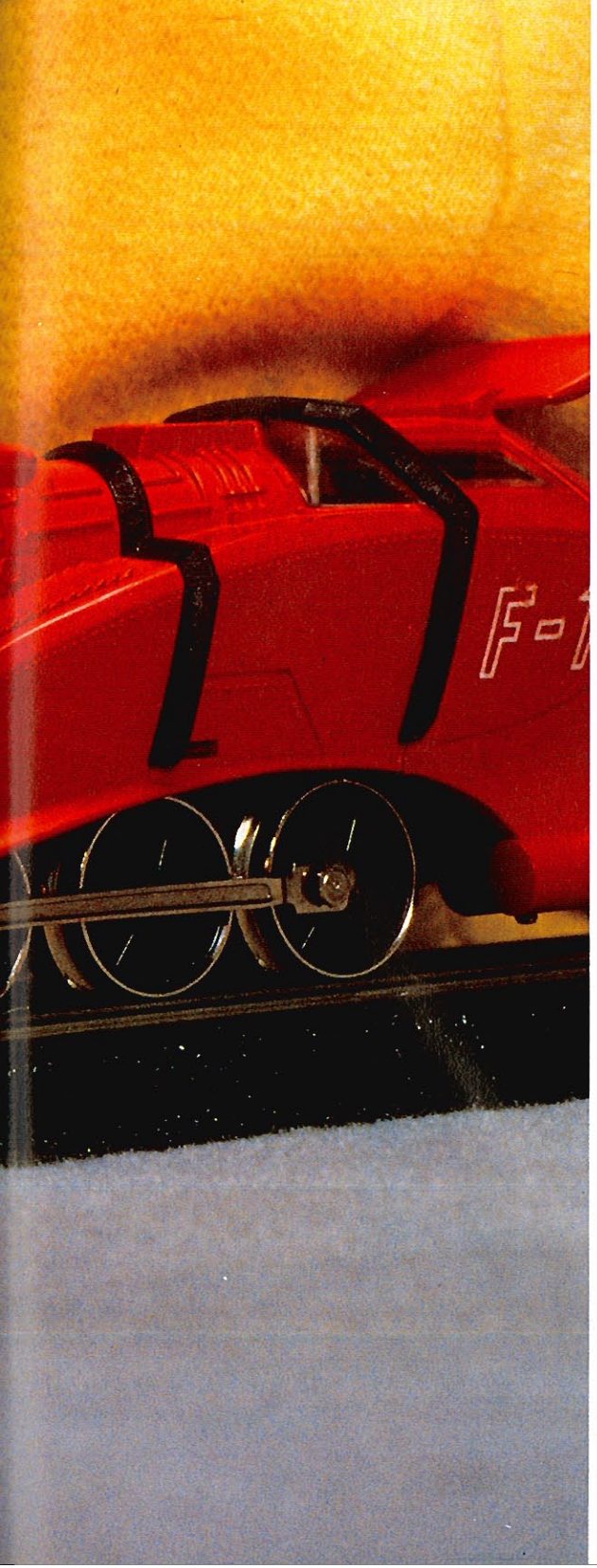
American freight trains are usually quite long. Several locomotives, operating in tandem, pull countless boxcars, gondolas, and other freight cars. The conductor and rear brakeman ride in the caboose.

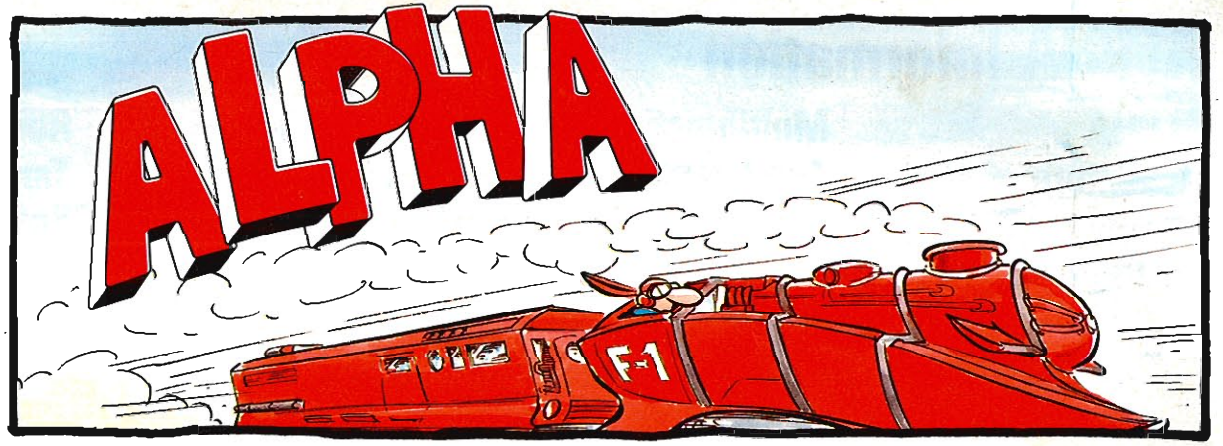
Southern Pacific Railroad (SP)

USA

4563 · Caboose · Metal body · Catwalk and ladders separately applied · Sliding doors · Trucks with flexible side frames · RELEX couplers · Length 12.5 cm (5")

Adventure Railroad – the right start

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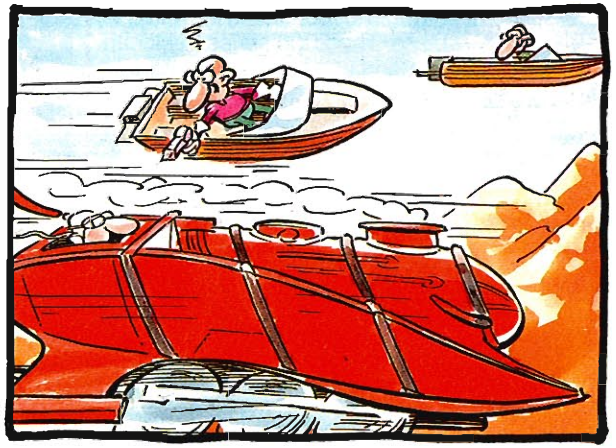
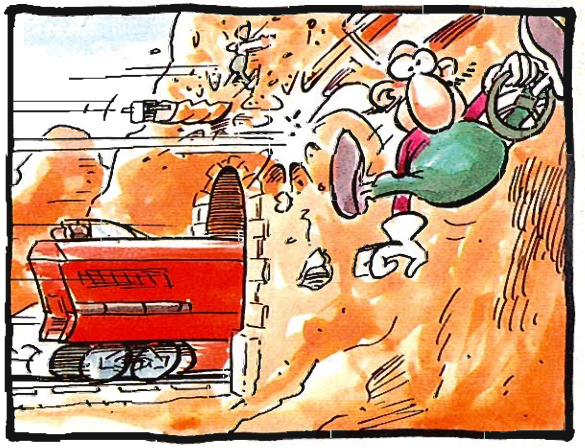
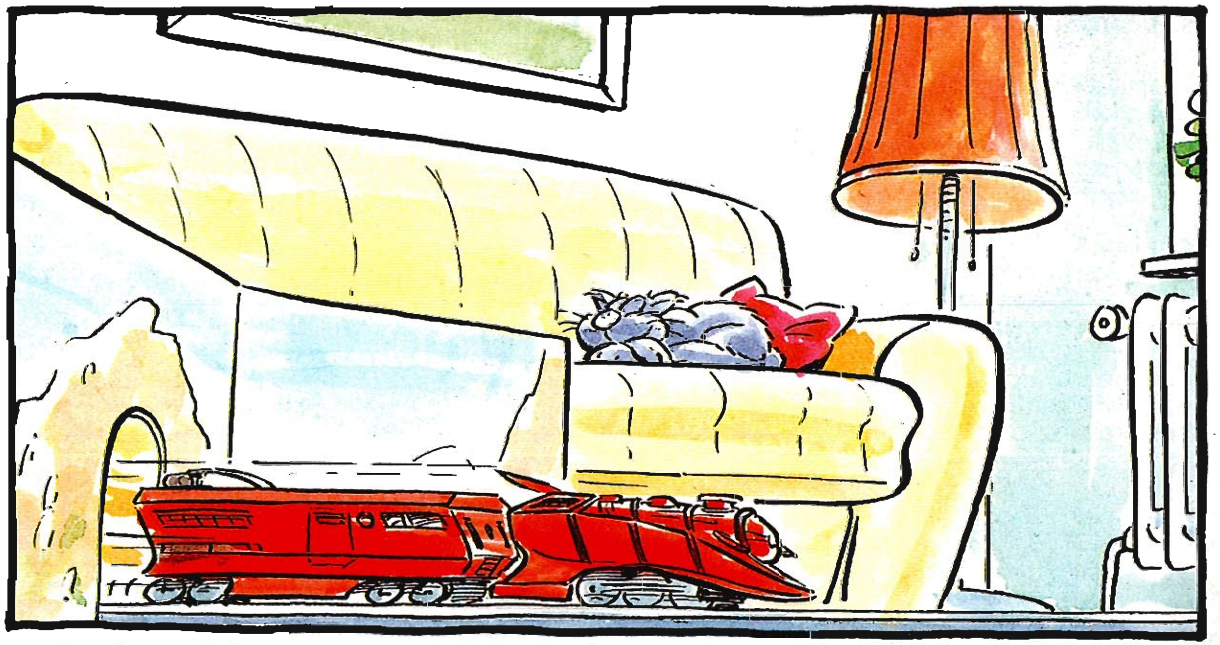


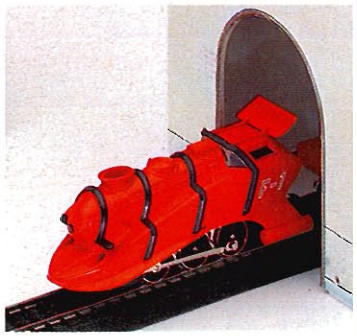




ALPHA Information

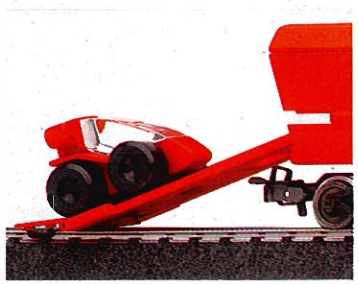
ALPHA – Adventure Railroad for Children

ALPHA is the new world of play from Märklin, the adventure railroad for boys and girls ages 5 to 10. ALPHA'S unlimited potential for play and transformation asks for and encourages especially children's creativity and ingenuity.

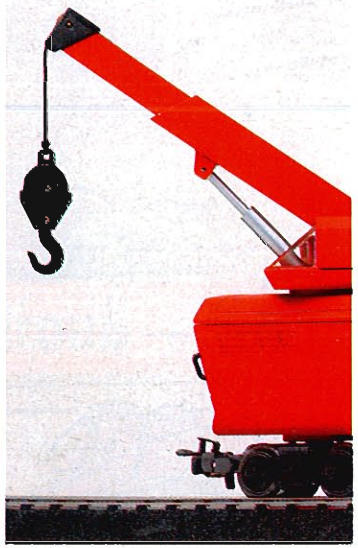


ALPHA was developed in cooperation with children. With ALPHA playing is everything; children can set it up and take it down quickly and without help. They can change it and transform it into constantly new adventures. Even the packaging is an essential element of play. The sturdy adventure carrying cases and the safe rechargeable transformer make ALPHA a mobile world of play, not dependent on playrooms or electric plugs.

Multifunctions – The Limitless, Creative Play Experience

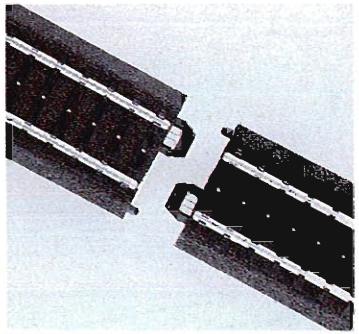


The four-axle, multi-function cars are quite special. They can be broken down into many pieces and reassembled for constantly new adventures. For example, the crane is fully functional when set up and the amphibious vehicle rolls down a ramp directly out of the radar car.



Track 2000 – The Quick and Easy "Snap-Together" System

Straight and curved track sections can be snapped together easily and quick as a flash. Of course, the turnouts are easy to add or remove to create any number of constantly new track plans. The 2000 series track can be used with Märklin H0 model railroads.



N

2001 · **Straight Track** · Length 1/1 = 180 mm (7-3/32")

2019 · **Bumper** · Length 70 mm (2-3/4")

2021 · **Curved Track** · Full section = 30° · Radius 360 mm (1' 2-3/16")

2031 · **Curved Track** · Full section = 30° · Radius 456.4 mm (1' 6")

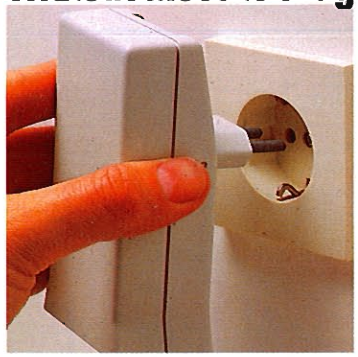
2062 · **Left Hand Turnout**

2063 · **Right Hand Turnout**
For manual operation · Can be converted to electric operation · Length of straight section 180 mm (7-3/32"), same as 2001 · Curved branch 30° · Radius 360 mm (1' 2-3/16"), same as 2021

2090 · **Straight Feeder Track** · Length 1/1 = 180 mm (7-3/32") · 2 feeder wires

2091 · **Adapter Track** · For Märklin H0 M track

Rechargeable Tansformer – Safe Operating Fun for Children, without Electric Plug



Adventure Carrying Case – Packaging You Play with

At Märklin Imagination Is Getting Its Turn

N

2510 220 Volts

ALPHA train Set with New 2000 Series Track and Rechargeable Transformer · Contents: F-1 locomotive with headlight · 1 four-axle, multi-function car, comes in 6 parts with 2 interchangeable interiors · 1 section 2001 straight track · 12 sections 2021 curved track · 1 section 2090 feeder track with wire · 1 each 10 VA rechargeable transformer with speed control and terminals for electric accessories · Illustrated background board · Instruction booklet with numerous ideas for playing with the set · Can be expanded with the 2511 and 2512 accessory sets and with the 2000 series track · Packed in a sturdy adventure carrying case which can be used as a station and a shed

2510
94 x 76 cm
(37" x 30")

N

2511 · ALPHA "Radar" Extension Set with 2000 Series Track · Contents: 1 four-axle, multi-function car, can be taken apart, retractable radar screen · Integrated amphibious vehicle and retractable loading ramp · 7 sections 2001 straight track · 2 sections 2021 curved track · 1 each 2062 left hand turnout · 1 each 2063 right hand turnout · Instruction booklet with numerous ideas for playing with the set · Packaging can be used as a tunnel and a railroad grade crossing

2511
166 x 76 cm
(65-3/8" x 30")

N

2512 · ALPHA "Crane" Extension Set with 2000 Series Track · Contents: 1 four-axle, multi-function car, can be taken apart, rotating solar panel · Collapsible crane, fully operational when set up · 6 sections 2001 straight track · 1 each 2063 right hand turnout · 1 each 2019 bumper · Instruction booklet with numerous ideas for playing with the set · Packaging can be used as a hotel and a railroad grade crossing

2512
184 x 76 cm
(72-½" x 30")

The Small and Large Start

2910 220 Volts
2911 100 Volts Japan
2912 110 Volts (60 Hz)
2913 240 Volts
Freight Train Set with Oval of M track and Transformer · Contents: Type DHG 500 diesel locomotive with headlights, 1 dump car, 1 low side car with skip loader, 12 each 5100 curved track, 1 each 5106 straight track, 1 each 5131 feeder track, prevents interference with radio and television reception, 1 each 10 VA transformer with stepless speed controller and accessory terminals · Dump car and skip loader can be used for loading and unloading operations · Illustrated instruction booklet with many ideas for playing with the set · Can be expanded with SET expansion program or with the entire M track program · The ideal start into the world of model railroading

märklin S

2910
94 x 76 cm
(37″ x 30″)

2900 220 Volts
2901 100 Volts Japan
2902 110 Volts (60 Hz)
2903 240 Volts
Passenger Train Set with Oval of M track and Transformer · Contents: 3087 tank locomotive, 2 passenger cars, 12 each 5100 curved track, 1 each 5106 straight track, 1 each 5131 feeder track, prevents interference with radio and television reception, 1 each 10 VA transformer with stepless speed controller and accessory terminals · Illustrated instruction booklet with numerous ideas for playing with the set · Can be expanded with SET expansion program or with the entire M track program · The ideal start into the world of model railroading

märklin S

2900
94 x 76 cm
(37″ x 30″)

2960 220 Volts
2962 110 Volts (60 Hz)
Freight Train Set with M Track Layout and Transformer · Contents: 3000 tank locomotive with headlights, 1 each 4413 dump car, 1 each 4423 low side gondola, 1 each 4465 gondola, 12 sections 5100 curved track, 10 sections 5106 straight track, 1 section 5107 straight track, 1 section 5131 feeder track with built-in condenser to prevent interference with radio and television reception, 1 each 5112 uncoupler track with 5113 light mast, 1 pair of 5221 turnouts, 2 sections 5206 curved track, 2 each 7190 bumpers, 1 each 10 VA transformer with stepless speed controller and terminals for electric accessories, 1 each 7072 control box · Dump car can be used for loading and unloading operations · 1 miniature automobile, can be used as load on low side gondola · Illustrated instruction booklet with numerous ideas and tips for playing with the set · Can be expanded with SET expansion program or with the entire M track program · The versatile entry into the fun-filled world of model railroading

märklin S+E

2960 184 x 76 cm (72-½″ x 30″)

The transformer with the starter sets has terminals for hooking up the train and electric accessories. Larger locomotives or additional turnouts or signals can also be operated with the transformer.

The transformer from the starter sets is not available separately.

Connect the transformer to AC outlets only

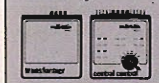
The Digital Start

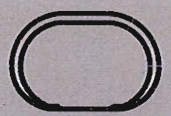
2600 100 Volts Japan
2601 110 Volts (60 Hz)
2602 220 Volts
2603 240 Volts

Digital Starter Set · 2 Freight Trains with Large M Track Layout and Transformer · Contents: 3665 class 260 diesel hydraulic switch engine with TELEX couplers, class 89 tank locomotive with headlights, 2 each 4423 low side gondolas, 1 each 4430 gondola, 1 each container car, 14 sections 5100 curved track, 4 sections 5106 straight track, 1 section 5107 straight track, 1 section 5111 feeder track, 1 each 5112 uncoupler track, 1 pair 5140 electric turnouts, 6 sections 5200 curved track, instructior book · 1 Central Control (combining Keyboard, Central Unit and Control 80 functions) for operating 4 solenoid accessories and 4 Digital locomotives with an auxiliary function and fixed addresses · All standard Digital control components can be connected to the Central Control for expansion · Decoder is already built into the turnouts and uncoupler track · 1 each 52 VA (42 VA in the USA) transformer · Set can be expanded with the entire M track program · The digital entry into the model railroading

The Central Control in the starter set is not available separately.

Connect the transformer to AC outlets only



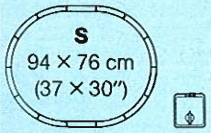


2602 128 x 84 cm (51″ x 33″)

The Logical Way to Expand

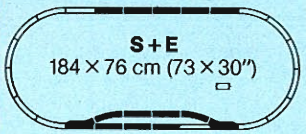
A lot begins with the simple oval included in the 2902 (S), 2912 (S), and the 2962 (S + E) starter sets. The first add-on can be either the 5190 (E) extension set with manual turnouts or the 5191 (E) with electric turnouts. Additional extension sets can be added on in any sequence and include the 5192 (T1), 5193 (T2) and 5194 (T3) sets.

These track plans illustrate the step-by-step construction

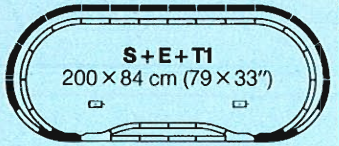


5190 · Extension Set E · Contents: 10 sections straight track, 2 sections curved track, 1 pair manual turnouts and instructions

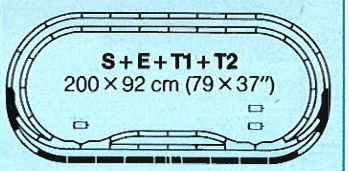
5191 · Extension Set E · Contents: 10 sections straight track, 2 sections curved track, 1 pair electric turnouts, control box, distribution strip, plugs, sockets and wire, and instructions

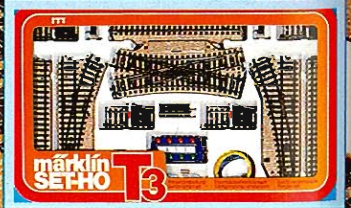


5192 · Double Track Set T1 · Contents: 6 sections straight track, 8 sections curved track, 1 pair electric curved turnouts, control box, distribution strip, plugs, sockets and wire, and instructions

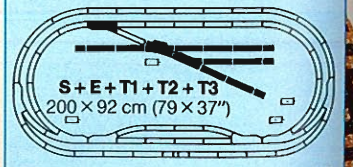


5193 · Station Track Set T2 · Contents: 9 sections straight track, 2 sections curved track, 1 pair electric curved turnouts, control box, distribution strip, plugs, sockets and wire, and instructions





5194 · Yard Track Set T3 · Contents: 9 sections straight track, 1 pair electric turnouts, double slip switch, 4 bumpers, control box, distribution strip, plugs, sockets, and wire, and instructions



The Professional Start

2980 220 Volts
Freight Train Set with K Track Layout and Transformer · Contents: 3141 diesel locomotive, 1 each 4415 refrigerator car, 1 each 4423 low side gondola, 1 each 4699 freight baggage car, 9 sections 2200 straight track, 2 sections 2207 straight track, 4 sections 2208 straight track, 12 sections 2221 curved track, 2 sections 2232 curved track, 1 pair 2261 electric turnouts, 1 section 2292 feeder track with feeder wires and built-in condenser to prevent interference with radio and television reception, 1 each freight yard accessories kit, 1 7072 control box, wire, plugs, sockets, 1 each 10 VA transformer with stepless speed controller and terminals for electric accessories · Instructions with different suggestions for putting the set together · Can be expanded with the entire K track program · A great way to enter the world of scale model railroading
Note: Not available in the USA

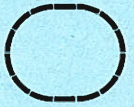
2980
186 × 78 cm
(74 × 31″)

The transformer with the starter sets has terminals for hooking up the train and electric accessories. Larger locomotives or additional turnouts or signals can also be operated with the transformer.

The transformer from the starter sets is not available separately.

Connect the transformer to AC outlets only

2970 220 Volts
2971 100 Volts Japan
2972 110 Volts (60 Hz)
2973 240 Volts
Passenger Train Set with Oval of K track and Transformer · Contents: 3000 tank locomotive with headlights, 2 4107 passenger cars with interiors, 1 section 2200 straight track, 12 sections 2221 curved track, 1 section 2292 feeder track with feeder wires and built-in condenser to prevent interference with radio and television reception, 1 each 10 VA transformer with stepless speed controller and terminals for electric accessories · Illustrated instruction booklet with introduction on setting up and operating the model railroad layout · Can be expanded with the entire K track program · The ideal start into the world of realistic model railroading



2970
94 × 76 cm
(37 × 30″)


MITTELSTADT

Layout construction with M and K track, photographed from an example by the FALLER Company.

Layout Planning

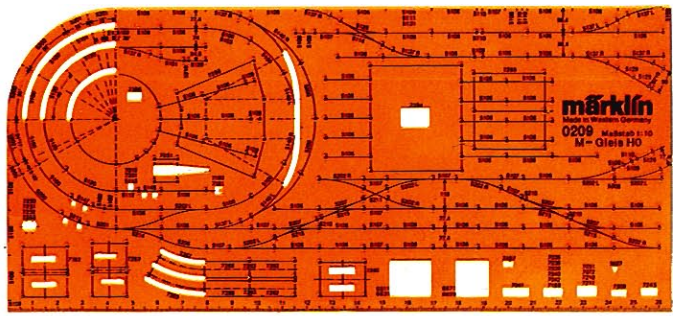
With Märklin the fun of model railroading begins right at the planning stage. Using the track planning game or the track planning stencils, each modeler can design his own layout to express his individuality. Märklin literature is full of tips and ideas on layout construction and creating scenery for all friends of Märklin model railroading.

Track Planning Games

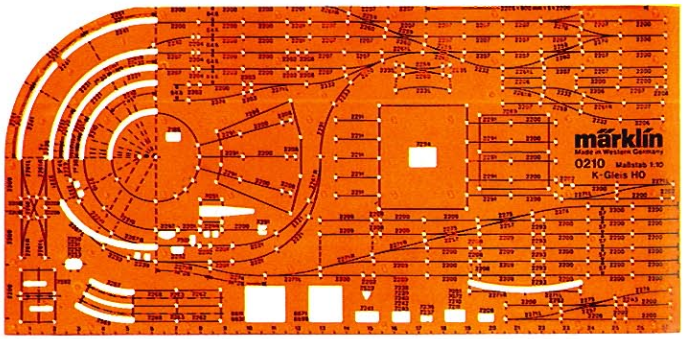
0230 · M · Track Planning Game · For designing and conceptualizing model railroad layouts in miniature form · All M track sections scaled 1 : 5 · Has transfer table, turntable and bridge pillars · Enough parts to plan a medium-sized layout · All pieces have corresponding part numbers on both sides · Pieces come in one of four colors (straight sections and 3 radii for curves) · Pieces can be connected to each other snugly and easily

0231 · K · Track Planning Game · For designing and conceptualizing model railroad layouts in miniature form · All K track sections scaled 1 : 5 · Has transfer table, turntable and bridge pillars · Enough parts to plan a medium-sized layout · All pieces have corresponding part numbers on both sides · Pieces come in one of seven colors (straight sections, turnouts for 14° 26′ and 5 radii for curves) · Pieces can be connected to each other snugly and easily

Track Planning Stencils

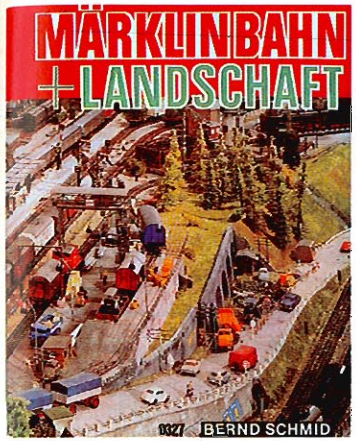


0209 · M · Track Planning Stencils · For planning track layouts with 5100 and 5200 series M track · All track sections are scaled 1 : 10 on the stencils and can be traced on paper with a sharp pencil · Instructions included

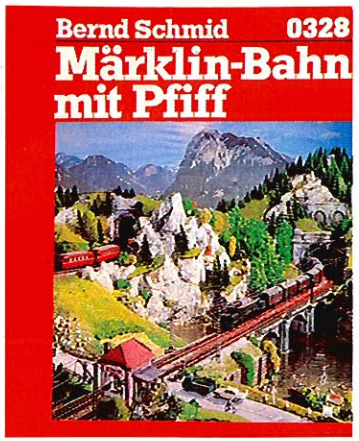


0210 · K · Track Planning Stencils · For planning track layouts with 2200 series K track · All track sections are scaled 1 : 10 on the stencils and can be traced on paper with a sharp pencil · Instructions included

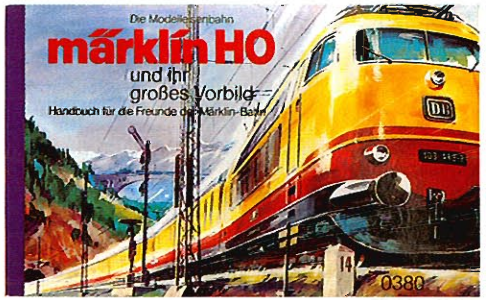
Right-of-Way and Scenery Tips



0327 · Märklin-Bahn + Landschaft · Book by Bernd Schmid · An excellent aid for building your own layout · Technical details, laying track, landscaping and general development of the layout are covered · Many color and black and white photos · 192 pages · Size 16.4 × 20.3 cm (6-½ × 8″) · German text



0328 · Märklin-Bahn mit Pfiff · Book by Bernd Schmid · Many additional tips on railroad construction for the demanding modeler · Mr. Schmid's first book (0327) described how to do things; his second book describes what to do in model railroading · In-depth discussion of all kinds of construction topics · Many color and black and white photos 262 pages · Size 17 × 22 cm (6-¾ × 8-¾″) · German text

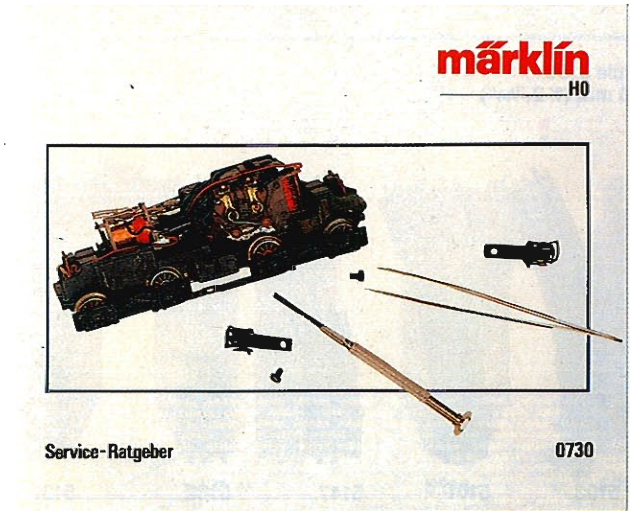


0380 · Die Modelleisenbahn Märklin H0 und ihr großes Vorbild · A handbook for Märklin enthusiasts · Suggestions for building Märklin layouts with scenery, Märklin locomotives and cars and their prototypes, signals, operating rules of the prototype railroads, the railroad traffic department, examples of switching circuits for multi-train operation and much more · 228 pages · Size 15 × 24 cm (5 × 9″) · German text

Layout Book

0702 · K + M Track Plan Book · 30 layouts, 15 for K track and 15 for M track · A supplement has M track equivalents for 14 K track layouts and K track equivalents for 15 M track layouts · Each layout suggestion includes a 1 : 10 track plan with wiring schematic, catenary, landscaping sketch, color photos of completed layouts, tips and suggestions for laying track and adding scenery · Special spacesaving layout ideas such as narrow shelf layouts, diagonal layouts, U-shaped layouts, and layout themes that can be built by themselves or used as add-ons for existing layouts · 186 pages · Size 22 × 26.4 cm (8-¾ × 10-½″) · English text

Service Manual

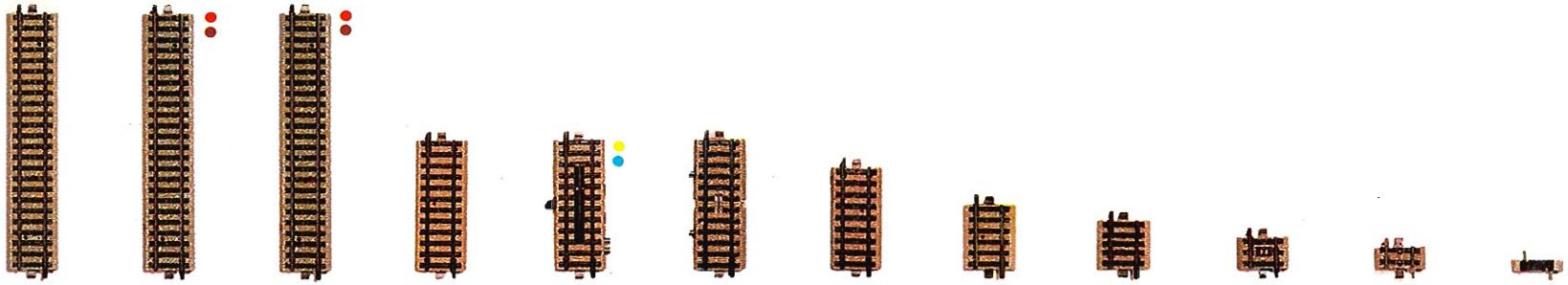


0733 · H0 Service Manual · Function, care and maintenance of locomotives · Practical tools and their use · Trouble shooting and help for locomotives and layouts · Tips on the Digital system · Installation of close couplers · Extensive spare parts tables · Many tips and much information on model railroad technology · 64 pages · Size 22 × 26.4 cm (8-¾ × 10-½″) · English text

Digital Book

0303 · Digital Book · All components of the Märklin Digital system · How does Digital work? · From the decoder panel to the central unit to the track detection unit · Directions for using a computer with the Digital system · Possible prototypical applications of the Digital system, such as: signal block and staging yard operation · Examples of circuits and control systems for model railroad equipment of different gauges and manufacturers · 168 pages · Size 14.8 × 21 cm (5-⅞ × 8-¼″) · English text

Overview of M Track



5106 5111 5131 5107 5112 5146 5129 5108 5109 5110 5210 5208

5106 · Straight Track · Full section, length = 180 mm (7-3⁄32″)

5111 · Feeder Track · Full section, length = 180 mm (7-3⁄32″) · 2 feeder wires

5131 · Feeder Track · Full section, length = 180 mm (7-3⁄32″) · 2 feeder wires · Built-in condenser to suppress interference with radio and television reception

5107 · Straight Track · ½ section, length = 90 mm (3-9⁄16″)

5112 · Uncoupler Track · With solenoid operation · ½ section, length = 90 mm (3-9⁄16″) · 2 connecting wires

5146 · Straight Circuit Track · ½ section, length = 90 mm (3-9⁄16″) · Momentary contact by means of pickup shoes

5129 · Straight Track · Length 70 mm (2-3⁄4″)

5108 · Straight Track · ¼ section, length = 45 mm (1-3⁄4″)

5109 · Straight Track · 3⁄16 section, length = 33.5 mm (1-5⁄16″)

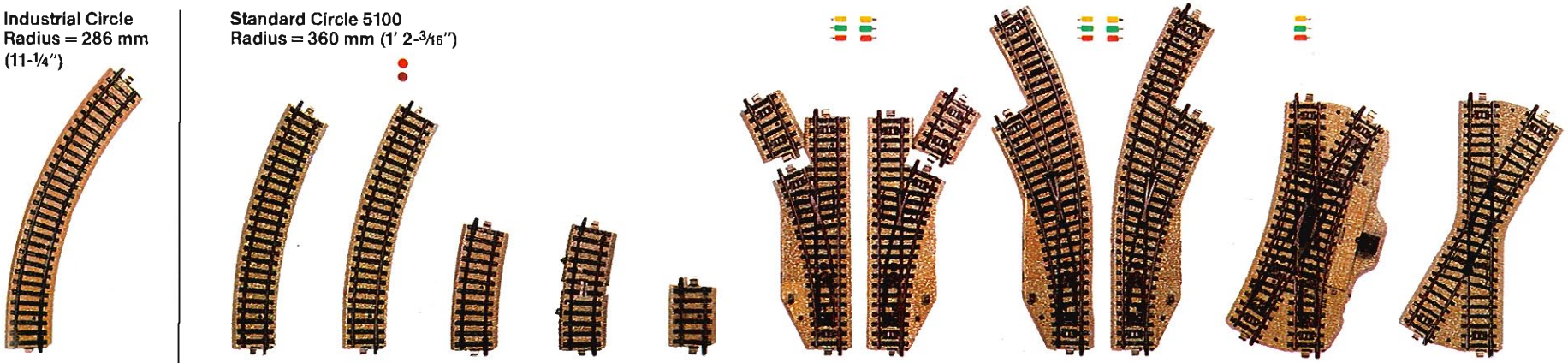
5110 · Straight Track · ⅛ section, length = 22.5 mm (7⁄8″)

5210 · Straight Track · Length 16 mm (5⁄8″)

5208 · Straight Track · Length 8 mm (5⁄16″)

Industrial Circle
Radius = 286 mm
(11-1⁄4″)

Standard Circle 5100
Radius = 360 mm (1′ 2-3⁄16″)



5120 5100 5103 5101 5147 5102 5137 5140 5128 5114

5120 · Curved Track · Full section = 45° · Sharp radius for branch lines and industrial sidings · For use with short locomotives and cars only

5100 · Curved Track · Full section = 30°

5103 · Curved Feeder Track · Full section = 30° · 2 feeder wires

5101 · Curved Track · ½ section = 15°

5147 · Circuit Track · ½ section = 15° · Momentary contact by means of pickup shoes

5102 · Curved Track · ¼ section = 7° 30′

5137 · Pair of Turnouts · With solenoid operation · Length of straight side 180 mm (7-3⁄32″) · Add 5102 section (included) to 22° 30′ turnout curve to form 30° section · 3 connecting wires · Illuminated lanterns

= 60000

5140 · Pair of Curved Turnouts · With solenoid operation · Inner curve 30° section · Outer curve 30° section with parallel spacing of 77.4 mm (3-1⁄16″) · 3 connecting wires · Illuminated lanterns

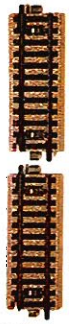
= 60000

5128 · Double Slip Switch · With solenoid operation · 30° crossing angle · Length of straight section 193 mm (7-5⁄8″) · Can be operated manually · 3 connecting wires · Illuminated lantern to indicate switch setting (crossing or curves)

= 60000

5114 · Crossing · 30° crossing angle · Length 193 mm (7-5⁄8″) · Third "rails" insulated from each other electrically

All turnouts have sprung points. The 5137, 5140, 5202 electromagnetic turnouts, the 5128 and 5207 double slip switches and the 5214 three-way turnout have double solenoids for remote operation. All pairs of turnouts consist of a right and left turnout.


5145


5115


5116



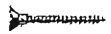
7190



7191


5113


7171



7195 7299


5004


2291


5022

5145 · Contact Track Set · 2 half sections, length = 2 × 90 mm (3-9/16") · Continuous contact effected by train wheels · Contact area can be extended with 5115 and 5116 contact track sections

5115 · Straight Contact Track · Full section, length = 180 mm (7-3/32") · For extending contact areas

5116 · Curved Contact Track · Full section = 30° · Radius 360 mm (1' 2-3/16") · For extending contact areas

7190 · Bumper · Length 70 mm (2-3/4")

7191 · Bumper · Length 70 mm (2-3/4") · With illuminated lantern

💡 = 60000

5113 · Light Pole · For 5112 uncoupler track · Height 85 mm (3-3/8") · Lantern illuminated during uncoupling operation

💡 = 60010

2291 · Adapter Track · Full section, length = 180 mm (7-3/32") · For connecting K track to M track

7171 · Sound Deadening Strips · Package of 50 strips and 50 wood screws for quieter train operation

7195 · Number Sign Set · Contents: 12 bases and signs numbered 1–24 · For identifying turnouts and signals

7299 · Wood Screws · Contents: 200 screws · For mounting M track

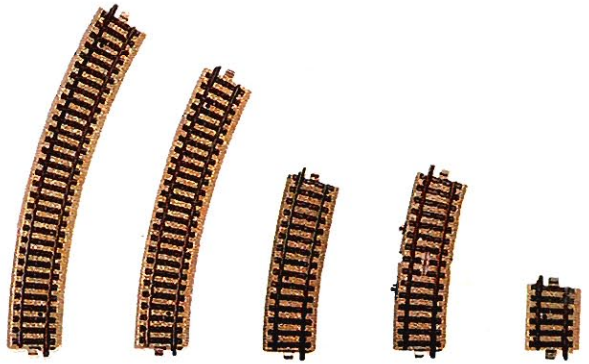
5004 · Center Rail Feeder Wire · Length 750 mm (2' 5-1/2") · Connects at joints in center rail

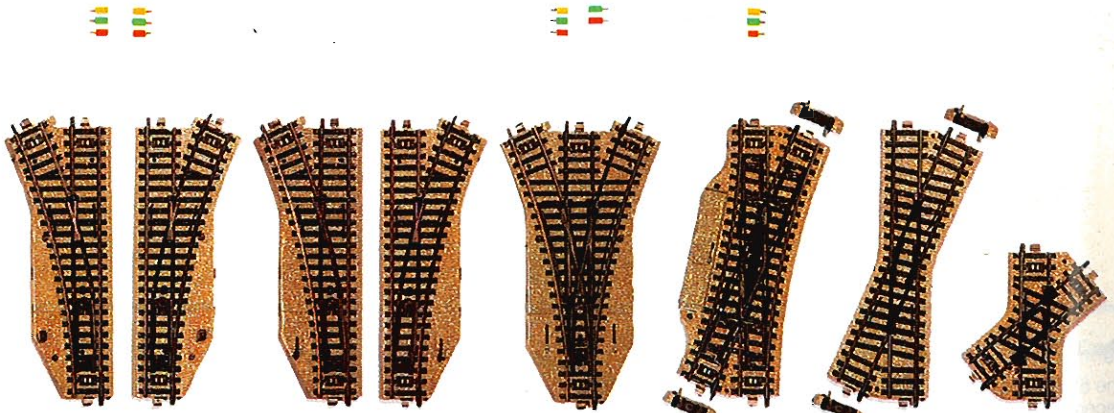
5022 · Center Rail Insulators · Insulator is placed between the center rail clips of a track joint to separate track circuits

7555 · Contact Set · Reed contact switches for installation in track · Activated by 7556 magnet

7556 · Magnet Set · 6 magnets for installation on car or locomotive bottoms · For activating 7555 reed contact switches

Parallel Circle 5200 · Radius = 437.4 mm (1' 5-1/8")


5200 5206 5201 5213 5205


5202 5221 5214 5207 5215 5211

5200 · Curved Track · Full section = 30°

5206 · Curved Track · Section = 24° 17' · Same as 5202 and 5221 curved branch

5201 · Curved Track · ½ section = 15°

5213 · Curved Circuit Track · ½ section = 15° · Momentary contact by means of pickup shoes

5205 · Curved Track · Section = 5° 43' · Extends 5206 section to a 5200 section

5202 · Pair of Turnouts · With solenoid operation · Length to straight side 180 mm (7-3/32") · Curved branch 24° 17' · 3 connecting wires · Illuminated lanterns

💡 = 60000

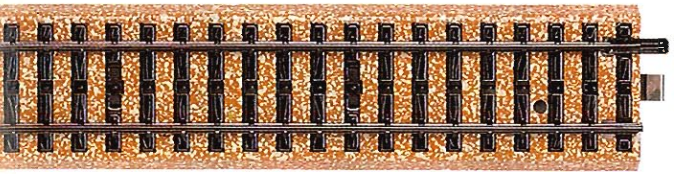
5221 · Pair of Turnouts · Manually operated · Length of straight side 180 mm (7-3/32") · Curved branch 24° 17'

5214 · Symmetrical Three-Way Turnout · With double solenoid operation · Length of the straight section 180 mm (7-3/32") · Curved branches 24° 17' · 5 connecting wires · 2 additional levers for manual operation

5207 · Double Slip Switch · With solenoid operation · Crossing angle 24° 17' · Length of the straight section 180 mm (7-3/32") · 3 connecting wires · Additional lever for manual operation · 2 5208 straight sections included

5215 · Crossing · Crossing angle 24° 17' · Length 180 mm (7-3/32") · Third "rails" insulated from each other · 2 5208 straight sections included

5211 · Crossing · Crossing angle 48° 30' · Length 98 mm (3-7/8") · Third "rails" insulated from each other



The special feature about M track is that its metal roadbed is an integral part of the track, thus giving it the durability necessary for layouts that are changed often. M track is easy for children to put together.

The track sections are 37.5 mm (1-15/32") wide. Therefore 37.5 mm (1-15/32") must be subtracted from the center-to-center track spacings indicated to determine the spacing needed for clearance.

The 2291 adapter track section is available for combining M and K track.

Straight Track

5106 · Full section, length = 180 mm (7-3/32")

5107 · 1/2 section, length = 90 mm (3-9/16")

5108 · 1/4 section, length = 45 mm (1-3/4")

5109 · 3/16 section, length = 33.5 mm (1-5/16")

5110 · 1/8 section, length = 22.5 mm (7/8")

5129 · Length 70 mm (2-3/4")

5208 · Length 8 mm (5/16")

5210 · Length 16 mm (5/8")

Curved Track

Industrial Circle · Radius 286 mm (11-1/4")

5120 · Full section = 45°

Standard Circle · Radius 360 mm (1' 2-3/16")

5100 · Full section = 30°

5101 · 1/2 section = 15°

5102 · 1/4 section = 7° 30'

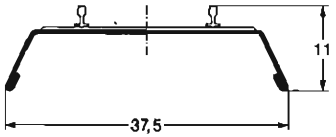
Parallel Circle · Radius 437.4 mm (1' 5-1/8")

5200 · Full section = 30°

5201 · 1/2 section = 15°

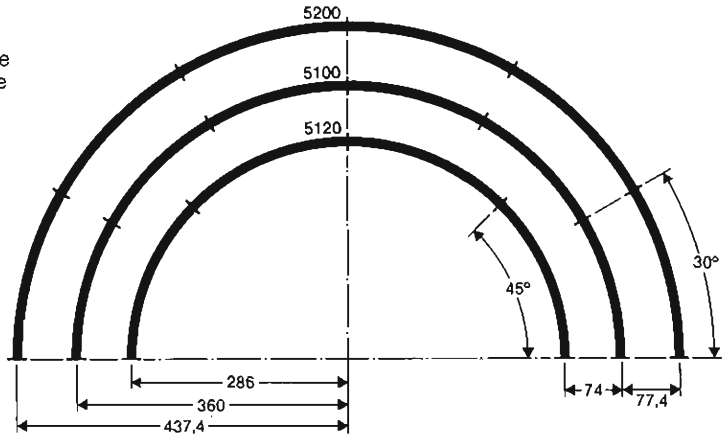
5205 · Section = 5° 43'

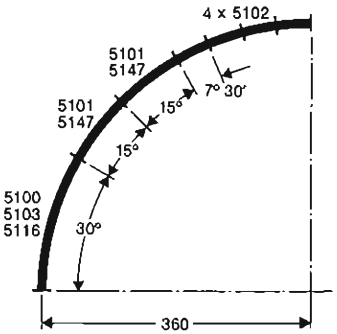
5206 · Section = 24° 17'

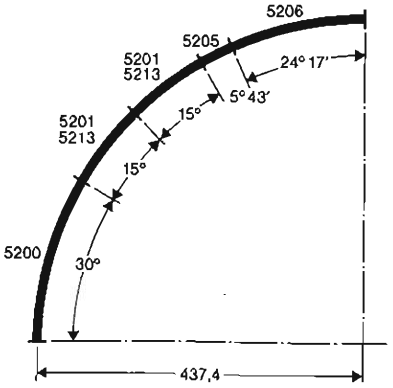


The 3 Track Radii

The 5202, 5221 or 5140 turnouts are necessary for the transition from the 5100 standard circle to the 5200 parallel circle.







Straight Special Function Tracks

2291 · **Adapter Track from M to K Track** · Full section, length = 180 mm (7-3⁄32″)

5111 · **Feeder Track** · Full section, length = 180 mm (7-3⁄32″) · Also for Märklin Digital

5131 · **Feeder Track** · Full section, length = 180 mm (7-3⁄32″) · Built-in condenser to suppress interference with radio and television reception

5112 · **Uncoupler Track** · 1/2 section, length = 90 mm (3-9⁄16″)

5113 · **Light Pole** · Height 85 mm (3-3⁄8″) · For uncoupler track 5112

5115 · **Contact Track** · Full section, length = 180 mm (7-3⁄32″) · To extend a contact area with 5145 and crossing gates

5145 · **Contact Track Set** · 2 half sections, length = 2 × 90 mm (3-9⁄16″) · With insulated section of rail for track detection function by means of car and locomotive wheels · Contact area can be lengthened with 5115 or 5116 sections

5146 · **Circuit Track** · 1/2 section, length = 90 mm (3-9⁄16″)

Curved Special Function Tracks

5103 · **Feeder Track** · Full section = 30° · Radius 360 mm (1′ 2-3⁄16″) · Also for Märklin Digital

5116 · **Contact Track** · Full section = 30° · Radius 360 mm (1′ 2-3⁄16″) · To extend a contact area with 5145 and crossing gates

5147 · **Circuit Track** · 1/2 section = 15° · Radius 360 mm (1′ 2-3⁄16″)

5213 · **Circuit Track** · 1/2 section = 15° · Radius 437.4 mm (1′ 5-1⁄8″)

7190 · **Bumper** · Length 70 mm (2-3⁄4″)

7191 · **Bumper with Illuminated Lantern** · Length 70 mm (2-3⁄4″)

7555 · **Switching Contact** · Reed contact switches for installation in track

7556 · **Magnet Set** · 6 switching magnets for activating 7555 switching contacts

Feeder Tracks

Current is fed to the third rail and returned from the two running rails using the feeder track. A feeder track should be installed for every track circuit – at least every 5 meters (16′ 5″) of track. To prevent interference with radio and television, it is recommended that a feeder track with a condenser (5131) be used for each track circuit. Only feeder tracks without condensers are to be used in the Märklin Digital system.

Circuit Tracks

The circuit tracks (5146, 5147 and 5213) enable the automatic control of turnouts and signals by trains in motion. Activated by locomotives and car pickup shoes, different, independent switching functions can be carried out by them in either direction. The control impulses are accepted at two electrically separated sockets.

Uncoupler Tracks

Automatic couplers and RELEX couplers can be separated automatically by remote control using an uncoupler track. Close couplers can also be uncoupled without any modifications. The uncoupler track has a solenoid to raise the uncoupler ramp located in the middle of the track. It can be operated from the 7072 control box or manually using the hand lever. When a 5113 light pole is attached to the uncoupler track, the light will be illuminated during the uncoupling procedure.

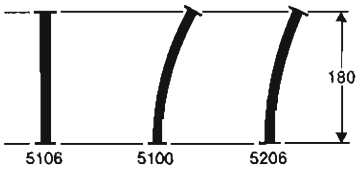
Switching Contacts

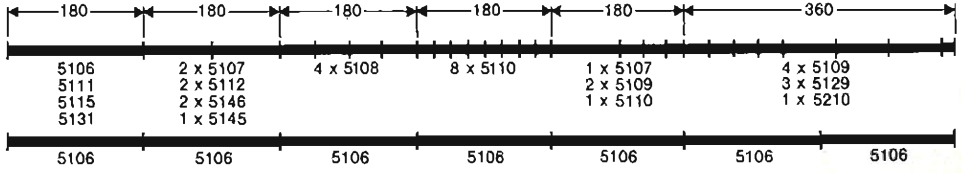
The contact switch can be installed anywhere on the track. The reed switch in the switching contact produces an impulse when a train with a switching magnet passes over it. This type of contact switch allows differentiation among specific locomotives and/or cars.

Contact Tracks

A train passing over an insulated length of rail produces an electrical contact. The track detection function made possible by this results from the wheels passing over the insulated rail. The contact area can be lengthened with the 5115 and 5116 sections.

A Comparison of M Track Lengths





All turnouts and double slip switches are equipped with sprung points, thus allowing trains to run "against" the turnout or slip switch.

The electric turnouts, double slip switches, three-way turnouts and curved turnouts all have double solenoids for remote operation.

The electric turnouts and slip switches can be operated using the 7072 control box, 5146, 5147 and 5213 circuit tracks or 7555 reed contact switch.

All turnouts and slip switches can be operated on the Märklin Digital system.

Standard Circle · Radius 360 mm (1' 2-3/16")

5137 · Pair of Electric Turnouts · 180 mm (7-3/32") · 22° 30' · Can be extended to 30° using the 5102 section included

5128 · Double Slip Switch · Length 193 mm (7-5/8") · 30° · Curve same as 5100

5114 · Crossing · Length 193 mm (7-5/8") · 30° · Dimensions same as 5128

Parallel Circle · Radius 437.4 mm (1' 5-1/8")

5202 · Pair of Electric Turnouts · 180 mm (7-3/32") · 24° 17' · Curve same as 5206

5221 · Pair of Manual Turnouts · 180 mm (7-3/32") · 24° 17' · Curve same as 5206

5207 · Double Slip Switch · 180 mm (7-3/32") · 24° 17' · Two 5208 sections included · 5206 curve produced by addition of 5208 sections

5215 · Crossing · 180 mm (7-3/32") · 24° 17' · Two 5208 sections included · Dimensions same as 5207

5211 · Crossing · 98 mm (3-7/8") · 48° 30' · For double crossovers

Adjustment Track Sections

5109 · Straight Track · 33.5 mm (1-5/16") · Can be used to adjust length on "S" curves with 5128 (5114) double slip switch

5110 · Straight Track · 22.5 mm (7/8") · Can be used to adjust length on "S" curves with 5128 (5114) double slip switch

5129 · Straight Track · 70 mm (2-3/4") · Can be used to adjust length on "S" curves with 5128 (5114) double slip switch and 5137 turnout (track spacing 54.8 mm (2-1/8"))

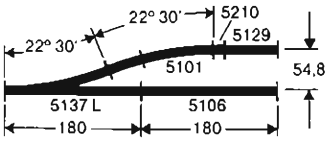
5208 · Straight Track · 8 mm (5/16") · Can be used to adjust length on diagonal straight sections of 5207 (5215)

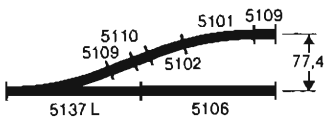
5210 · Straight Track · 16 mm (5/8") · Can be used to adjust length on "S" curves with 5137 turnout (track spacing 54.8 mm (2-1/8")), diagonally installed 5202 turnout and 5207 (5215) double slip switches installed in succession

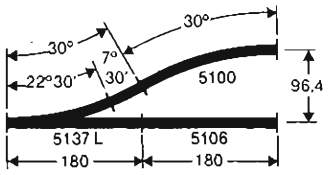
5205 · Curved Track · 5° 43' · Radius 437.4 mm (1' 5-1/8") · Produces 5200 section when combined with 5206

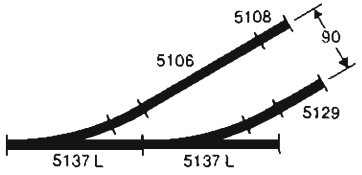
5206 · Curved Track · 24° 17' · Radius 437.4 mm (1' 5-1/8") · Complementary curve to 5202, 5221 turnouts and 5207 double slip switch for parallel track spacing of 77.4 mm (3-1/16")

Turnouts for 5100 Standard Circle

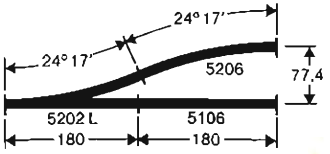


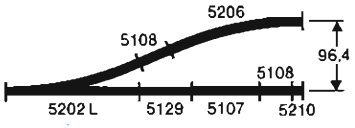


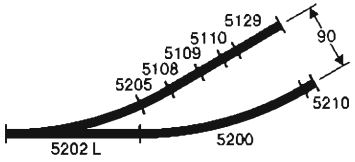


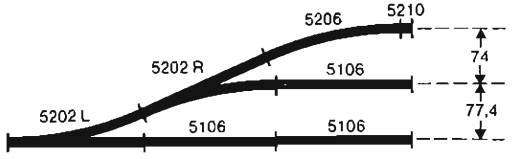


Turnouts for 5200 Parallel Circle

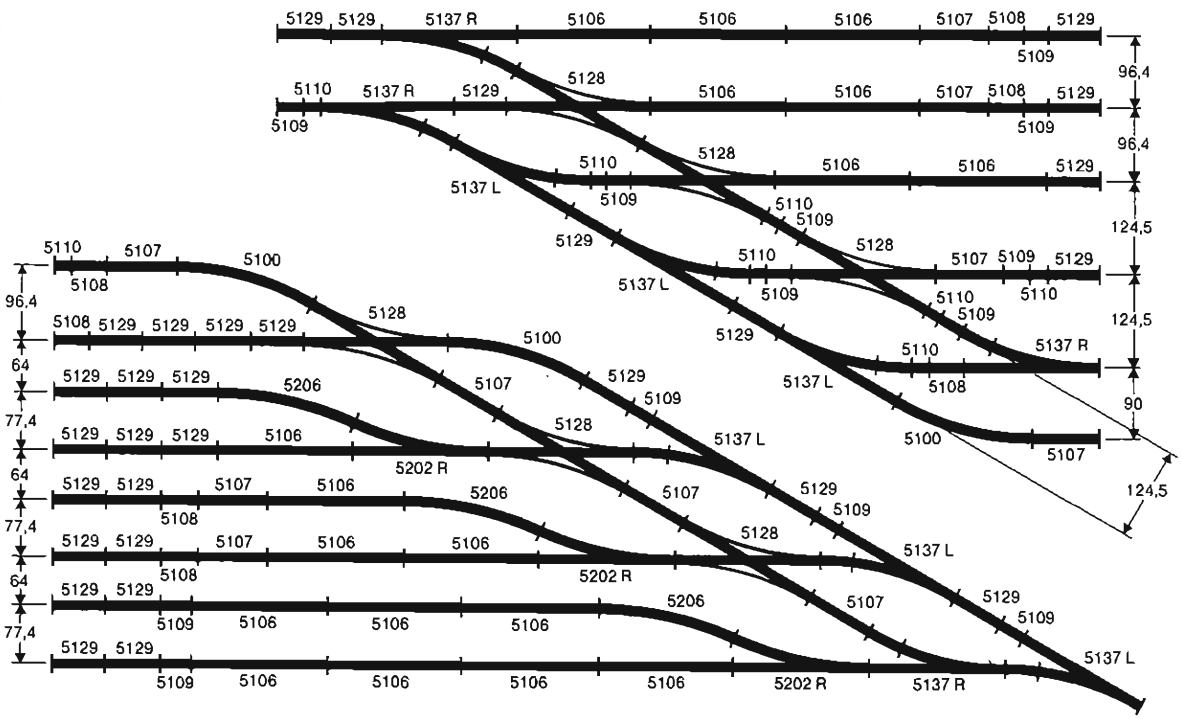




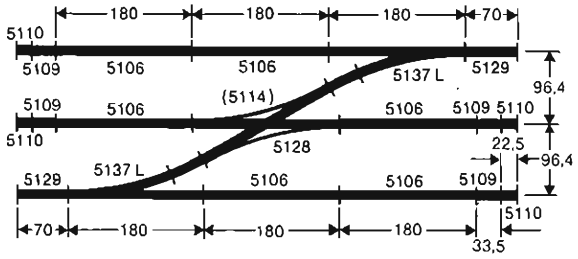


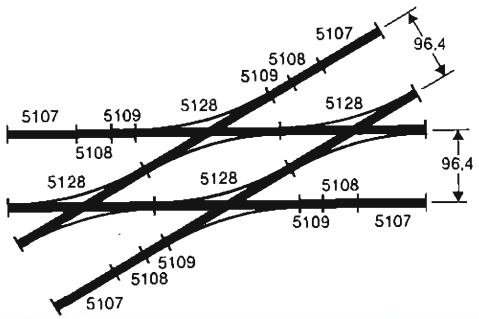


Example: Ladder Tracks

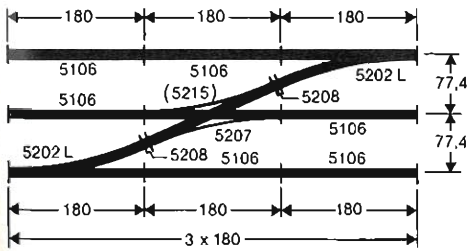


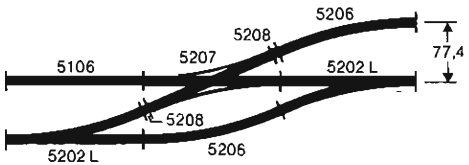
Crossings for 5100 Standard Circle

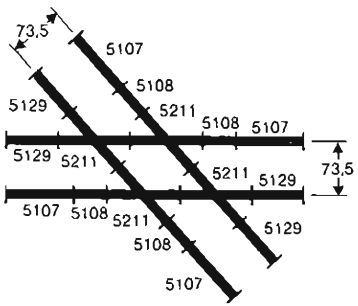


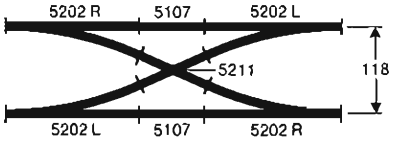


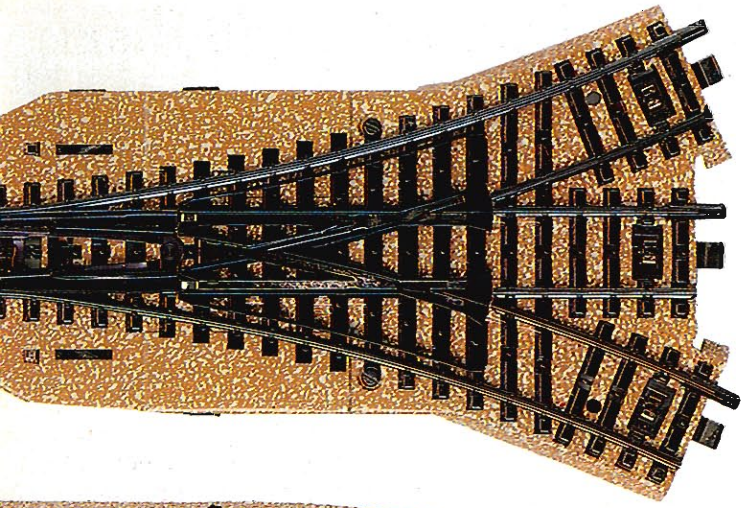
Crossings for 5200 Parallel Circle

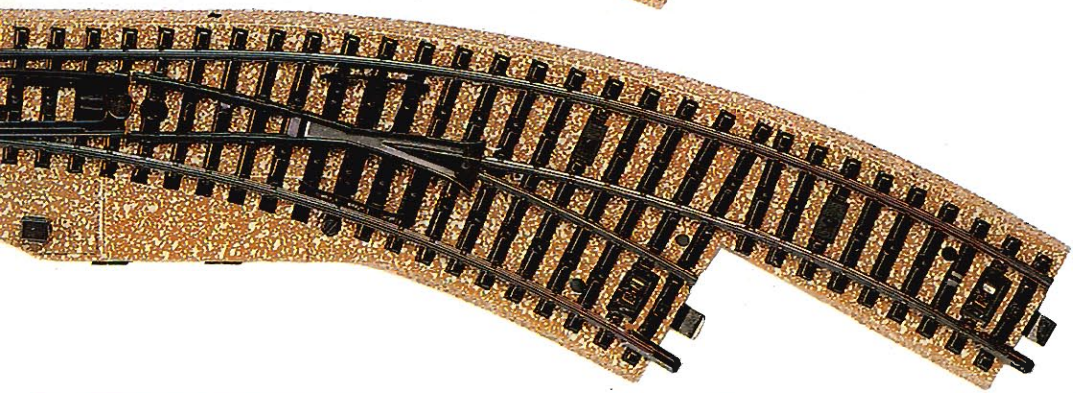












Curved Turnouts

Sidings and branches can be started on curves using curved turnouts. This increases considerably the usable area on straight portions of track.

The curved turnout allows a harmonious transition from the 5100 standard circle (radius 360 mm (1′ 2-3⁄16″)) to the 5200 parallel circle (radius 437.4 mm (1′ 5-1⁄8″)). With a turnout angle of 30° it is possible to install curved turnouts in existing parallel circles without using adjustment sections.

Three-Way Turnout

The three-turnout combines a left and right turnout in the space of a normal turnout. This results in a savings in space in yards and stations with concentrations of turnouts.

The three-way turnout has two double solenoids for remote operation.

Both curved branches have the same radius and length as that of the 5202 turnout.

The track spacing of 77.4 mm (3-1⁄16″) is maintained when the 5206 is used with this turnout.

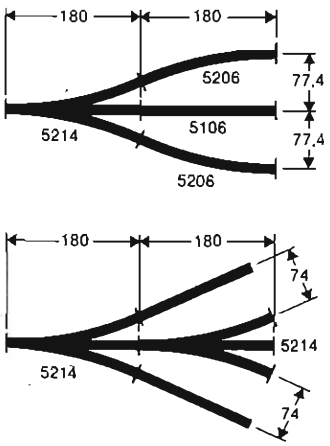
A three-way turnout can be used for direct approach to the 7288 roundhouse.

5140 · Pair of Electric Curved Turnouts · Inner and outer curves 30° · Radius 360 mm (1″ 2-3⁄16″) with parallel spacing of 77.4 mm (3-1⁄16″) · Inner curve same as 5100

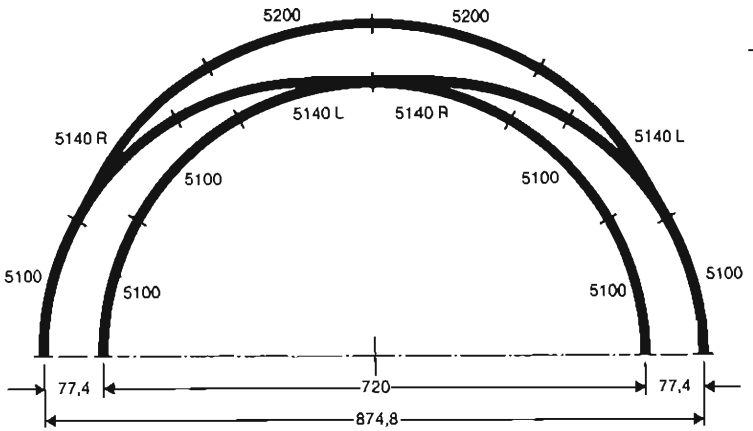
5214 · Symmetrical Three-Way Turnout · 180 mm (7-3⁄32″) · 2 × 24° 17′ · Radius of the branches 437.4 mm (1′ 5-1⁄8″)

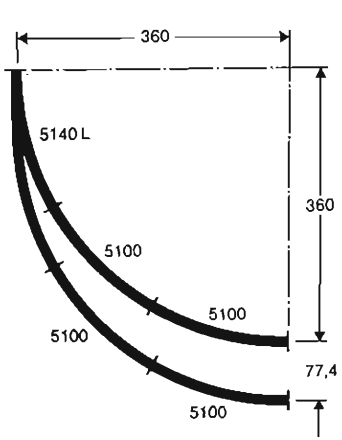
5206 · Curved Track · Section 24° 17′ · Radius 437.4 mm (1′ 5-1⁄8″) · Complementary curve for parallel track spacing of 77.4 mm (3-1⁄16″) when using 5214 three-way turnout

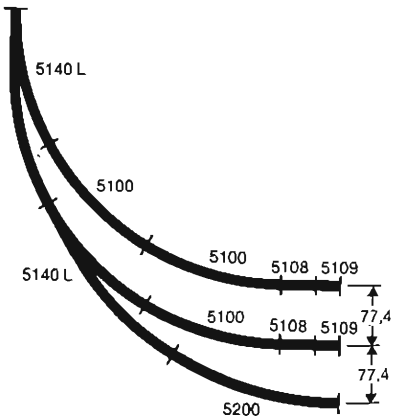
5214 Three-Way Turnout



5140 Curved Turnouts







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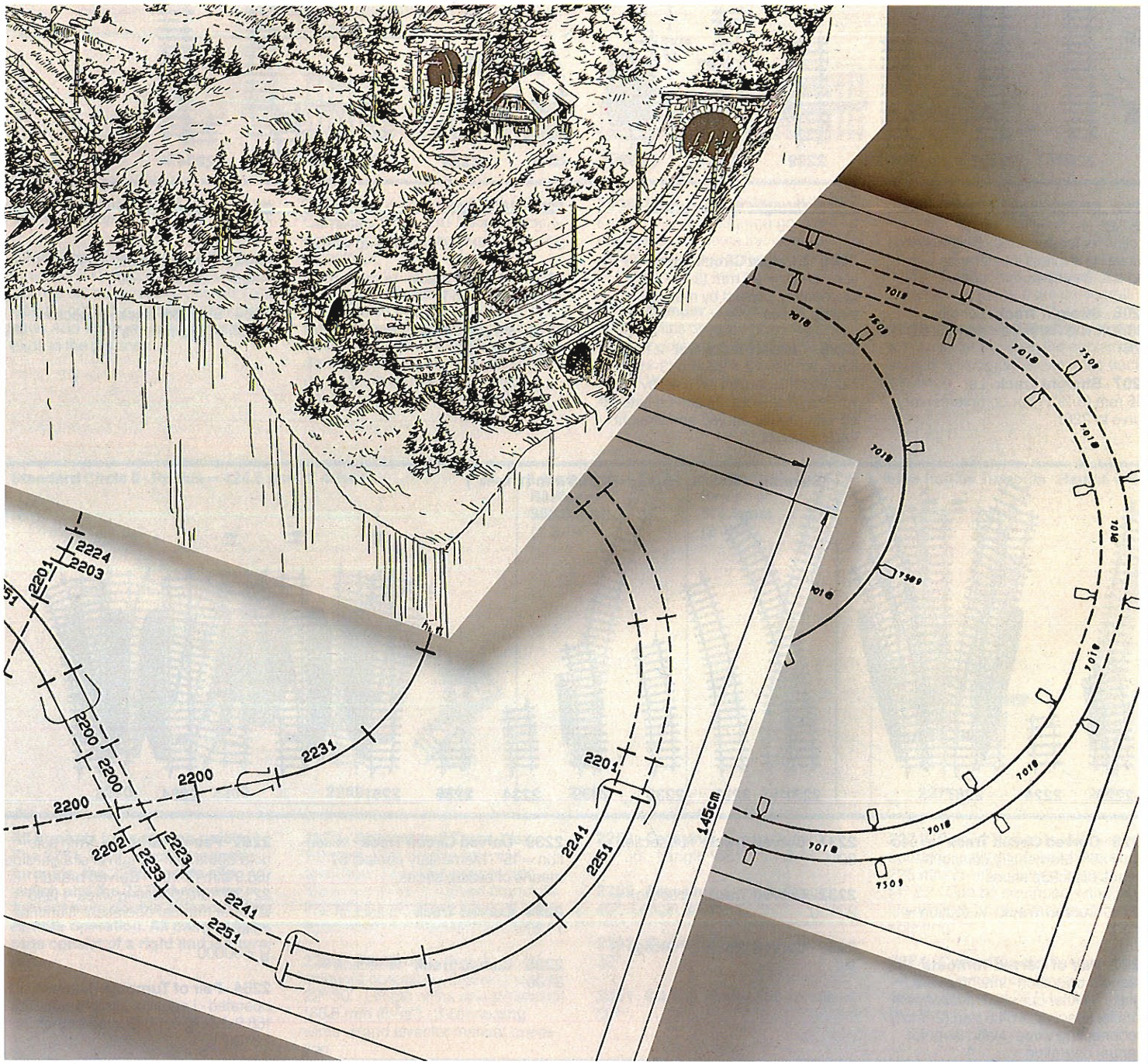

Save yourself time-consuming layout planning. Our computer-enhanced layout planning system can design a layout specially tailored to your individual ideas and space. In addition, we will also draft the plans for catenary according to your ideas. Also, our model railroad experts can do perspective drawings for the scenery on your layout. In four different versions. Of course, each track plan or catenary plan comes with a list of parts and each drawing comes with specifications including details for construction. We will plan your individual Märklin layout step by step with a firm price quote in square meters (square feet in the USA).

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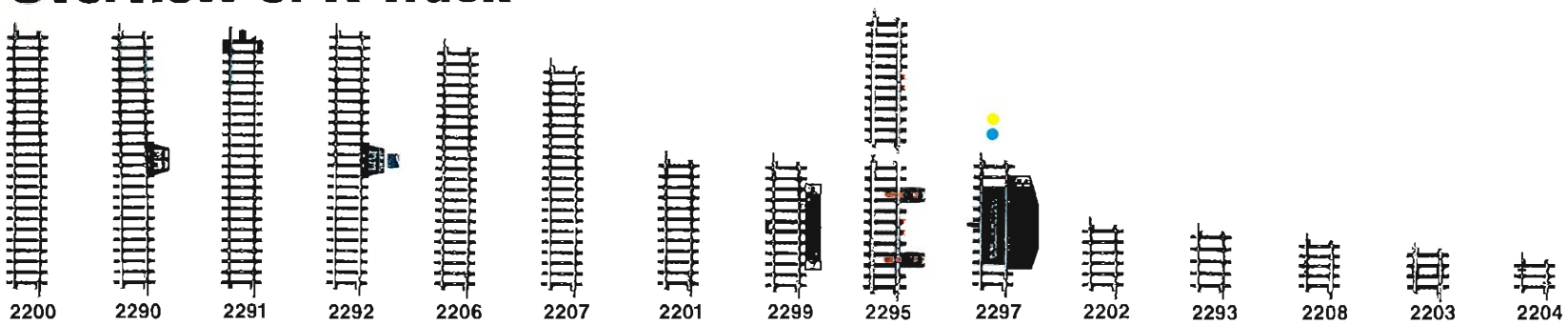
Overview of K Track



2200 · Straight Track · Full section, length = 180 mm (7-3/32″)

2290 · Feeder Track · Full section, length = 180 mm (7-3/32″) · 2 clips for feeder wires

2291 · Adapter Track · Full section, length = 180 mm (7-3/32″) · For connecting K track to M track

2292 · Straight Feeder Track · Full section, length = 180 mm (7-3/32″) · 2 clips for feeder wires · Built-in condenser to supress interference with radio and television reception

2206 · Straight Track · Length 168.9 mm (6-5/8″) · Same length as 2261

2207 · Straight Track · Length 156 mm (6-1/8″) · For complementary curve to 2261

2201 · Straight Track · ½ section, length = 90 mm (3-9/16″)

2299 · Straight Circuit Track · ½ section, length = 90 mm (3-9/16″) · Momentary contact by means of pickup shoes

2295 · Contact Track Set · 2 half sections, length = 2 × 90 mm (3-9/16″) · Continuous contact effected by train wheels · Contact area can be extended with regular curved and straight track sections

2297 · Uncoupler Track · With solenoid operation · ½ section, length = 90 mm (3-9/16″) · 2 connecting wires

2202 · Straight Track · ¼ section, length = 45 mm (1-3/4″)

2293 · Straight Track · Length 41.3 mm (1-5/8″)

2208 · Straight Track · Length 35.1 mm (1-3/8″)

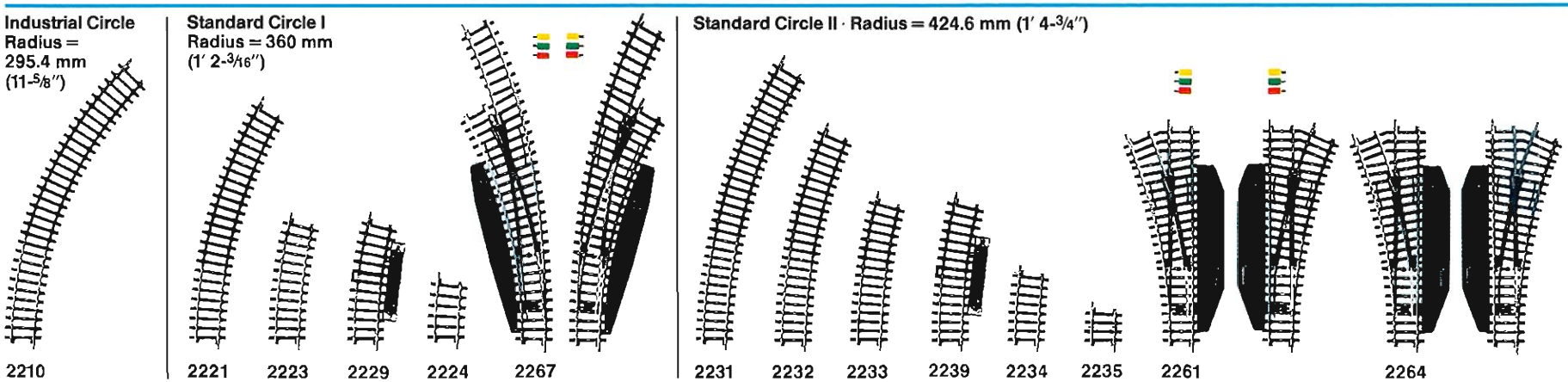
2203 · Straight Track · ⅛ section, length = 30 mm (1-3/16″)

2204 · Straight Track · ⅛ section, length = 22.5 mm (7/8″)

Industrial Circle
Radius = 295.4 mm (11-5/8″)

Standard Circle I
Radius = 360 mm (1′ 2-3/16″)

Standard Circle II · Radius = 424.6 mm (1′ 4-3/4″)



2210 · Curved Track · Full section = 45° · Sharp radius for branch lines and industrial sidings · For short locomotives and cars only

2221 · Curved Track · Full section = 30°

2223 · Curved Track · ½ section = 15°

2229 · Curved Circuit Track · ½ section = 15° · Momentary contact by means of pickup shoes

2224 · Curved Track · ¼ section = 7° 30′

2267 · Pair of Curved Turnouts · With solenoid operation · Inner curve 30° section · Outer curve 30° section with parallel spacing of 64.6 mm (2-17/32″) · 3 connecting wires · Hand lever for manual operation

2231 · Curved Track · Full section = 30°

2232 · Curved Track · ¾ section = 22° 30′

2233 · Curved Track · ½ section = 15°

2239 · Curved Circuit Track · ½ section = 15° · Momentary contact by means of pickup shoes

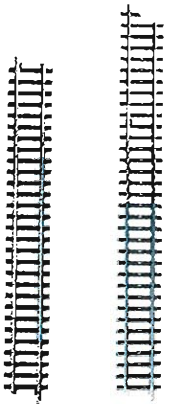
2234 · Curved Track · ¼ section = 7° 30′

2235 · Curved Track · ⅛ section = 3° 45′

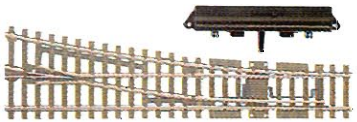
2261 · Pair of Turnouts · With solenoid operation · Length of straight side 168.9 mm (6-5/8″) · Curved branch 22° 30′ · 3 connecting wires · Hand lever for manual operation · Illuminated laterns

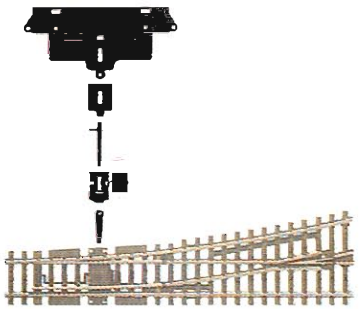
⚲ = 60000

2264 · Pair of Turnouts · Manually operated · Length of straight side 168.9 mm (6-5/8″) · Curved branch 22° 30′


2209

2205


7549


7548


7391


7599


7500


7504


7522

2209 · Straight Track · Length 217.9 mm (8-9/16″)

2205 · Flex Track · 5 full sections, length = 900 mm · (2′ 11-7/16″) · Can be used to create curves of different radii · Can be cut with a coping saw or track saw · Add 7595 rail joiners and track clips to the cut ends

7595 · Rail Joiners and Track Clips · Contents: 10 of each · Required for connecting cut sections of 2205 with other track

7549 · Electric Turnout Mechanism · For 2271 turnouts and 2275 double slip switch · Momentary current contacts · Can be connected to a track detection circuit · Can be mounted under the layout using the 7548 under-layout mounting kit

7548 · Under-Layout Mounting Kit · For mounting 7549 turnout mechanism beneath the layout · Adjustable for board thicknesses 6–16 mm (¼″ to 5/8″)

7391 · Bumper · Length 38 mm (1-½″) · Clips onto the rails · Round head wood screws included

7599 · Wood Screws · Contents: 200 screws · For mounting K track

7500 · Ground Terminal Clip · Can be attached under the rails at any spot desired

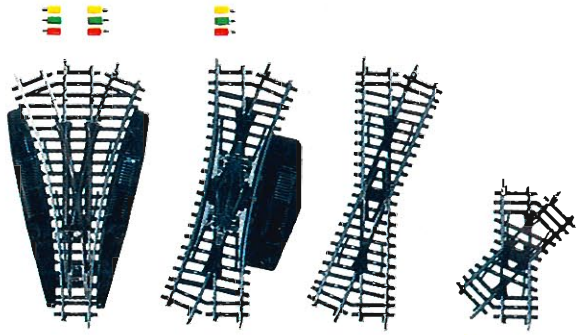
7504 · Center Rail Terminal Clip · Connects at joints in the center rail

7522 · Center Rail Insulator · Insulator is placed between the center rail clips of a track joint to separate track circuits

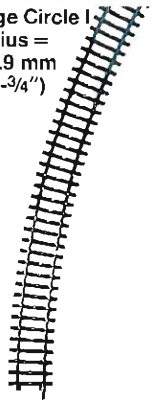
7555 · Contact Set · Reed contact switches for installation in track · Activated by 7556 magnet

7556 · Magnet Set · 6 magnets for installation on car or locomotive bottoms · For activating 7555 reed contact switches

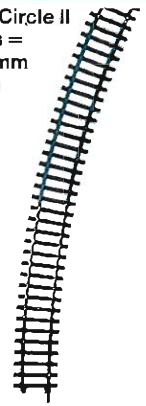
Standard Circle II · Radius = 424.6 mm (1′ 4-3/4″)


2270 2260 2259 2258

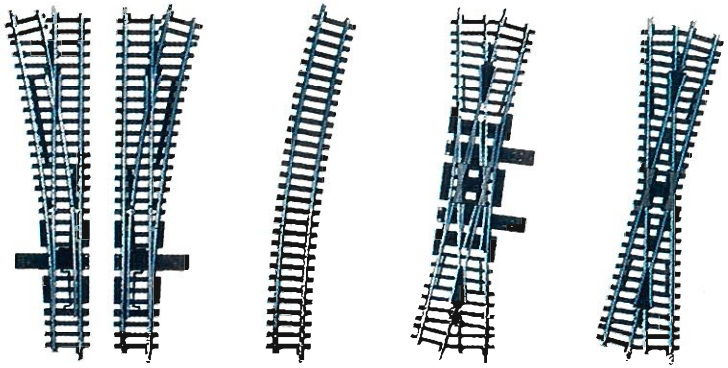
Large Circle I · Radius = 553.9 mm (1′ 9-3/4″)


2241

Large Circle II · Radius = 618.5 mm (2′ 1/4″)


2251

Wide Radius Turnouts · Radius = 902.4 mm (2′ 11-5/8″)


2271 2274 2275 2257

All turnouts have sprung points. The 2261, 2267, electromagnetic turnouts, the 2260 double slip switch and the 2270 three-way turnout have double solenoids for remote operation. All pairs of turnouts consist of a right and left turnout.

2270 · Symmetrical Three-Way Turnout · With double solenoid operation · Length of straight side 168.9 mm (6-5/8″) · Curved branches 22° 30′ · 6 connecting wires · 2 additional levers for manual operation

2260 · Double Slip Switch · With solenoid operation · Crossing angle 22° 30′ · Length of the straight section 168.9 mm (6-5/8″) · 3 connecting wires · Hand lever for manual operation

2259 · Crossing · Crossing angle 22° 30′ · Length 168.9 mm (6-5/8″)

2258 · Crossing · Crossing angle 45° · Length 90 mm (3-9/16″)

2241 · Curved Track · Full section = 30°

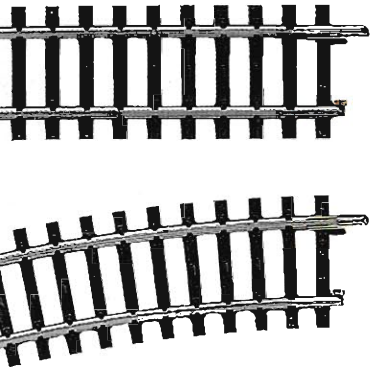
2251 · Curved Track · Full section = 30°

2271 · Pair of Turnouts · Manually operated · Length of straight section 225 mm (8-1/8″) · Curved branch 14° 26′ · Can be equipped with 7549 electric turnout mechanism · Moveable frog

2274 · Curved Track · Section = 14° 26′ · Complementary curve to curved branch of 2271 turnout

2275 · Double Slip Switch · Manually operated · Crossing angle 14° 26′ · Length of straight section 225 mm (8-1/8″) · Can be equipped with two 7549 turnout mechanisms · Each point lined separately

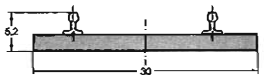
2257 · Crossing · Crossing angle 14° 26′ · Length 225 mm (8-1/8″)



K track has five track radii, prototypical solid rails, flex track and wide radius turnouts, thus offering the discriminating model railroader many possibilities such as elegant, sweeping main lines, parallel tracks with minimum center-to-center spacings, and gentle curves and magnificent straight stretches.

The track is 30 mm (1-3/16") wide. Therefore 30 mm (1-3/16") must be subtracted from the center-to-center track spacings indicated to determine the spacing needed for clearance.

The 2291 adapter track section is available for combining M and K track.



Straight Track

2200 · Full section, length = 180 mm (7-3/32")

2201 · 1/2 section, length = 90 mm (3-9/16")

2202 · 1/4 section, length = 45 mm (1-3/4")

2203 · 1/6 section, length = 30 mm (1-3/16")

2204 · 1/8 section, length = 22.5 mm (7/8")

2205 · 5 full sections, length = 900 mm (2' 11-7/16") · Flexible · Can be cut shorter

2206 · Length 168.9 mm (6-5/8")

2207 · Length 156 mm (6-1/8")

2208 · Length 35.1 mm (1-3/8")

2209 · Length 217.9 mm (8-9/16")

2293 · Length 41.3 mm (1-5/8")

Curved Track

Industrial Circle · Radius 295.4 mm (11-5/8")

2210 · Full section = 45°

Standard Circle I · Radius 360 mm (1' 2-3/16")

2221 · Full section = 30°

2223 · 1/2 section = 15°

2224 · 1/4 section = 7° 30'

Standard Circle II · Radius 424.6 mm (1' 4-3/4")

2231 · Full section = 30°

2232 · 3/4 section = 22° 30'

2233 · 1/2 section = 15°

2234 · 1/4 section = 7° 30'

2235 · 1/8 section = 3° 45'

Large Circle I · Radius 553.9 mm (1' 9-3/4")

2241 · Full section = 30°

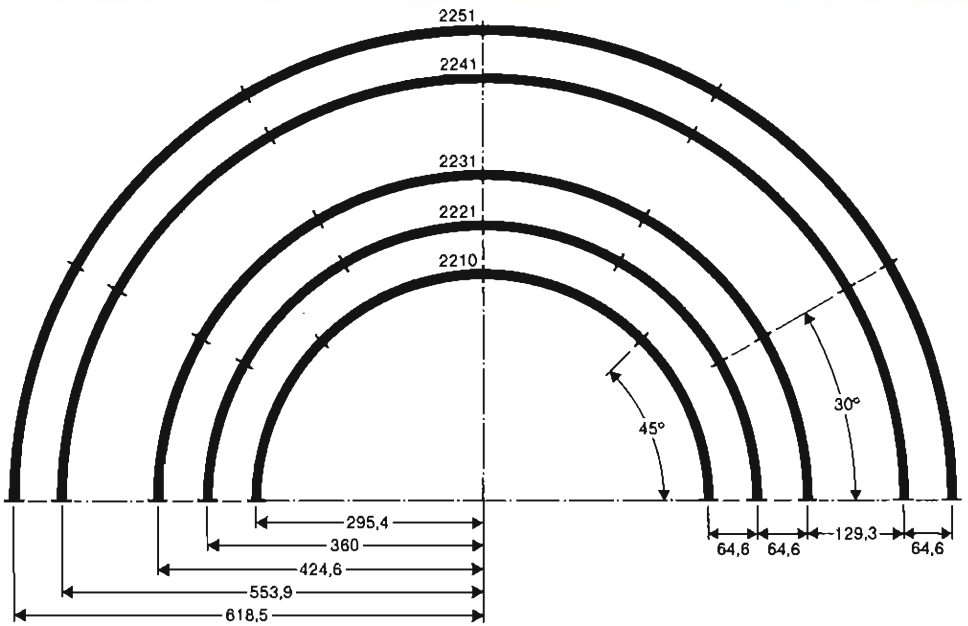
Large Circle II · Radius 618.5 mm (2' 1/4")

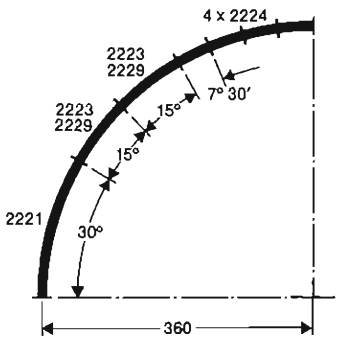
2251 · Full section = 30°

The 5 Track Radii

For Standard Circle **I** (22**2**1), all track sections have a **2** for the **second digit** (22**2**1, 22**2**3, 22**2**4).

For Standard Circle **II** (22**3**1), all track sections have a **3** for the **second digit** (22**3**1, 22**3**2, 22**3**3, 22**3**4, 22**3**5).





Straight Special Function Tracks

2291 · **Adapter Track from K to M Track** · Full section, length = 180 mm (7-3⁄32″)

2290 · **Feeder Track** · Full section, length = 180 mm (7-3⁄32″) · Also for Märklin Digital

2292 · **Feeder Track** · Full section, length = 180 mm (7-3⁄32″) · Built-in condenser to supress interference with radio and television reception

2295 · **Contact Track Set** · 2 half sections, length = 2 × 90 mm (3-9⁄16″) · With insulated section of rail for track detection function by means of car and locomotive wheels · Contact area can be lengthened with normal straight and curved track sections

2297 · **Uncoupler Track** · 1/2 section, length = 90 mm (3-9⁄16″)

2299 · **Circuit Track** · 1/2 section, length = 90 mm (3-9⁄16″)

Curved Special Function Tracks

2229 · **Circuit Track** · 1/2 section = 15° · Radius 360 mm (1′ 2-3⁄16″)

2239 · **Circuit Track** · 1/2 section = 15° · Radius 424.6 mm (1′ 4-3⁄4″)

7391 · **Bumper** · Length 38 mm (1-1⁄2″) · Clips onto track

7555 · **Switching Contact** · Reed contact switches for installation in track

7556 · **Magnet Set** · 6 switching magnets for activating 7555 switching contacts

Feeder Tracks

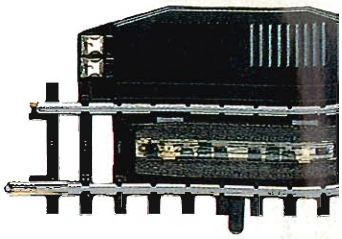
Current is fed to the third rail and returned from the two running rails using the feeder track. A feeder track should be installed for every track circuit – at least every 5 meters (16′ 5″) of track. To prevent interference with radio and television, it is recommended that a feeder track with a condenser (2292) be used for each track circuit. Only feeder tracks without condensers are to be used in the Märklin Digital system.

Contact Tracks

A train passing over an insulated length of rail produces an electrical contact. The track detection function made possible by this results from the wheels passing over the insulated rail. The contact area can be lengthened with normal straight and curved sections of track.

Uncoupler Tracks

Automatic couplers and RELEX couplers can be separated automatically by remote control using an uncoupler track. Close couplers can also be uncoupled without any modifications. The uncoupler track has a solenoid to raise the uncoupler ramp located in the middle of the track. It can be operated from the 7072 control box or manually using the hand lever.



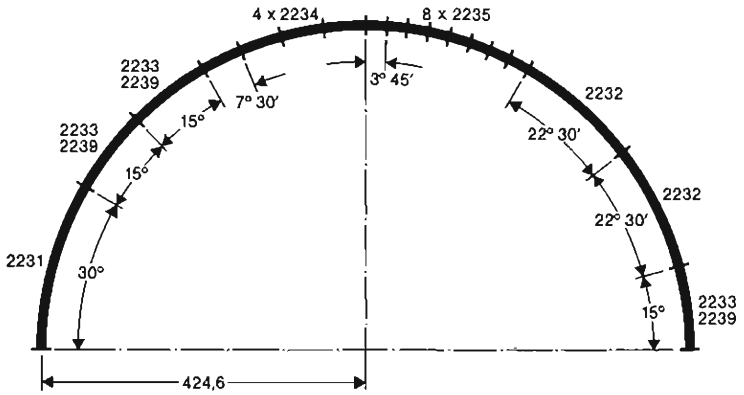
Circuit Tracks

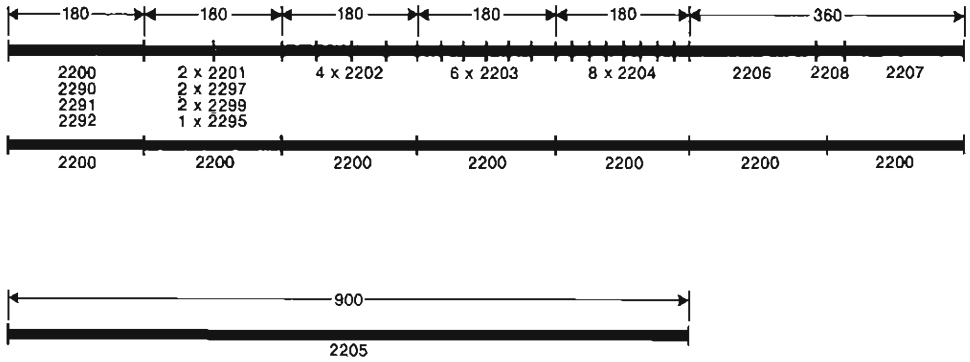
The circuit tracks (2229, 2239 and 2299) enable the automatic control of turnouts and signals by trains in motion. Activated by locomotives and car pickup shoes, different, independent switching functions can be carried out by them in either direction. The control impulses are accepted at two electrically separated sockets.

Switching Contacts

The contact switch can be installed anywhere on the track. The reed switch in the switching contact produces an impulse when a train with a switching magnet passes over it. This type of contact switch allows differentiation among specific locomotives and/or cars.

A Comparison of K Track Lengths





The turnouts and slip switch are designed for a standard center-to-center spacing of 64.6 mm (2-17/32"). The shorter design reduces the space needed for sidings and yards.

The turnouts, slip switch and 2259 crossing are interchangeable. They can be installed straight or diagonally without affecting the track spacing or the layout geometry.

The turnouts and double slip switch are equipped with sprung points, thus allowing trains to run "against" the turnout or slip switch.

The 2260 double slip switch is produced with inset points.

The electric turnouts, double slip switch, three-way turnout and curved turnouts all have double solenoids for remote operation.

The electric turnouts and slip switch can be operated using the 7072 control box, 2229, 2239 and 2299 circuit tracks or 7555 reed contact switch.

The turnouts and slip switch can be operated on the Märklin Digital system.

Standard Circle II · Radius 424.6 mm (1' 4-3/4")

2261 · **Pair of Electric Turnouts** · 168.9 mm (6-5/8") · 22° 30' · Radius of curved branch 424.6 mm (1' 4-3/4")

2264 · **Pair of Manual Turnouts** · 168.9 mm (6-5/8") · 22° 30' · Radius of curved branch 424.6 mm (1' 4-3/4")

2260 · **Double Slip Switch** · 168.9 mm (6-5/8") · 22° 30' · Radius of curved branches 424.6 mm (1' 4-3/4")

2259 · **Crossing** · 168.9 mm (6-5/8") · 22° 30'

2258 · **Crossing** · 90 mm (3-9/16") · 45°

Adjustment Track Sections

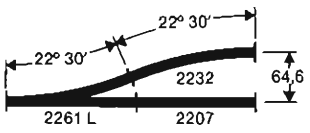
2206 · **Straight Track** · 168.9 mm (6-5/8") · Same length as 2261 turnout

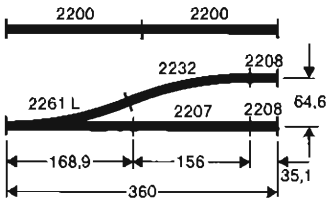
2207 · **Straight Track** · 156 mm (6-1/8") · Can be used to adjust length on "S" curves with 2261 (2264) turnout as well as 2260 (2259) double slip switch

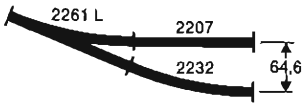
2208 · **Straight Track** · 35.1 mm (1-3/8") · Can be used to adjust length on "S" curves with 2261 (2264) turnout as well as 2260 (2259) double slip switch

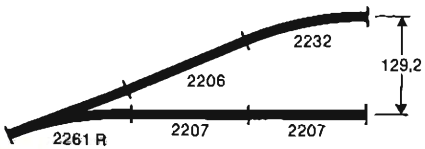
2232 · **Curved Track** · 3/4 = 22° 30' · Radius 424.6 mm (1' 4-3/4") · Can be used to adjust length on "S" curves with 2261 (2264) turnout as well as 2260 (2259) double slip switch for center-to-center spacing of 64.6 mm (2-17/32")

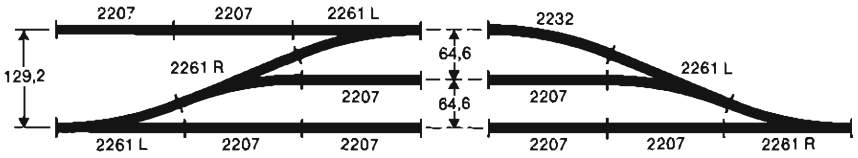
Turnouts for Standard Circle II



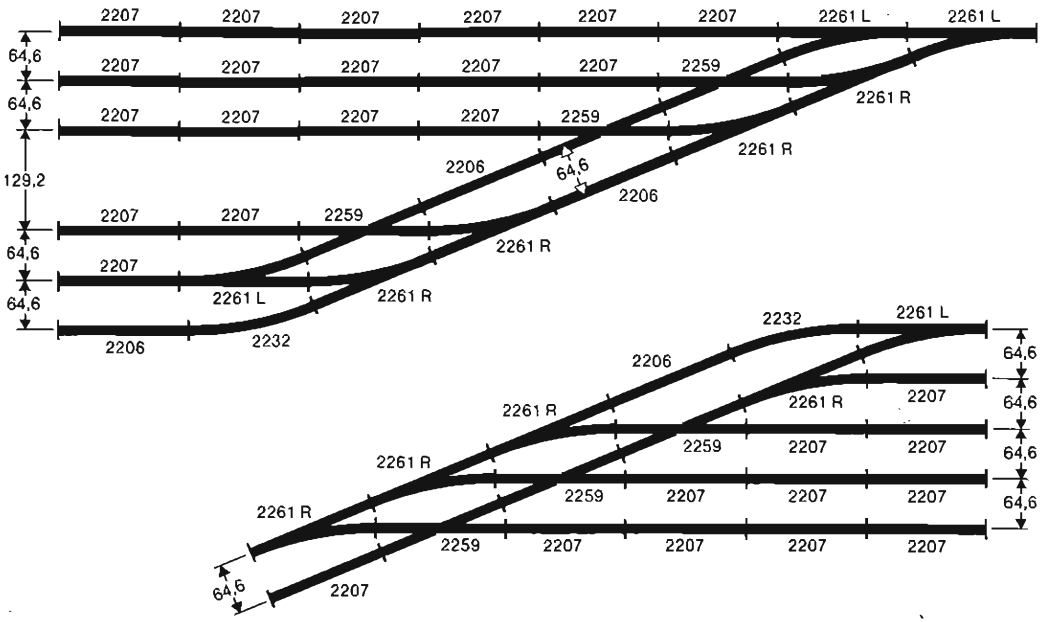


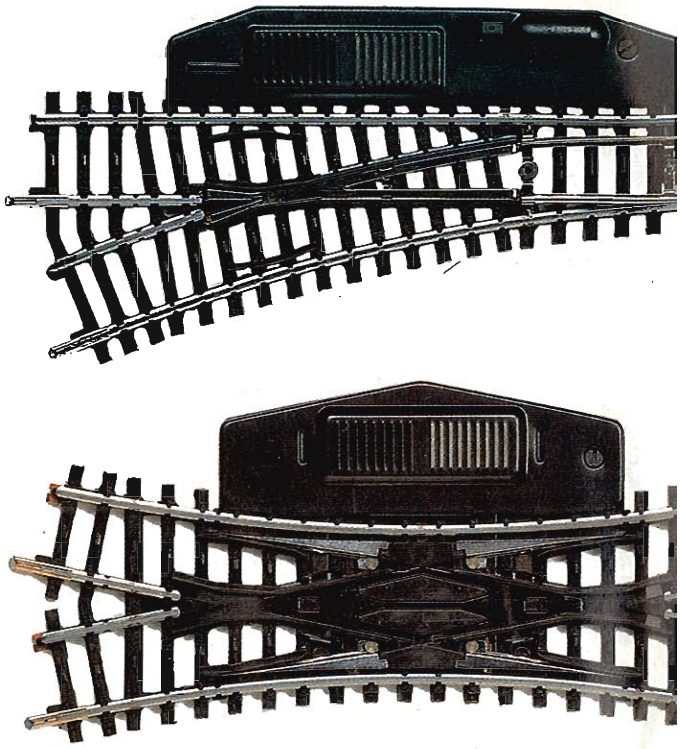




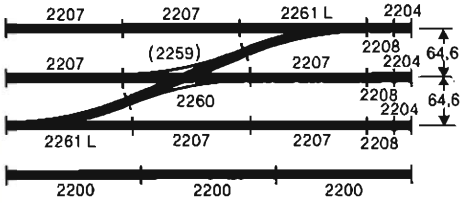


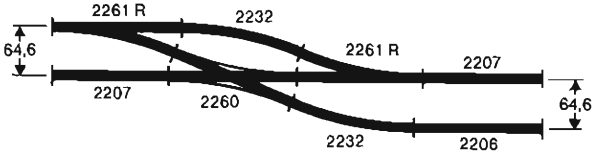
Example: Ladder Tracks

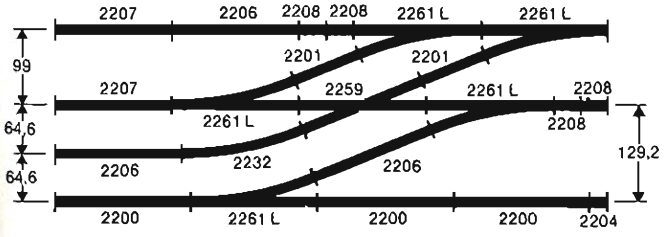


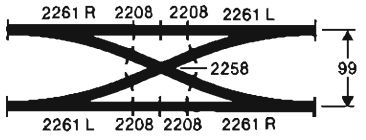


Crossings for Standard Circle II

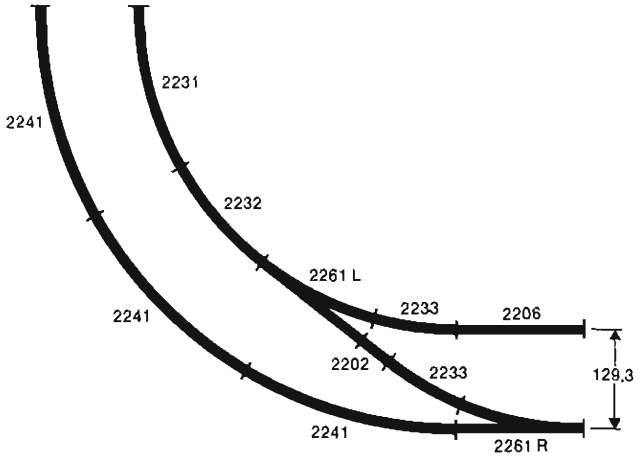


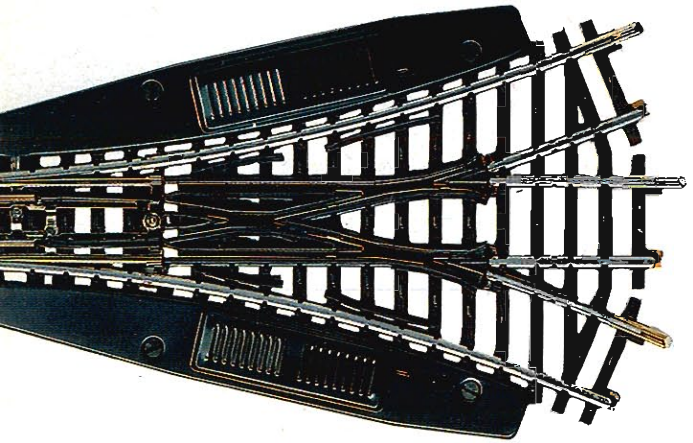


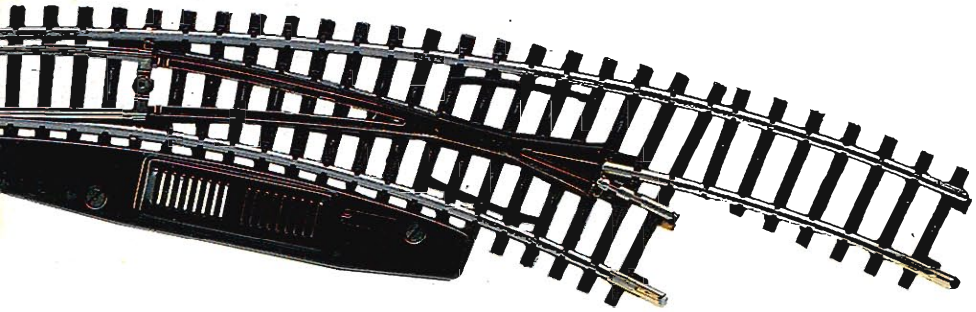




Transition to Large Circle I







Curved Turnouts

Sidings and branches can be started on curves using curved turnouts. This increases considerably the usable area on straight portions of track.

The curved turnout allows a harmonious transition between the two standard circles (radii 360 mm (1' 2-3⁄16") and 424.6 mm (1' 4-3⁄4")). With a turnout angle of 30° it is possible to install curved turnouts in existing parallel circles without using adjustment sections.

Three-Way Turnout

The three-turnout combines a left and right turnout in the space of a normal turnout. This results in a savings in space in yards and stations with concentrations of turnouts.

The three-way turnout has two double solenoids for remote operation.

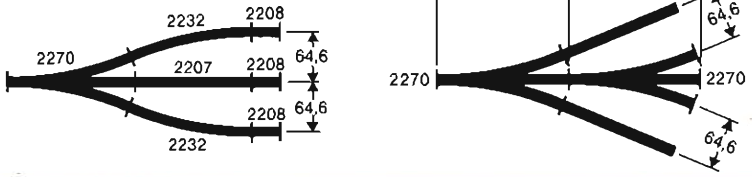
Both curved branches have the same radius and length as that of the 2261 turnout.

A three-way turnout can be used for direct approach to the 7288 roundhouse.

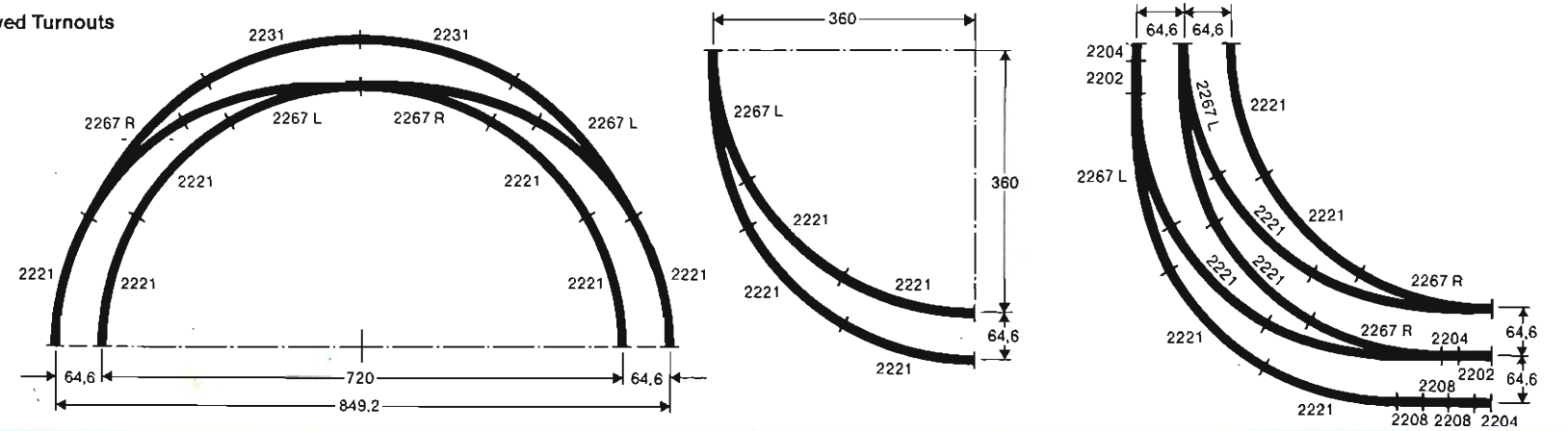
2267 · Pair of Electric Curved Turnouts · Inner and outer curves 30° · Radius 360 mm (1" 2-3⁄16") with parallel spacing of 64.6 mm (2-17⁄32") · Inner curve same as 2221

2270 · Symmetrical Three-Way Turnout · 168.9 mm (6-5⁄8") · 2 × 22° 30' · Radius of the branches 424.6 mm (1' 4-3⁄4")

2270 Three-Way Turnout



2267 Curved Turnouts



2271 · Pair of Manual Turnouts · 225 mm (8-1/8") · 14° 26' · Radius of the branch 902.4 mm (2' 11-5/8")

2275 · Manual Double Slip Switch · 225 mm (8-1/8") · 14° 26' · Radius of the branches 902.4 mm (2' 11-5/8")

2257 · Crossing · 225 mm (8-1/8") · 14° 26'

Adjustment Track Sections

2202 · Straight Track · 45 mm (1-3/4") · Can be used to adjust length on "S" curves of the 2271 turnout as well as the 2275 (2257) double slip switch

2203 · Straight Track · 30 mm (1-3/16") · Can be used to adjust length for center-to-center spacing of 64.6 mm (2-17/32")

2204 · Straight Track · 22.5 mm (7/8") · Can be used to adjust length when installing the 2271 turnout as well as the 2275 (2257) double slip switch

2209 · Straight Track · 217.9 mm (8-9/16") · Can be used to adjust length when the 2271 turnout is installed diagonally

2293 · Straight Track · 41.3 mm (1-5/8") · Can be used to adjust length on "S" curves of the 2275 (2257) double slip switch

2274 · Curved Track · 14° 26' · Radius 902.4 mm (2' 11-5/8") · Complementary curve for 2271 turnout for center-to-center spacing of 57 mm (2-1/4")

7548 · Under-Layout Mounting Kit · For mounting 7549 turnout mechanism beneath the layout baseboard

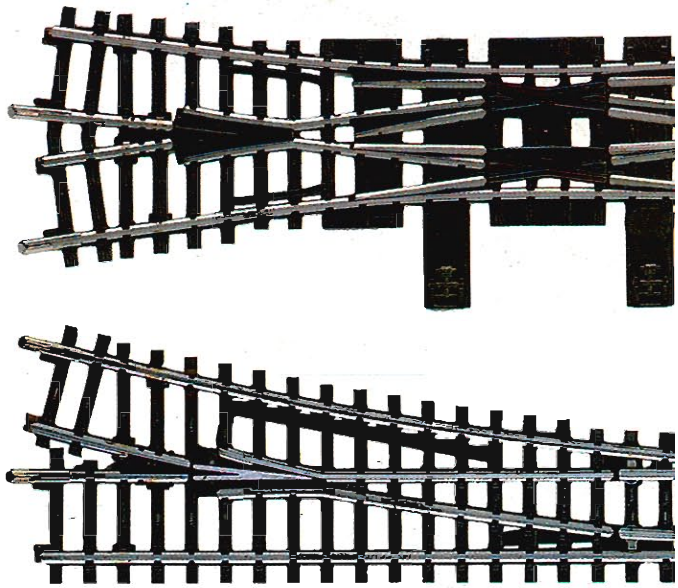
7549 · Electric Turnout mechanism · For 2271 turnouts and 2275 double slip switch

The wide radius turnouts and crossings have a turnout angle of 14° 26' and a center-to-center spacing starting at 57 mm (2-1/4") which makes it possible to construct the elegant, sweeping track configurations desired by discriminating model railroaders.

The hand levers on the turnouts as well as the double slip switch can be mounted on the left or right and can be replaced by the 7549 electric turnout mechanism.

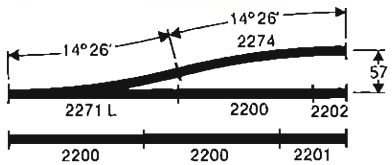
The 2271 turnout has a moveable frog like the DB's high-speed turnouts. This results in a consistently smooth, gap-free path.

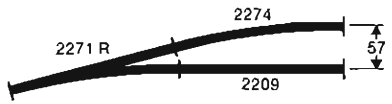
The independent points on the 2275 double slip switch allow four different routes to be set.



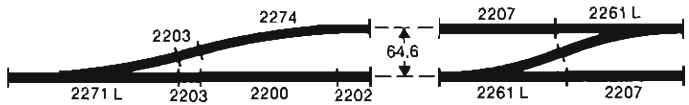
The 7549 turnout mechanism is equipped with momentary contacts and allows the easy installation of a track detection circuit.

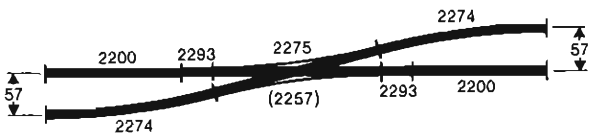
The 7549 turnout mechanism can be mounted beneath the layout baseboard with the 7548 under-layout mounting kit.

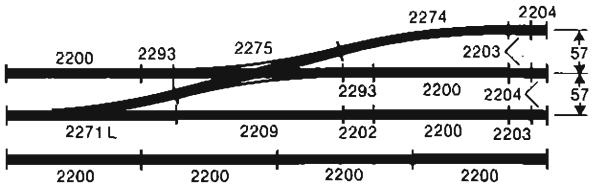




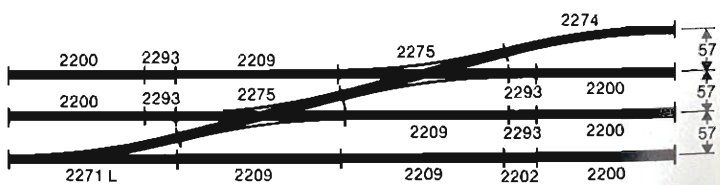
Wide Radius 2271 Turnouts







Wide Radius 2275 Double Slip Switch or 2257 Crossing



Electrified through Europe

In 1904/05 a private stretch of railroad in the province was electrified, although serious experts had declared that the relatively slight return in traffic did not justify the horrendous investment. The privately owned railroad operated between Murnau and Oberammergau in the Alpine foothills and a small (by today's standards) power station supplied energy for the first electrically operated railroad with five kilovolt single phase AC at a frequency of 16 hertz.

One of the Lokalbahn A.G.'s (LAG) little locomotives was in service for well over a half century. It now stands in the German Museum as a testament to those days inasmuch as economic considerations had to give way to the use of new technologies.

Only experiments with long-distance railroads

There were only experiments with long-distance railroads. The most remarkable of these and the one always mentioned in history was the speed record for two rail cars with three-phase propulsion on the Marienfelde-Zossen military railroad in October of 1903. Despite a speed of 210 km/h (131.25 m.p.h.), the researchers were not exactly encouraged. The three-phase cars had to be controlled from the stationary power station and supplying current over three separate catenary wires portended great difficulties at turnouts and crossings.

In 1911 test operation of a long-distance railroad between Bitterfeld and Dresden was started, this time with 10,000 volts and 15 hz frequency. Later this stretch of railroad was changed over to 15,000 volts and 16 2/3 hz. In 1912 the Wiesental Railroad followed, initially with 10,000 volts/15 hz and likewise later with 15,000 volts/16 2/3 hz. Soon the routes Magdeburg-Leipzig-Halle and Leipzig-Schönefeld were changed over.

Also, in 1912 there was an "agreement concerning the type of electric rail propulsion" which took on the status of a norm in Central Europe. The Prussian-Hessian, the Bavarian and the Baden State Railroads as well as the Swiss Federal Railways agreed on essential technical parameters. Single-phase AC with 15,000 volts and 16 2/3 hz frequency was thus chosen as a power system. Norway and Sweden also decided on this system.

Germany's neighbors, on the other hand, neither agreed among themselves nor with the Central European countries on a standard set of system parameters. Today multivoltage locomotives using modern technology have done away with the necessity for time-consuming changes of motive power on cross border trains.

The same measures are planned for future developments so that express trains can then travel between Cologne and Brussles and Frankfurt/Main and Paris.

The record set by the two three-phase cars in 1903 was not surpassed with electric motive power until 1954 and 1955 when two French express locomotives reached 330.8 km/h (206.75 m.p.h.) with special gearing and three cars.

"World record in the tunnel" with 345 km/h (215.63 m.p.h.)

It was almost another 30 years until the French TGV railcar train reached the still unsurpassed speed of 380 km/h (237.5 m.p.h.) between Paris and Lyon. The German Federal ICE followed it closely in November of 1986 with the "world record in a tunnel" of 345 km/h (215.63 m.p.h.).

Catenary testing car of the German Federal Railroad's Munich Research Laboratory in use.

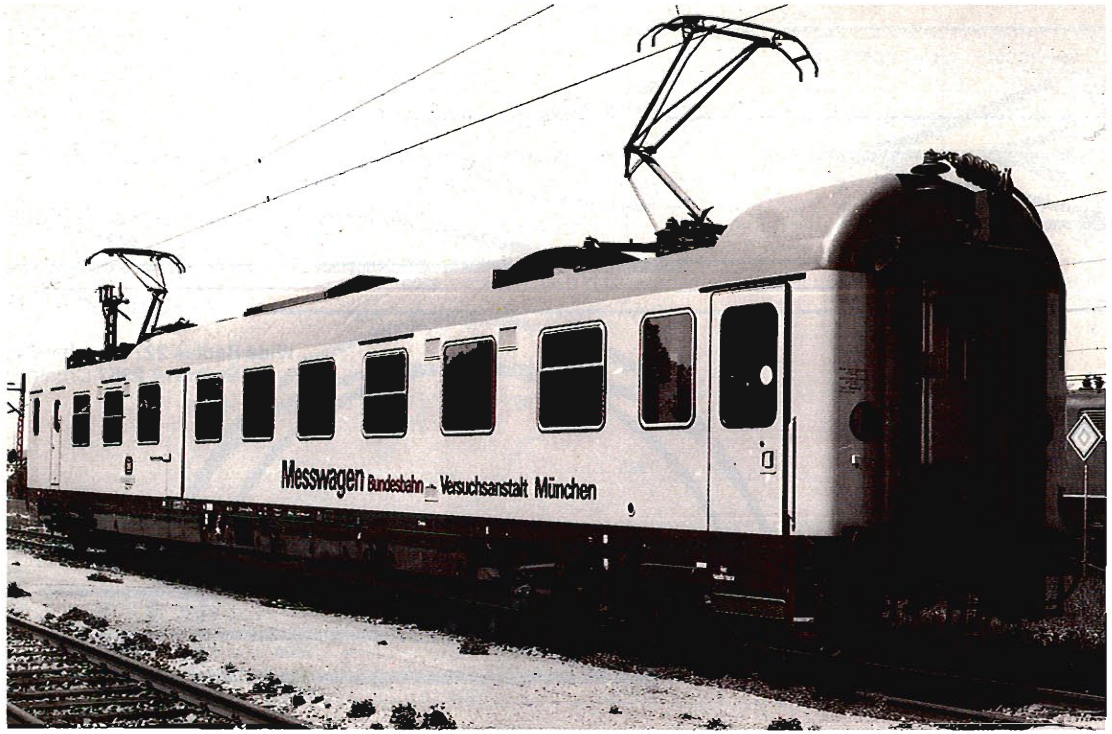


Photo: Messerschmitt-Bölkow-Blohm

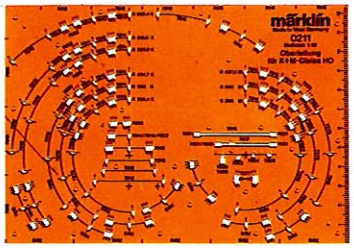
Catenary

Crane and flat cars with tower masts, photo-graphed on the VOLLMER Company's layout scene "Catenary under Construction".

Catenary

Catenary (or overhead wires) provides more than just realism and added enjoyment to a layout. It can also be used to control trains.

The contact wire of the catenary serves the same function as the center rail in the track. By connecting the catenary to an additional transformer, two trains can be operated independently of each other on the same track. The track current can also be used for constant train lighting.

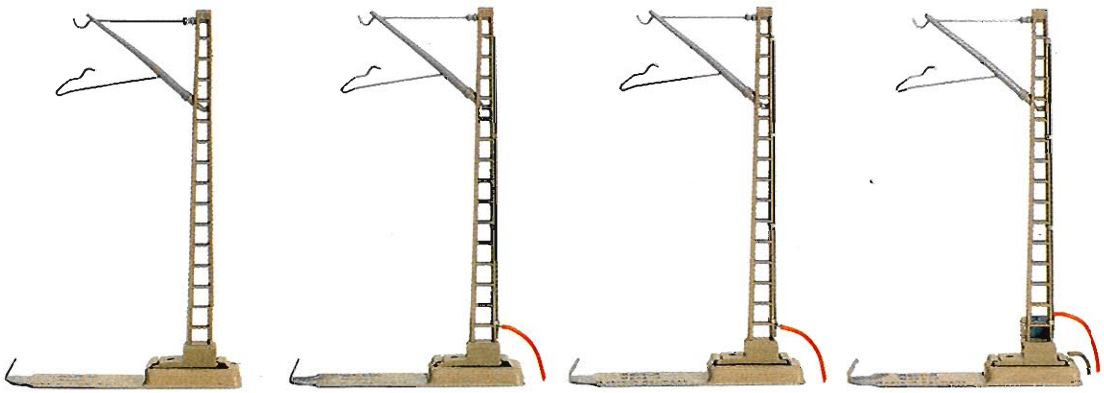


0211 · Catenary Stencil · For designing and tracing catenary plans · For K and M track · All masts and wire sections on the stencil scaled 1 : 10 for straight sections and all curves · The position of the catenary wires and masts in existing track plans can be laid out with a sharp pencil · Instructions included

7003 · Catenary Feeder Wire · For hooking up signals when tower masts are used and for supplying current to any point on the layout · 600 mm (23-5/8") long

7004 · Fastening Kit · Includes 5 bolts, 5 nuts, 5 washers · For use in special situations where the normal push-in connection cannot provide a secure connection

7006 · Contact Wire Insulation · For insulating sections of contact wires from cross spans · One required for each track and cross span connection · 15 × 6 mm (5/8" × 1/4")



7009 7010 7012 7201

Catenary for the 5100/5200 M Track

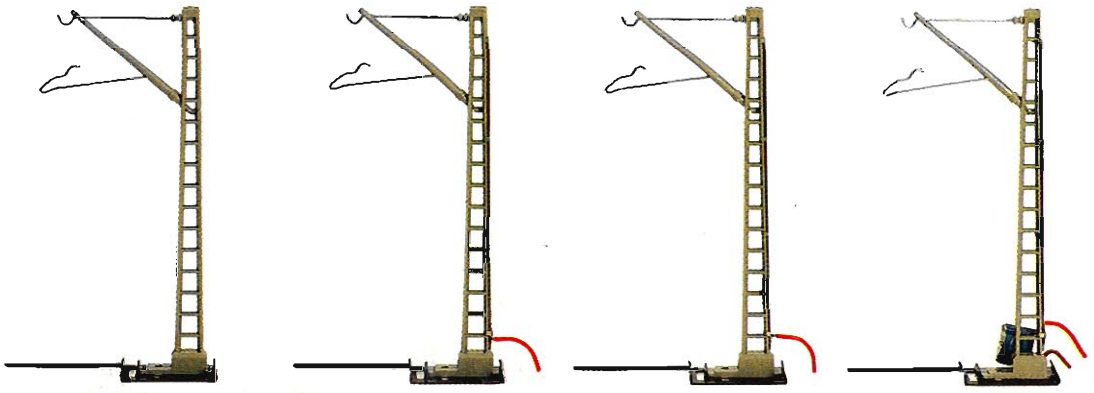
7009 · Catenary Mast · Basic mast for setting up catenary on the 5100/5200 series M track · 100 mm (4") high

7010 · Feeder Mast · 2 wires for supplying current · Instructions for setting up catenary · 100 mm (4") high

7012 · Feeder Mast · For signals · 1 wire for supplying current · 100 mm (4") high

7201 · Feeder Mast · 3 wires for supplying current · Built-in condenser to suppress interference with radio and television reception · One mast required for each circuit · Instructions for setting up catenary 100 mm (4") high

7005 · Catenary Set · For train control using 7000 series signals not located near tower masts · Consists of 2 each 7012 feeder masts, 2 each 7022 insulated wire sections and 2 each 7014 wire sections



7509 7510 7512 7501

Catenary for 2200 K Track

7509 · Catenary Mast · Basic mast for setting up catenary on the 2200 series K track · 97 mm (3-7/8") high

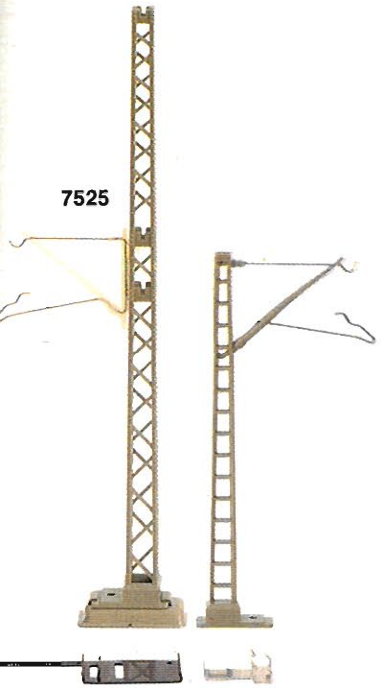
7510 · Feeder Mast · 2 wires for supplying current · Instructions for setting up catenary · 97 mm (3-7/8") high

7512 · Feeder Mast · For signals · 1 wire for supplying current · 97 mm (3-7/8") high

7501 · Feeder Mast · 2 wires for supplying current · Built-in condenser to suppress interference with radio and television reception · One mast required for each circuit · Instructions for setting up catenary · 97 mm (3-7/8") high

7505 · Catenary Set · For train control using 7200 series signals not located near tower masts · Consists of 2 each 7512 feeder masts, 2 each 7022 insulated wire sections and 2 each 7014 wire sections · For use with 2200 series K track

Catenary for K and M Track



7525 · Cantilever Support Arm · For hanging a single or double catenary line in conjunction with 7021, 7046 or 7283 tower masts

7021 · Tower Mast · For hanging the 7016 and 7017 cross spans and the 7525 cantilever support arm · 157 mm (6-13/16") high with M track, 154 mm (6-1/16") high with K track

7046 · Tower Mast with Arc Lamp · For M track · 192 mm (7-9/16") high

7283 · Tower Mast with Lamp · 173 mm (6-13/16") high with M track, 170 mm (6-3/4") high with K track

7511 · Bridge Mast · For attaching to the sides of the plastic bridges and ramps · 97 mm (3-7/8") high

All contact wire sections are nickel-plated.

7019 · Contact Wire Section · For straight track only · 360 mm (14-3/8") long

7018 · Contact Wire Section · For straight and curved track · 270 mm (10-5/8") long

7278 · Contact Wire Section · For straight and curved track · 230 mm (9-1/16") long

7013 · Contact Wire Section · For push-in connections, especially for turnouts · 240 mm (9-1/2") long

7014 · Contact Wire Section · Female section (for push-in connections) · 115 mm (4-1/2") long

7015 · Contact Wire Section · Male section (for push-in connections) · 115 mm (4-1/2") long

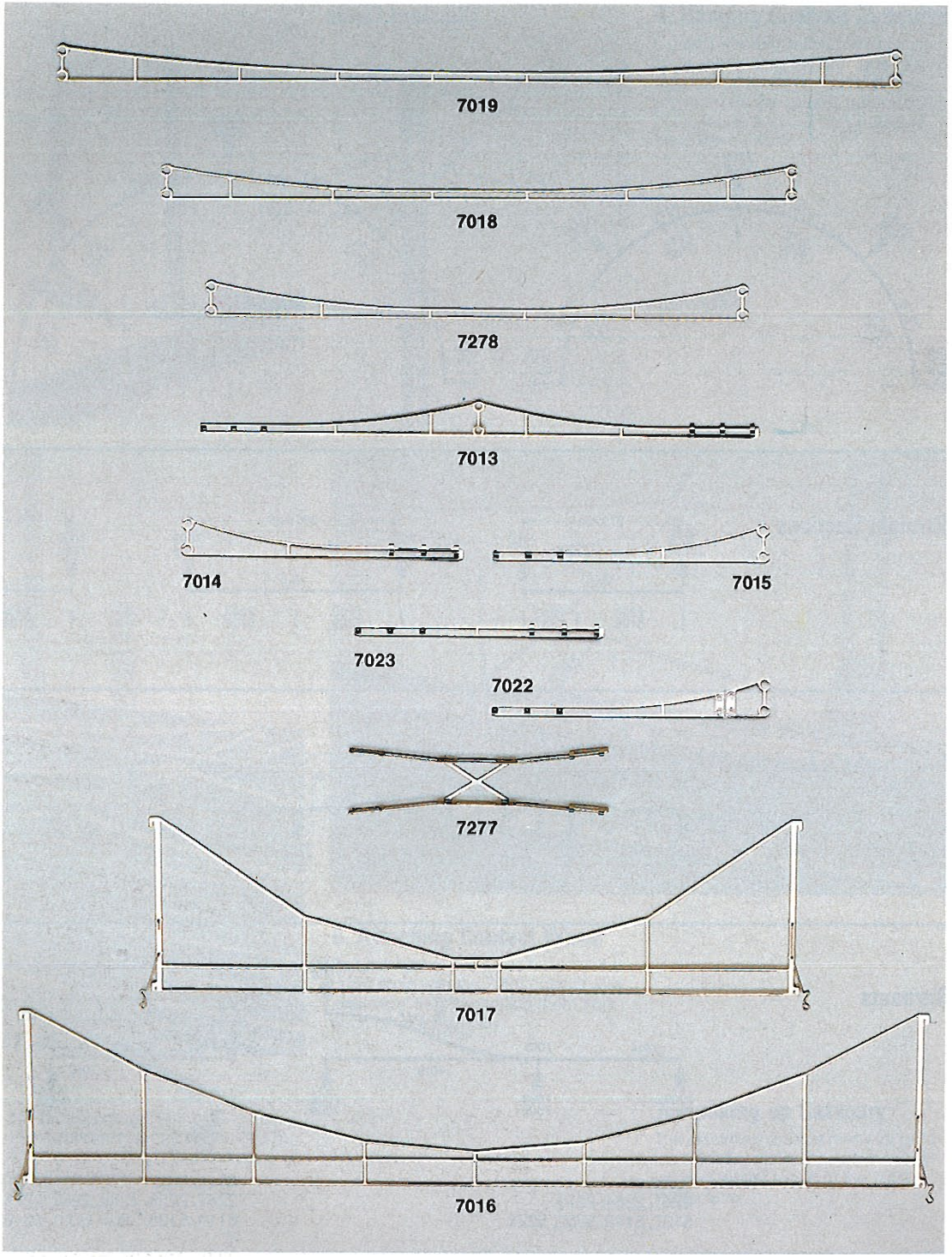
7023 · Adjustment Section · For push-in connections · 100 mm (4") long

7022 · Insulated Section · Male section (for push-in connections) for interrupting current in the catenary · 115 mm (4-1/2") long

7277 · Crossing Section · For 2257, 2258, 2259, 2260, 2275, 5114, 5128, 5207, 5211 and 5215

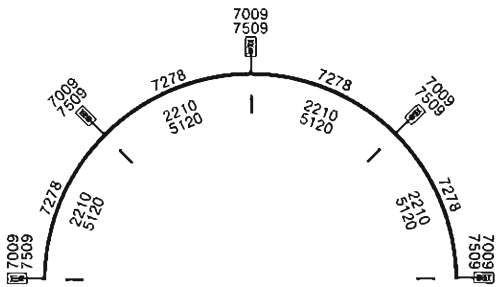
7017 · Cross Span · For hanging from tower masts · Spans up to 4 tracks according to the track spacings · Span width 280 mm (11")

7016 · Cross Span · For hanging from tower masts · Spans up to 6 tracks according to the track spacings · Span width 390 mm (15-1/4")

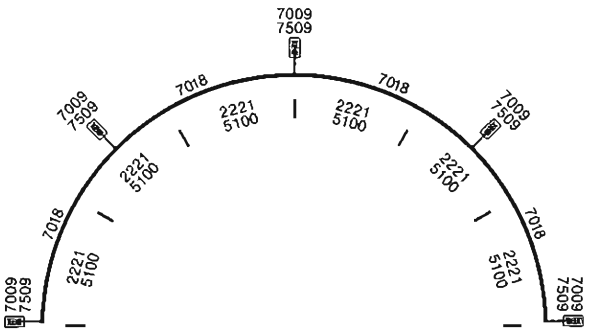


Installation Tips for Catenary

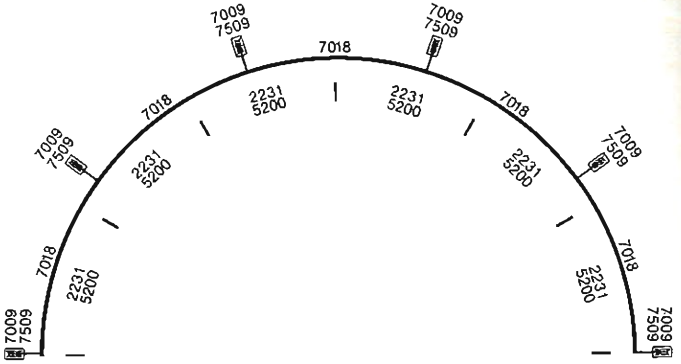
Industrial Circle



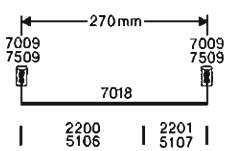
Standard Circle

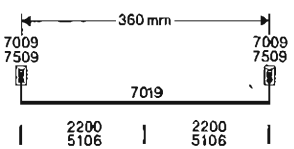


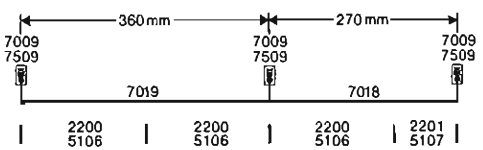
Parallel Circle



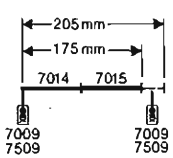
Straight Sections

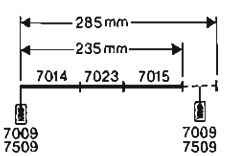




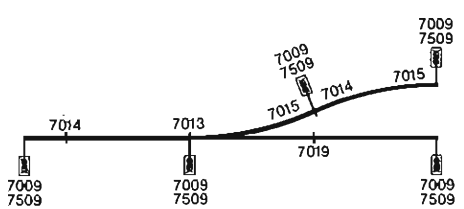


Intermediate Lengths

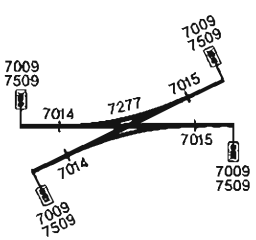




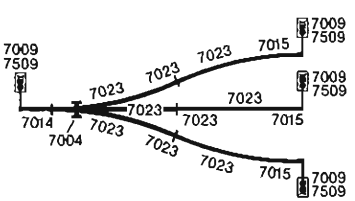
Turnouts



Turnouts
2261, 2264, 2271
5137, 5140, 5202, 5221



Crossings
2257, 2258, 2259, 2260, 2275
5114, 5128, 5207, 5211, 5215



Three-Way Turnouts
2270
5214

1. Required Material

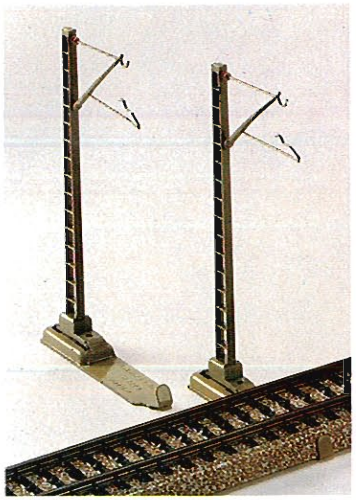
The amount of catenary material needed can be calculated best from the track plan of the layout. The illustrations give an indication of the necessary quantity of masts and catenary wire sections for particular situations. The 0211 catenary stencil should be used for exact planning.

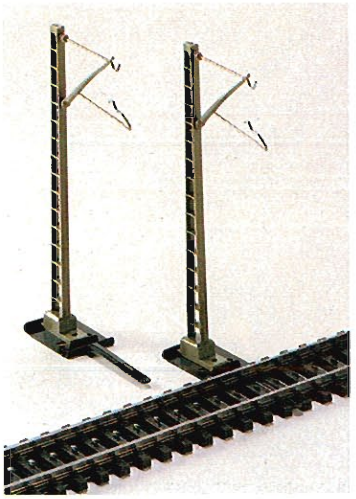
2. Planning Procedure

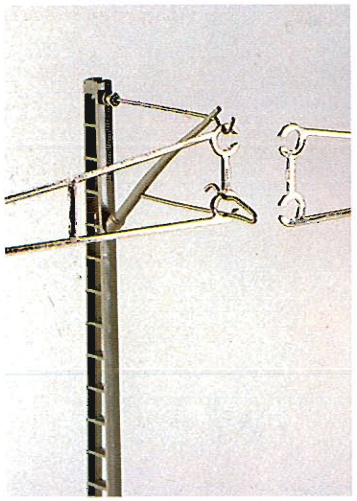
Construction should be started at turnouts or crossings with the 7013 turnout contact wire section or the 7277 crossing piece. You can then see where the next masts will be. The open stretches of track between crossings and turnouts are hung with normal contact wires. The 7014, 7015 and 7023 contact wire sections with push-in connections can be used to make up the necessary contact wire length between the last mast and the next crossing or turnout.

3. Setting up Masts

The masts are easy to attach to the track bed and remain rigidly in place once installed. They can be adjusted slightly to either side in their bases to correspond exactly to the contact wires.

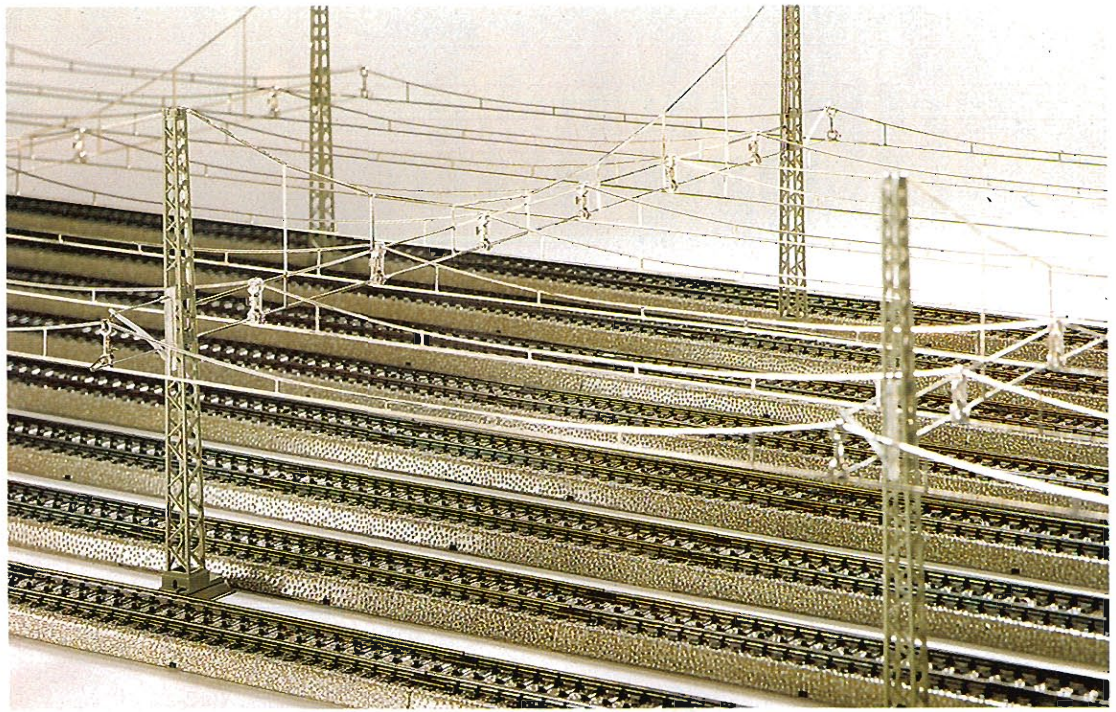






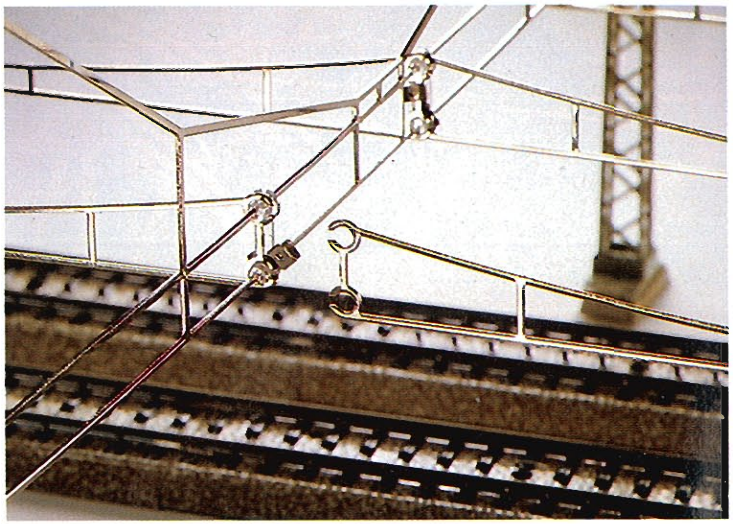
4. Hanging Contact Wire

Contact wires for curved stretches of track should be bent slightly to conform to the curve. The contact wires are hung on the sprung support arms of the masts and clip on for reliable electrical contact.



5. Cross Spans

Areas with up to four parallel tracks are spanned prototypically with the 7021 tower masts and 7017 cross spans. The 7016 cross span can be used for up to 6 tracks depending on the track spacings. The 7525 cantilever support arm can be attached to the tower mast for single tracks outside of the cross spans.



6. Attaching Contact Wires

Parallel contact wires are hung on the cross span with the 7006 contact wire insulation, thus separating them from each other electrically.

7. Hooking up Catenary

The electrified route is ready for genuine catenary operation with the installation of feeder masts or the 7003 feeder wire.

Bridges

Swiss Ae 3/6II electric locomotive with baggage car and coaches crossing arched bridge, photographed on the NOCH Company's layout scene "Höllenschlucht".

7263 · Arched Bridge · For K or M track · 6 clips for attaching K track and instructions for building bridges · Arch 117 mm (4-5⁄8″) high · Length 360 mm (1′ 2-1⁄16″)

7262 · Truss Bridge · Can be used alone or with the 7263 arched bridge · For K or M track · 3 clips for attaching K track and instructions for building bridges · 45 mm (1-3⁄4″) high · Length 180 mm (7-3⁄32″)

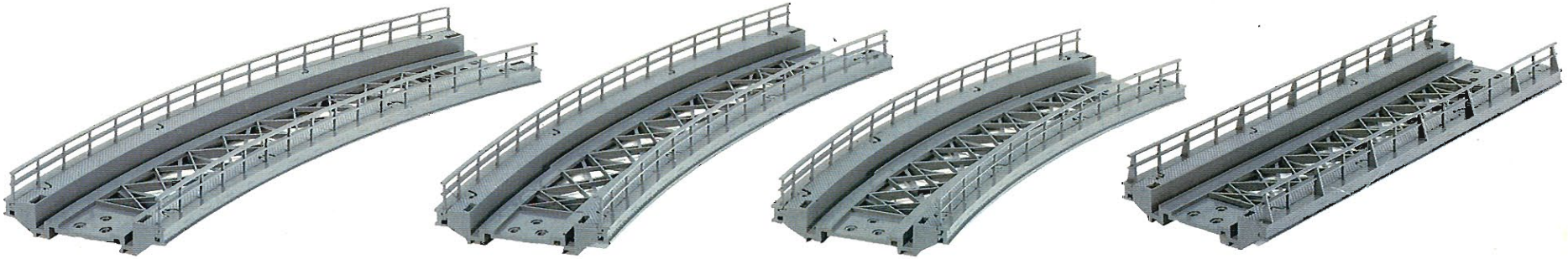
7569 · Curved Ramp · Radius 424.6 mm (1′ 4-3⁄4″) · **For K track only** (standard circle II) · 3 clips for attaching track · Length and radius same as 2231 track section

7269 · Curved Ramp · Radius 437.4 mm (1′ 4-1⁄8″) · **For M track only** (parallel circle) · Length and radius same as 5200 track section

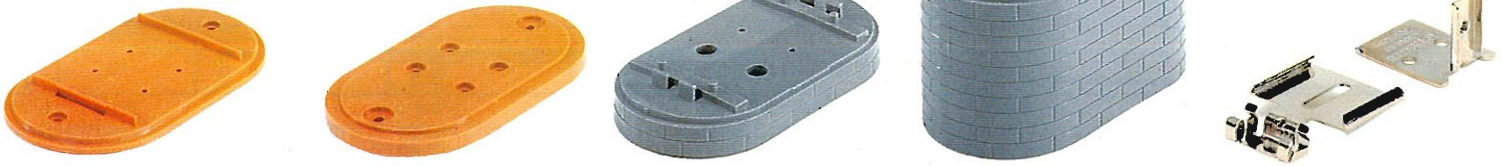
7267 · Curved Ramp · Radius 360 mm (1′ 2-1⁄16″) · For K or M track · 3 clips for attaching K track · Length and radius same as 2221 and 5100 track sections

7268 · Straight Ramp · For K or M track · 3 clips for attaching K track · Length 180 mm (7-3⁄32″)

7263 7262



7569 7269 7267 7268



7250 7251 7252 7253 7234

7250 · Base Plate · 2.5 mm high (1⁄10″) · For pillar foundation

7251 · Base Plate · 3 mm high (1⁄8″) · Can only be used in conjunction with 7250

7252 · Pillar · 6 mm (1⁄4″) high · Suitable for building ramps with 6 mm (1⁄4″) difference in elevation between pillars

7253 · Pillar · 30 mm high (1-3⁄16″)

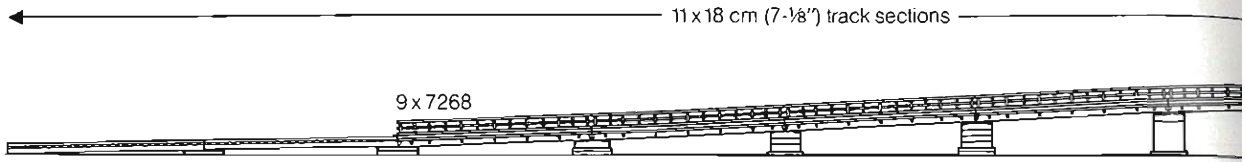
7234 · Base Plate · For attaching 7200 series signals to bridges

Bridge Approaches

These drawings show how many track sections and bridge pillars are required to build approach ramps. Each modeller can check for himself on his layout how a route should be laid out, including the beginning and end of the approach ramps. The grade is 5% and is decreased at the ends of the approach ramp.

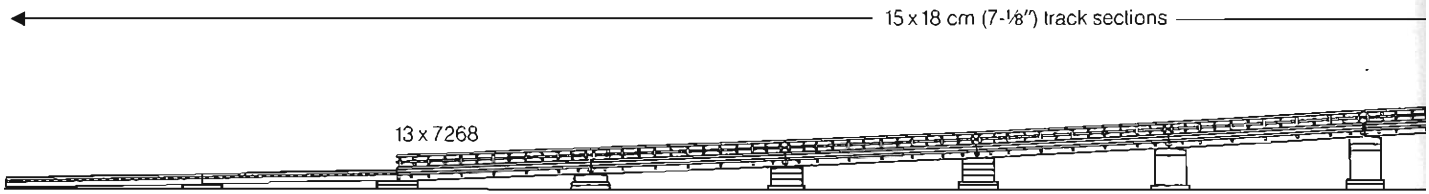
Bridges and approach ramps can be built in any desired combination and length. The 7252 and 7253 pillar sections go together like building blocks and allow the construction of pillars in height increments of 6 mm (¼"). Smaller increments of 3 mm (⅛") are possible by combining the 7250 and 7251 base plates. Pillar sections and base plates can be fastened to each other and to the base board with the 7599 wood screws.

A Grade with M Track for Steam and Diesel Locomotives



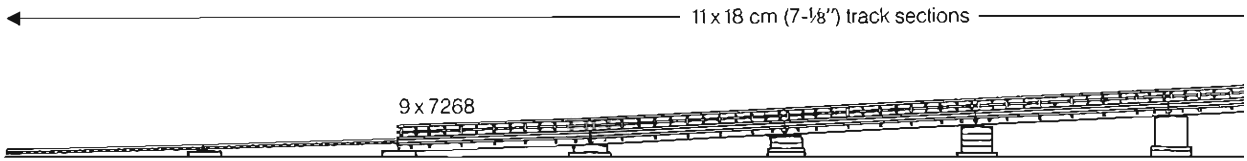
Pillar 1	Pillar 2	Pillar 3	Pillar 4	Pillar 5	Pillar 6
Height 2.5 mm (3/32")	Height 5.5 mm (7/32")	Height 11.5 mm (29/64")	Height 20.5 mm (13/16")	Height 29.5 mm (1-5/32")	Height 38.5 mm (1-33/64")
1 x 7250	1 x 7250 1 x 7251	1 x 7250 1 x 7252 1 x 7251	1 x 7250 3 x 7252	1 x 7250 4 x 7252 1 x 7251	1 x 7250 1 x 7253 1 x 7252

A Grade with M Track for Electric Locomotives with Catenary



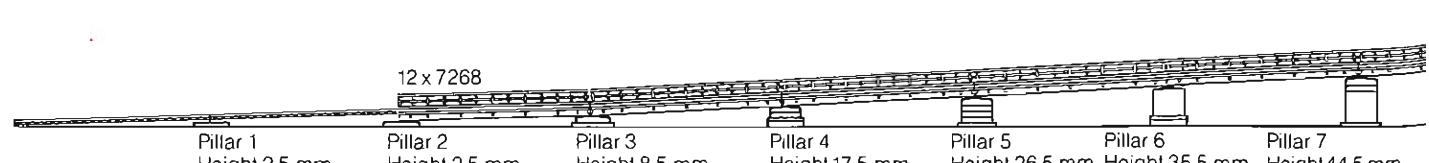
Pillar 1	Pillar 2	Pillar 3	Pillar 4	Pillar 5	Pillar 6	Pillar 7
Height 2.5 mm (3/32")	Height 5.5 mm (7/32")	Height 11.5 mm (29/64")	Height 20.5 mm (13/16")	Height 29.5 mm (1-5/32")	Height 38.5 mm (1-33/64")	Height 47.5 mm (1-7/8")
1 x 7250	1 x 7250 1 x 7251	1 x 7250 1 x 7252 1 x 7251	1 x 7250 3 x 7252	1 x 7250 4 x 7252 1 x 7251	1 x 7250 1 x 7253 1 x 7252	1 x 7250 2 x 7252 1 x 7251 1 x 7253

A Grade with K Track for Steam and Diesel Locomotives

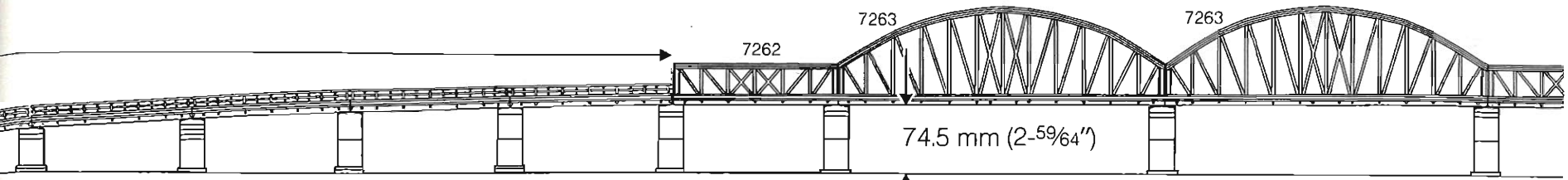


Pillar 1	Pillar 2	Pillar 3	Pillar 4	Pillar 5	Pillar 6
Height 2.5 mm (3/32")	Height 2.5 mm (3/32")	Height 8.5 mm (11/32")	Height 17.5 mm (11/16")	Height 26.5 mm (1-3/64")	Height 35.5 mm (1-13/62")
1 x 7250	1 x 7250	1 x 7250 1 x 7252	1 x 7250 2 x 7252 1 x 7251	1 x 7250 4 x 7252	1 x 7250 1 x 7253 1 x 7251

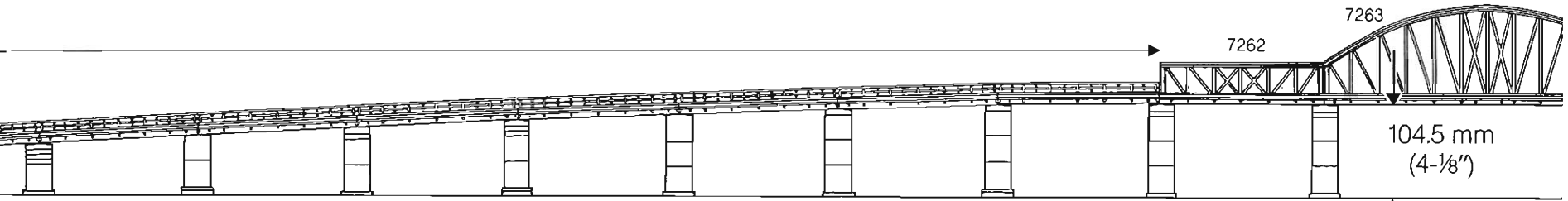
A Grade with K Track for Electric Locomotives with Catenary



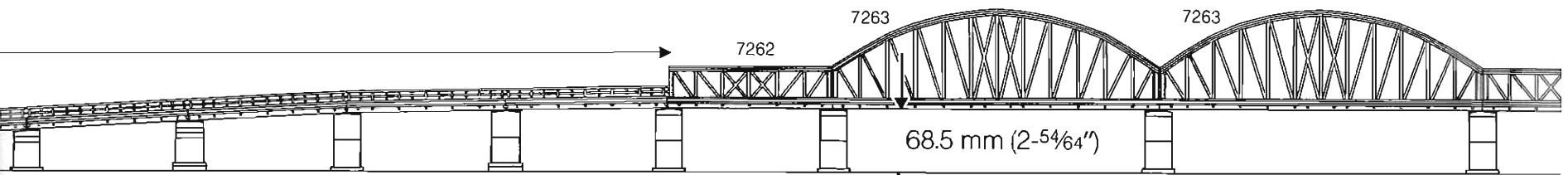
Pillar 1	Pillar 2	Pillar 3	Pillar 4	Pillar 5	Pillar 6	Pillar 7
Height 2.5 mm (3/32")	Height 2.5 mm (3/32")	Height 8.5 mm (11/32")	Height 17.5 mm (11/16")	Height 26.5 mm (1-3/64")	Height 35.5 mm (1-13/32")	Height 44.5 mm (1-3/4")
1 x 7250	1 x 7250	1 x 7250 1 x 7252	1 x 7250 1 x 7251 2 x 7252	1 x 7250 4 x 7252	1 x 7250 1 x 7251 1 x 7253	1 x 7250 2 x 7252 1 x 7253



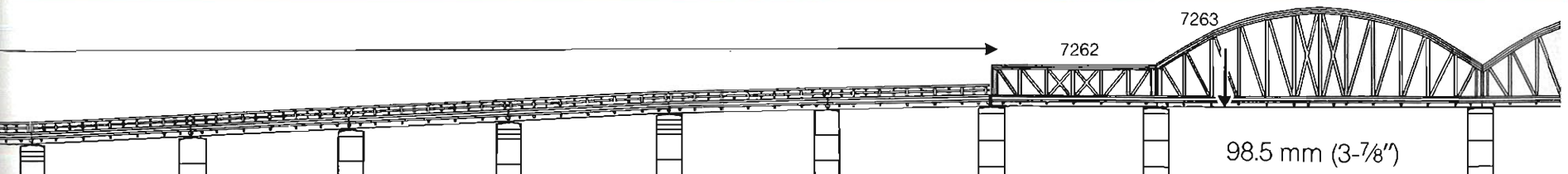
Pillar 7	Pillar 8	Pillar 9	Pillar 10	Pillar 11
Height 47.5 mm (1-7/8")	Height 56.5 mm (2-15/64")	Height 65.5 mm (2-37/64")	Height 71.5 mm (3-13/16")	Height 74.5 mm (2-59/64")
1 x 7250 2 x 7252	1 x 7250 1 x 7253	1 x 7250 2 x 7253	1 x 7250 1 x 7252	1 x 7250 2 x 7253
1 x 7251 1 x 7253	4 x 7252	1 x 7251	1 x 7251 2 x 7253	2 x 7252



Pillar 8	Pillar 9	Pillar 10	Pillar 11	Pillar 12	Pillar 13	Pillar 14	Pillar 15
Height 56.5 mm (2-15/64")	Height 65.5 mm (2-37/64")	Height 74.5 mm (2-59/64")	Height 83.5 mm (3-9/32")	Height 92.5 mm (3-31/32")	Height 98.5 mm (3-7/8")	Height 101.5 mm (4")	Height 104.5 mm (4-1/8")
1 x 7250 1 x 7253	1 x 7250 2 x 7253	1 x 7250 2 x 7253	1 x 7250 3 x 7252	1 x 7250	1 x 7250 3 x 7253	1 x 7250 1 x 7252	1 x 7250 3 x 7253
4 x 7252	1 x 7251	2 x 7252	1 x 7251 2 x 7253	3 x 7253	1 x 7252	1 x 7251 3 x 7253	2 x 7252



Pillar 7	Pillar 8	Pillar 9	Pillar 10	Pillar 11
Height 44.5 mm (1-3/4")	Height 53.5 mm (2-7/64")	Height 62.5 mm (2-15/32")	Height 65.5 mm (2-37/64")	Height 68.5 mm (2-54/64")
1 x 7250 1 x 7253	1 x 7250 3 x 7252	1 x 7250	1 x 7250 2 x 7253	1 x 7250 2 x 7253
2 x 7252	1 x 7251 1 x 7253	2 x 7253	1 x 7251	1 x 7252



Pillar 8	Pillar 9	Pillar 10	Pillar 11	Pillar 12	Pillar 13	Pillar 14
Height 53.5 mm (2-7/64")	Height 62.5 mm (2-15/32")	Height 71.5 mm (2-13/16")	Height 80.5 mm (3-11/64")	Height 89.5 mm (3-17/32")	Height 95.5 mm (3-3/4")	Height 98.5 mm (3-7/8")
1 x 7250 3 x 7252	1 x 7250	1 x 7250 1 x 7252	1 x 7250	1 x 7250 4 x 7252	1 x 7250	1 x 7250
1 x 7251 1 x 7253	2 x 7253	1 x 7251 2 x 7253	3 x 7252	1 x 7251 2 x 7253	1 x 7251	1 x 7252
			2 x 7253		3 x 7253	3 x 7253

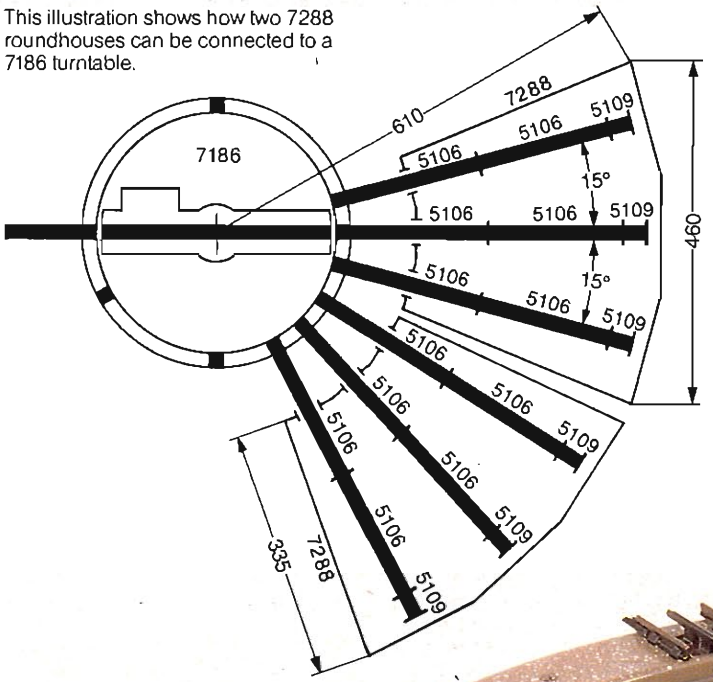
7186 · Remote Controlled Turntable · Base plate with 10 track connections for M track or 2291 K track section · Turntable with motor in operator's hut for operation in both directions · Control box and hookup wires for remote control · Turntable stops automatically at track connections · Power to the 6 locomotive shed tracks supplied from the turntable · Metal construction · External diameter 360 mm (1′ 2-3⁄16″) · Turntable deck length 308 mm (12-1⁄8″)

= 60030

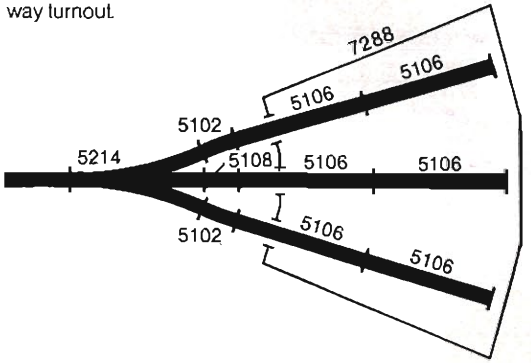
2291 · Adapter Track · For connecting K track to the 7186 turntable · Length 180 mm (7-3⁄32″)

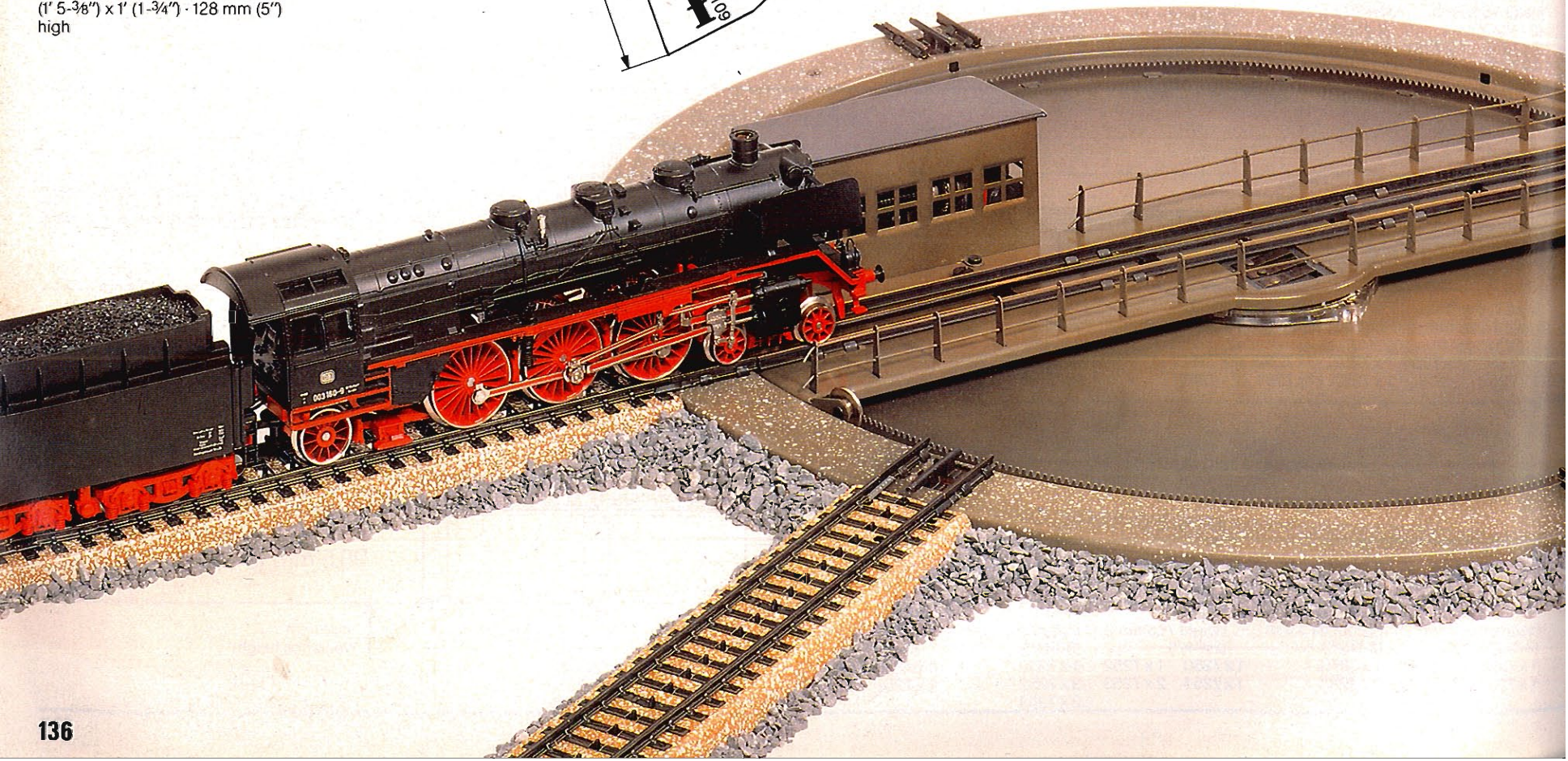
7288 · Locomotive Roundhouse Kit · 3 stalls with doors that close automatically · For M and K track (track not included) · Size 335 x 460 mm (1′ 5-3⁄8″) x 1′ (1-3⁄4″) · 128 mm (5″) high

This illustration shows how two 7288 roundhouses can be connected to a 7186 turntable.



A suggestion for using the 7288 roundhouse with the 5214 three-way turnout.

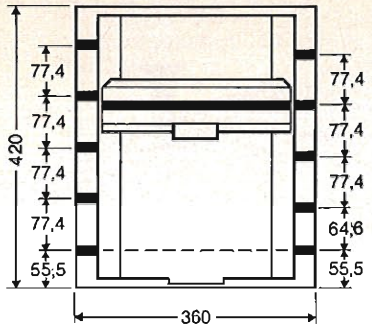




Turntable

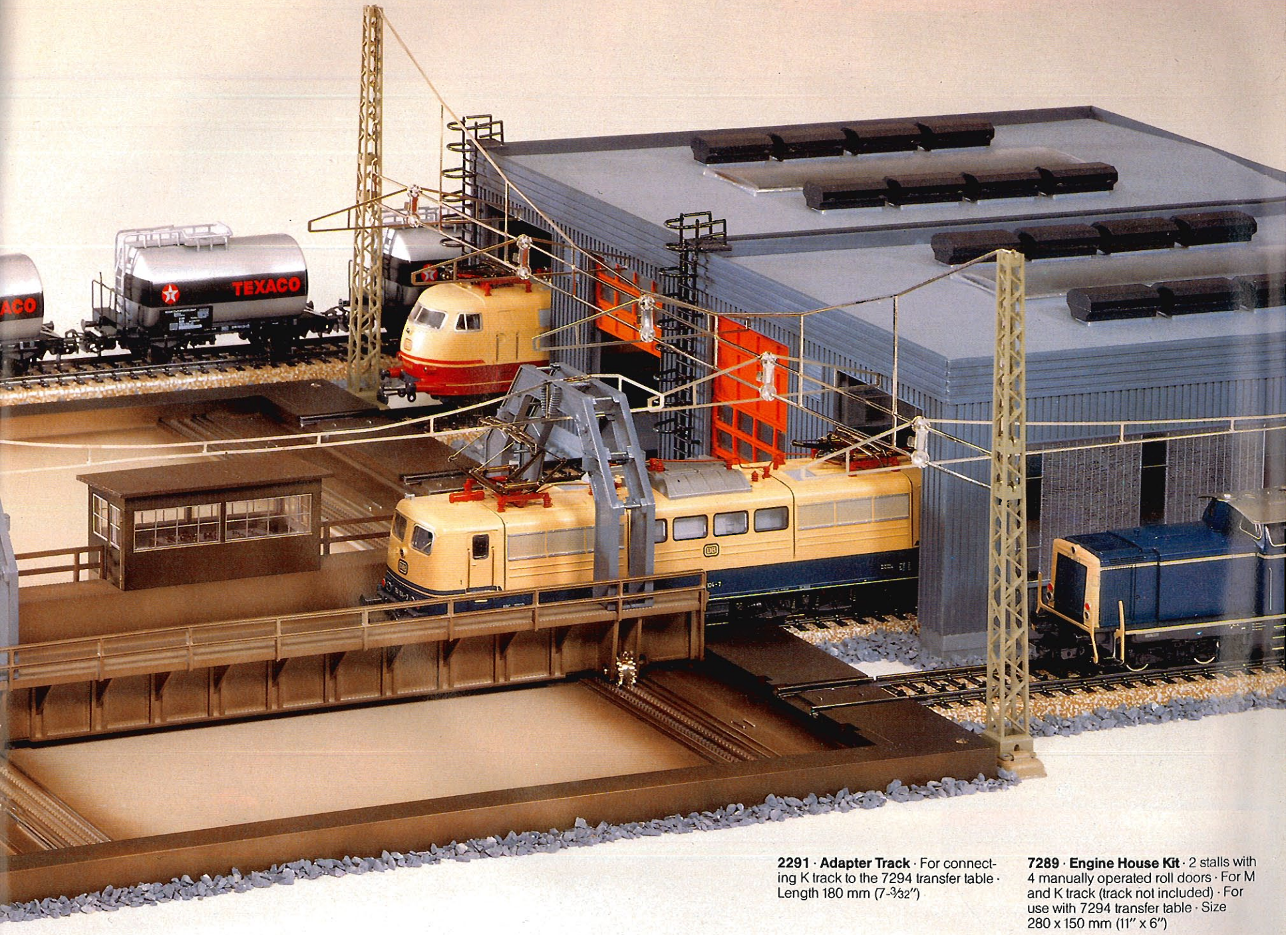
Transfer Table

7294 · Remote Controlled Transfer Table · Base plate with 2 approach tracks and 8 stall tracks · For M track or 2291 K track section · Can be used with 7289 engine house · Transfer table deck with motor in operator's hut for operation in both directions · Control panel and hookup wires for remote control · Transfer table deck stops automatically at the track connections · Stall tracks supplied with power from the deck · Additional connections for catenary · Size of the base 360 x 420 mm (1' 2-⅛" x 1' 4-½") · Deck length 288 mm (11-⅜")



7295 · Catenary Set for Transfer Table · Consists of 2 catenary support gantries, 1 section of catenary wire with hookup wire for the deck and 10 short catenary wires for the track connections

Transfer Table



2291 · Adapter Track · For connecting K track to the 7294 transfer table · Length 180 mm (7-3⁄32″)

7289 · Engine House Kit · 2 stalls with 4 manually operated roll doors · For M and K track (track not included) · For use with 7294 transfer table · Size 280 x 150 mm (11″ x 6″)

Railroad Grade Crossings

Class 120 electric locomotive, photographed on the VOLLMER Company's layout scene "Grade Crossing with Lowered Gates".

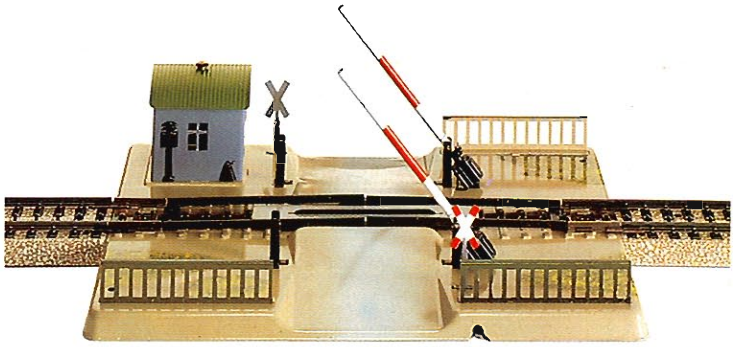
The crossing gates for the fully automatic railroad grade crossings descend as soon as an approaching train reaches the contact area and do not rise until the last car has left the contact area. The contact area can be extended to any length. With K track any standard straight or curved sections can be used; with M track **only** the 5115, 5116 or 5145 sections can be used.

5115 · Straight Contact Track · Length 180 mm (7-3⁄32″) · Same as 5106

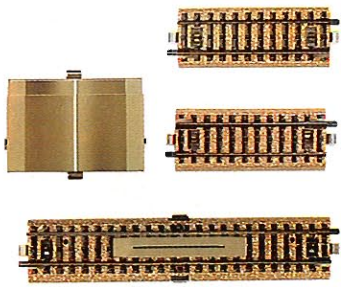
5116 · Curved Contact Track · Radius 360 mm (1′ 2-3⁄16″), 30° · Same as 5100

5145 · Straight Contact Track Set · 2 sections of track · Length of each 90 mm (3-9⁄16″) · Same as 5107

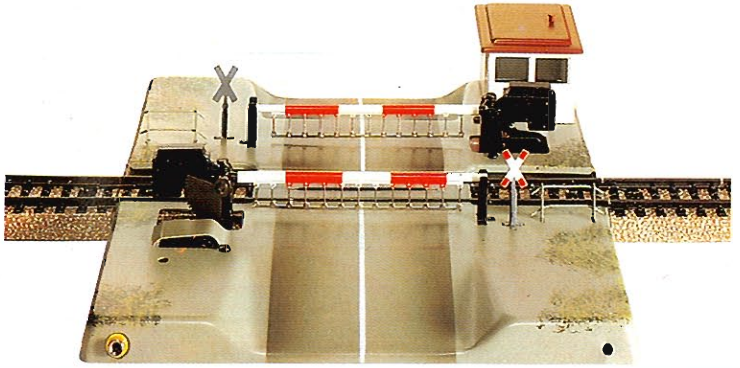
2291 · Adapter Track · For connecting K track to the 7192 and 7390 railroad grade crossings · Length 180 mm (7-3⁄32″)



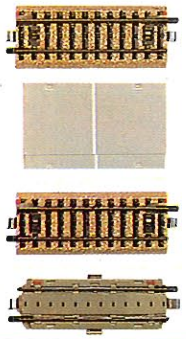
7390 · Manually Operated Railroad Grade Crossing · With full gates · With built-in M track for single track routes · Gates activated by train's weight on rocker-type running rails · Gatekeeper's hut and warning crosses · Metal construction · Track length same as 5106 · Size of base 135 × 180 mm (5-3⁄8″ × 7-3⁄32″)



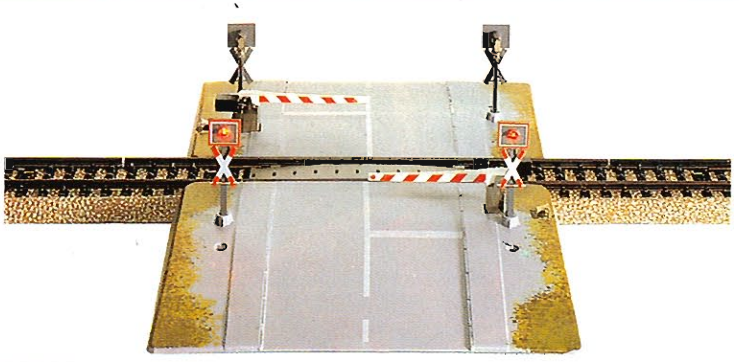
7193 · Add-On Set · For 7192 grade crossing · For M track · Required for each additional parallel track · Contact track set: 1 straight track section 180 mm (7-3⁄32″) and 2 straight track sections each 90 mm (3-9⁄16″) · Telescoping road section for space between tracks of 37 to 67 mm (1-1⁄2″) to 2-5⁄8″) (Track spacing of 74 to 104 mm (3″ to 4″))



7192 · Fully Automatic Railroad Grade Crossing · With full gates · For M track · 2 solenoid-activated gates with gatekeeper's hut and warning crosses · Metal construction · Contact track set: 1 straight track section 180 mm (7-3⁄32″) and 2 straight track sections each 90 mm (3-9⁄16″) · Size of each base 180 × 90 mm (7-3⁄32″ × 3-9⁄16″))

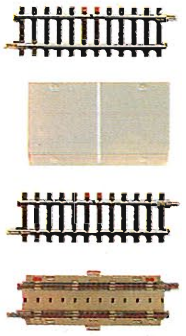


7293 · Add-On Set · For 7292 grade crossing · For M track · Required for each additional parallel track · Contact track set: 3 straight track sections each 90 mm (3-9⁄16″) · Telescoping road section for space between tracks of 27 to 62 mm (1-1⁄16″ to 2-1⁄2″) (Track spacing of 64 to 99 mm (2-1⁄2″ to 3-7⁄8″))

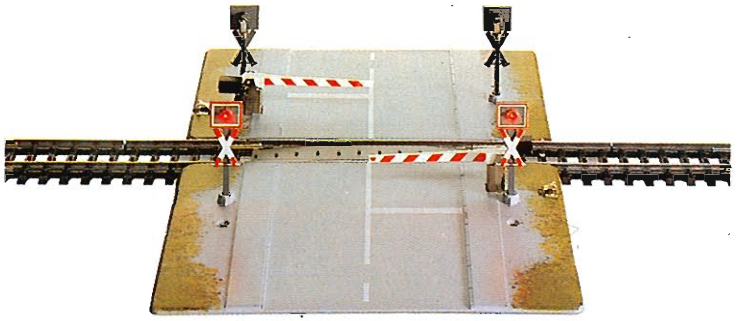


7292 · Fully Automatic Railroad Grade Crossing · With half gates · For M track · 2 solenoid-activated gates each with 2 warning crosses and 2 red warning lights which illuminate when the gates are down · Contact track set: 3 straight track sections each 90 mm (3-9⁄16″) · Size of each base 137 × 95 mm (5-3⁄8″ × 3-3⁄4″)

💡 = 60201



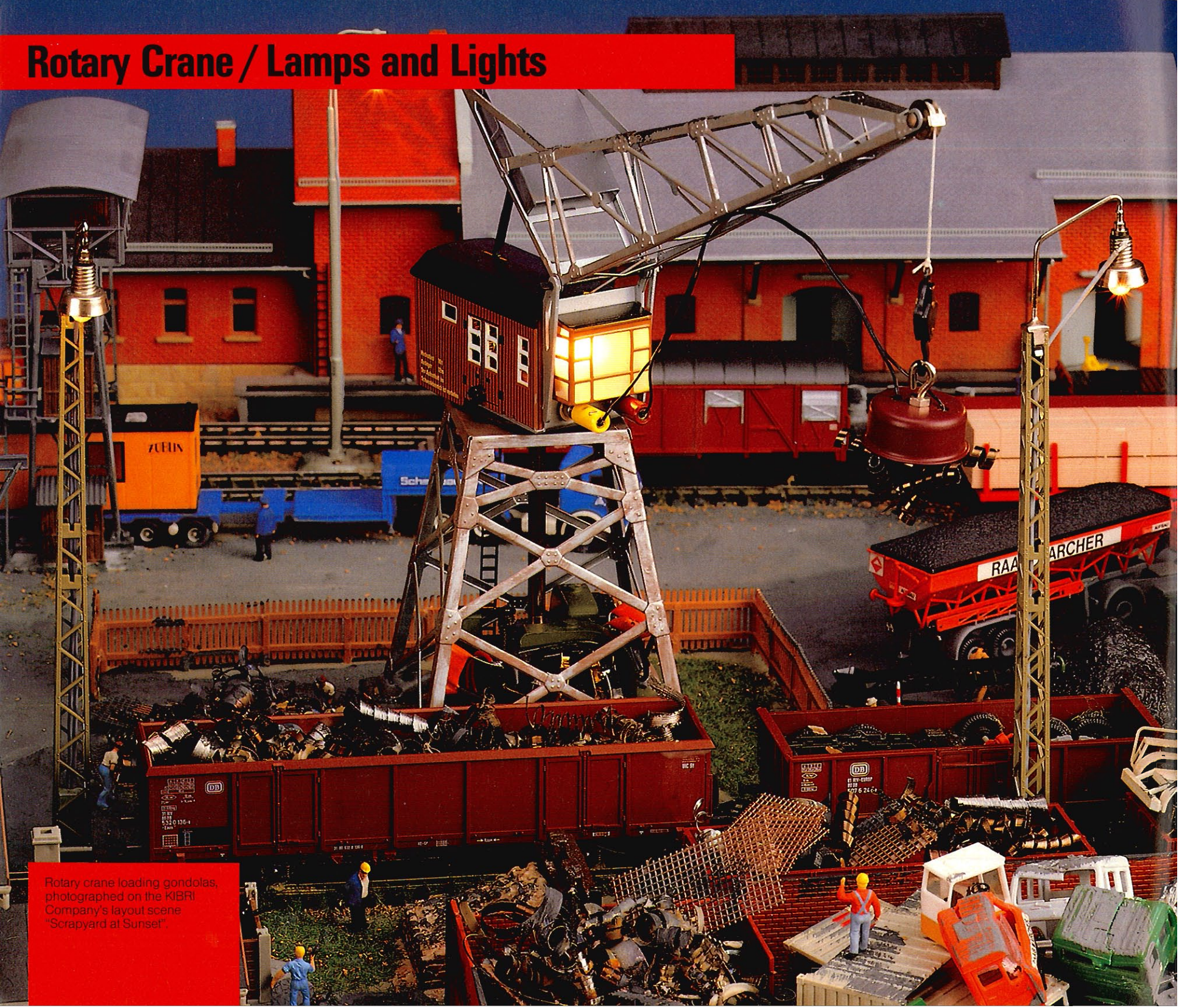
7593 · Add-On Set · For 7592 grade crossing · For K track · Required for each additional parallel track · Contact track set: 3 straight track sections each 90 mm (3-9⁄16″) · Telescoping road section for space between tracks of 33 to 68 mm (1-5⁄16″ to 2-1 1⁄16″) (Track spacing of 64 to 99 mm (2-1⁄2″ to 3-7⁄8″))



7592 · Fully Automatic Railroad Grade Crossing · With half gates · For K track · 2 solenoid-activated gates each with 2 warning crosses and 2 red warning lights which illuminate when the gates are down · Contact track set: 3 straight track sections each 90 mm (3-9⁄16″) · Size of each base 137 × 95 mm (5-3⁄8″ × 3-3⁄4″)

💡 = 60201

Rotary Crane / Lamps and Lights



Rotary crane loading gondolas, photographed on the KIBRI Company's layout scene "Scrapyard at Sunset".

Rotary Crane

7051 · Remote Controlled Crane with Lifting Magnet · Separate motors for rotating crane and raising/lowering load · Hook with lifting magnet can lift iron or objects containing iron · Boom manually adjustable · Illuminated cab · 260 mm (10-¼") high · Base 90 × 90 mm (3-9⁄16" × 3-9⁄16") · 1 combined controller and on/off switch panel

= 60000

= 60030

If you want to load and unload your freight trains the right way, you need this rotary crane. Naturally, the lifting magnet only attracts iron. However, you can load other things besides just "scrap" and "pig iron". A couple of miniature screws hidden in the wooden "freight" and a wooden crate can be loaded from a truck onto a freight car. All the different activities possible with this crane can be remoted controlled, thus expanding the play value and creating a realistic transportation scene.

Lamps and Lights

The lamps and lights are delicate and yet especially sturdy. All round masts are made of metal · The lattice masts are the same as the catenary tower masts.

7046 · Arc Lamp with Lattice Mast · For use with M track catenary · Height 192 mm (7-9⁄16") · Base 14 × 28 mm (9⁄16" × 1-1⁄8")

= 60010

7048 · Arc Lamp · Height 156 mm (6-⅛") · Base diameter 29 mm (1-⅛")

= 60010

7283 · Tower Mast Lamp · Mounted on lattice mast · With base plate · Can be used with catenary · Height 170 mm (6-¾")

= 60000

7280 · Street Lamp · Height 117 mm (4-⅝") · Base diameter 25 mm (1")

= 60000

7281 · Station Platform Light · Twin lights · Height 97 mm (3-⅞") · Base diameter 25 mm (1")

= 60000

7282 · Street Light · Twin lights · Height 120 mm (4-¾") · Base diameter 25 mm (1")

= 60000

7284 · Park Light · Height 63 mm (2-½") · Base diameter 15 mm (1-1⁄16")

= 60000

7047 · Street Light · Height 127 mm (5") · Base diameter 27 mm (1-1⁄16")

= 60010

Light Bulbs for Accessories

Light Bulbs	No.	Power consumption approx.	
	60 000	**0.8 VA**	Car lighting kit 7077 Turnouts 2261, 5128, 5137, 5140, 5202 Bumper 7191 Signals 7036, 7038, 7039, 7040, 7041, 7042 Lamps 7280, 7281, 7282, 7283, 7284 Crane 7051
red	**60 001**	**0.8 VA**	Car lighting kit 7079 Signals 7188, 7339
green	**60 002**	**0.8 VA**	Signals 7188, 7339
	60 008	**0.9 VA**	Car lighting kit 7330, 7333
	60 010	**0.8 VA**	Car lighting kit 7323 Light pole 5113 Lamps 7046, 7047, 7048
	60 015	**1.0 VA**	Car lighting kit 7197, 7320, 7322, 7329
	60 020	**0.8 VA**	Car lighting kit 7074
	60 200	**0.5 VA**	Signal 7242
red	**60 201**	**0.5 VA**	Signals 7239, 7240, 7241 Railroad grade crossings 7292, 7592
green	**60 202**	**0.5 VA**	Signals 7187, 7236, 7237, 7238, 7239, 7240, 7241
orange	**60 204**	**0.5 VA**	Signals 7187, 7236, 7237, 7238, 7240, 7241

The power consumption figures are given with reference to the standard 16 volts supplied by Marklin transformers. The total power needed in a circuit for lighting is arrived at by adding the power consumption figures for all light bulbs that are in use simultaneously.

Class 260 and 212 diesel locomotives with bulk freight and tank cars, photographed on the FALLER Company's layout scene "Switchyard".

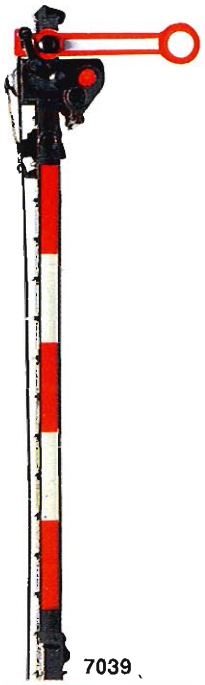
Signals for M Track

Solenoids and a functionally reliable precision mechanism are used to set semphore/target signals in a prototypical manner. At the same time a built-in relay for the track current turns power on and off to the track block monitored by the signal according to the latter's setting. Train control is possible with center stud/third rail operation as well as catenary. The necessary third rail connections and installation instructions are included with each signal.

Distant signals are set up at a sufficient stopping distance from the appropriate home signal and electrically coupled with the latter. The distant signals by themselves have no train control functions.

The signals can be switched conventially using the 7072 control box or in the Digital system using solenoid accessory decoders. Control by a moving train is also possible with circuit tracks.

7036



7039

7036 · **Distant Signal** · With moveable disc · Lights change from yellow/yellow to green/green · Double solenoid · With base plate · 28 mm (1-1/8") wide · 65 mm (2-9/16") long · 73 mm (2-7/8") high

⚲ = 60000

7039 · **Home Signal** · With one semaphore arm · Lights change from red to green · Double solenoid · With base plate · 27 mm (1-1/16") wide · 70 mm (2-1/4") long · 125 mm (5") high

⚲ = 60000

Usually used on mainlines or at stations where there are no branches or sidings.

7036

Distant Signal: Prepare to stop

7039

Home Signal: Stop

7036

Distant Signal: Prepare to proceed at speed

7039

Home Signal: Proceed at speed

7038

Distant Signal: Prepare to stop

7040

Home Signal: Stop

Usually used at or near station where trains are switched from the main track.

7038

Distant Signal: Prepare to slow down

7040

Home Signal: Proceed slowly


7041

7041 · Home Signal · With two independent semaphore arms · Lights change from red to green or from red to green/yellow · Three solenoids · With base plate · 27 mm (1-1/16") wide · 97 mm (2-9/16") long · 125 mm (5") high

⚲ = 60000


7042

7042 · Block Signal · Mast with moveable front and rear discs · Double solenoid · Base plate · 28 mm (1-1/8") wide · 70 mm (2-3/4") long · 70 mm (2-3/4") high

⚲ = 60000

7187 · Color Light Distant Signal · Lights change from green/green to yellow/yellow · 16 mm (5/8") wide · 11 mm (7/16") long · 60 mm (2-3/8") high

⚲ = 60202 green ⚲ = 60204 orange


7187


7188

7188 · Color Light Home Signal · Lights change from red to green · Double solenoid · Additional hand lever · Pair of sockets for connecting up 7187 distant signal · With base plate · 28 mm (1-1/8") wide · 70 mm (2-1/4") long · 90 mm (3-1/2") high

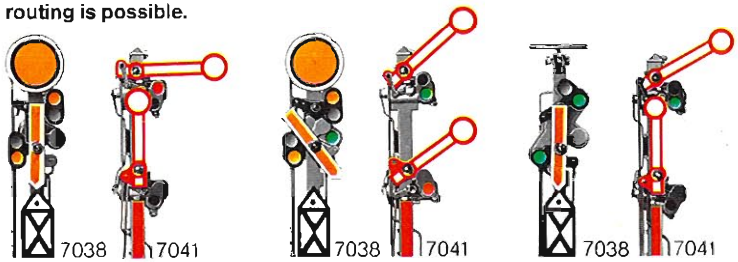
⚲ = 60001 red ⚲ = 60002 green


7339

7339 · Color Light Home Signal · For manual operation · Lights change from red to green with simultaneous control of the track current in an M track section attached to the signal base · Additional special 90 mm (3-1/2") track section with gapped center rail · 55 mm (2-3/16") wide · 90 mm (3-1/2") long · 90 mm (3-1/2") high

⚲ = 60001 red ⚲ = 60002 green

Used at or near stations where diversion or direct routing is possible.

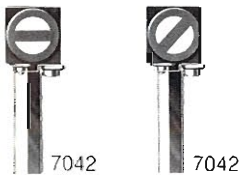


Distant Signal: Prepare to stop — Home Signal: Stop

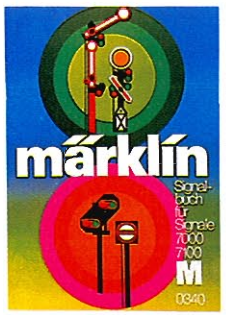
Distant Signal: Prepare to slow down — Home Signal: Proceed slowly

Distant Signal: Prepare to proceed at speed — Home Signal: Proceed at speed

Usually used in terminal or yard areas.



Block Signal: Stop — Proceed



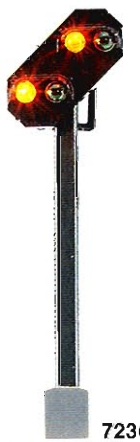
0342 · Märklin Signal Manual for 7000 and 7100 Series Signals · Detailed explanations with multicolored illustrations showing how to install and use the 7000 and 7100 series signals and the universal relay with M track · 28 pages · Size 18 × 25 cm (7-1/8" × 9-7/8") · English text

Signals for K Track and M Track

Each color light home and block signal has a solenoid-activated set of contacts which switch the signal lights to the correct prototypical pattern. An additional set of contacts switches track current on and off in the track block monitored by the signal according to the latter's setting. Train control is possible with center stud/third rail operation as well as catenary. The necessary third rail connections and installation instructions are included with each signal.

Distant signals are set up at a sufficient stopping distance from the appropriate home signal and electrically coupled with the latter. The distant signals by themselves have no train control functions.

The signals can be switched conventially using the 7072 control box or in the Digital system using solenoid accessory decoders. Control by a moving train is also possible with circuit tracks.



7236

7239

7237

7240

7236 · Color Light Distant Signal · Lights change from yellow/yellow to green/green · With 7230 mounting bracket and base plate · 16 mm (5/8") wide · 28 mm (1-1/8") long · 67 mm (2-5/8") high

= 60202 green = 60204 orange

7239 · Color Light Home Signal · Lights change from red to green and track current is controlled by a double solenoid · Additional hand lever · With base plate · 30 mm (1-3/16") wide · 70 mm (2-3/4") long · 90 mm (3-1/2") high

= 60201 red = 60202 green

7237 · Color Light Distant Signal · Lights change from yellow/yellow to yellow/green · With 7230 mounting bracket and base plate · 16 mm (5/8") wide · 28 mm (1-1/8") long · 67 mm (2-5/8") high

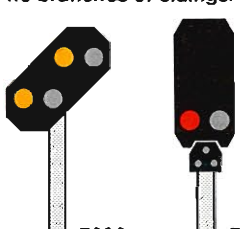
= 60202 green = 60204 orange

7240 · Color Light Home Signal · Lights change from red to green/yellow and track current is controlled by a double solenoid · Additional hand lever · With base plate · W 30 mm (1-3/16") wide · 70 mm (2-3/4") long · 90 mm (3-1/2") high

= 60201 red = 60202 green

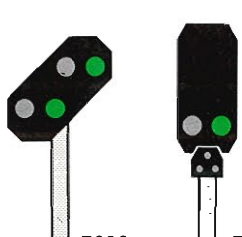
= 60204 orange

Usually used on mainlines or at stations where there are no branches or sidings.



7236 Distant Signal: Prepare to stop

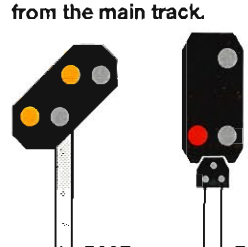
7239 Home Signal: Stop



7236 Distant Signal: Prepare to proceed at speed

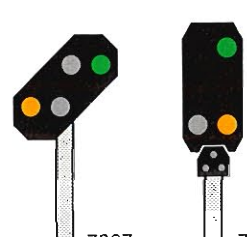
7239 Home Signal: Proceed at speed

Usually used at or near station where trains are switched from the main track.



7237 Distant Signal: Prepare to stop

7240 Home Signal: Stop



7237 Distant Signal: Prepare to slow down

7240 Home Signal: Proceed slowly

7238

7241

7242

7245

The 7200 series signals can be detached from their solenoid mechanisms and mounted using the 7230 bracket. This enables installation of the mechanism below the base board.

7238 · Color Light Distant Signal · Lights change from yellow/yellow to green/green or yellow/green · Double solenoid for the yellow/green setting · With base plate · 30 mm (1-3⁄16″) wide · 70 mm (2-3⁄4″) long · 67 mm (2-5⁄8″) high

= 60202 green = 60204 orange

7241 · Color Light Home Signal · Lights change from red to green or green/yellow and track current is controlled by a double solenoid with an additional third solenoid for the green/yellow setting · 2 Additional hand levers · With base plate · 30 mm (1-3⁄16″) wide · 95 mm (3-3⁄4″) long · 90 mm (3-1⁄2″) high

= 60201 red = 60202 green

= 60204 orange

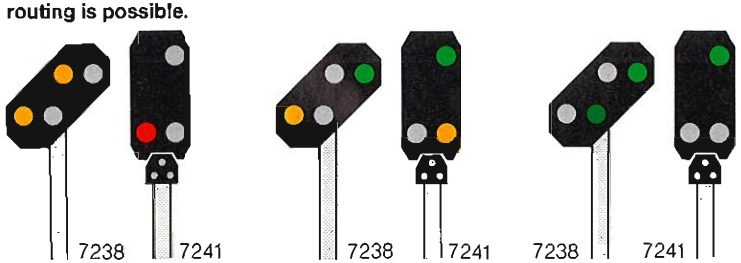
7242 · Block Signal · Lights change from red/red to white/white and track current is controlled by a double solenoid · Additional hand lever · 30 mm (1-3⁄16″) wide · 70 mm (2-3⁄4″) long · 18 mm (1⁄16″) high

= 60200

7245 · Universal Relay · With 2 single-pole switches and one double pole switch for different circuits · Can be used to operate 3 functions simultaneously · Possible uses described in 0342 and 0361 signal manuals · Double solenoid operation · Can be activated with a circuit track, control box or with the hand lever · 30 mm (1-1⁄8″) wide · 70 mm (2-3⁄4″) long · 8 mm (5⁄16″) high

7230 · Mounting Bracket · For mounting the masts of the 7238, 7239, 7240, 7241 signals and the 7242 block signal separately from their solenoid mechanisms

Used at or near stations where diversion or direct routing is possible.

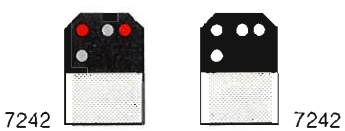


7238 7241 — Distant Signal: Prepare to stop; Home Signal: Stop

7238 7241 — Distant Signal: Prepare to slow down; Home Signal: Proceed slowly

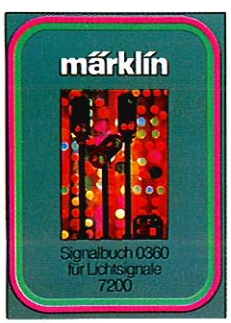
7238 7241 — Distant Signal: Prepare to proceed at speed; Home Signal: Proceed at speed

Usually used in terminal or yard areas.



7242 — Block Signal: Stop

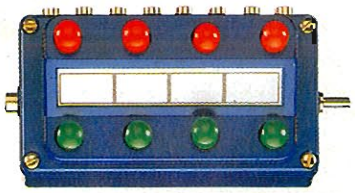
7242 — Proceed

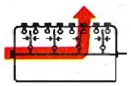


0361 · Märklin Signal Manual for 7200 Series Signals · Detailed explanations with multicolored illustrations showing how to install and use the 7200 series signals and the universal relay with K track · 48 pages · Size 18 × 25 cm (7-1⁄8″ × 9-7⁄8″) · English text

Control Boxes

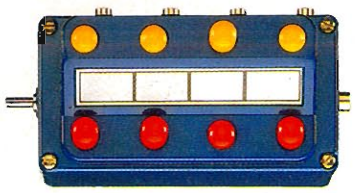
For Remote Control Operation

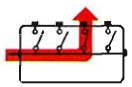




Schematic of 7072
(Control switch 3 closed)

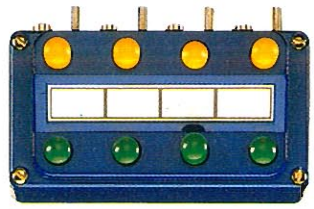
7072 · Control Box · With 8 sockets for connecting 4 double solenoid accessories · Position of the buttons indicates the setting of the signals, turnouts, etc. · 80 mm (3-1/8") long · 40 mm (1-9/16") wide





Schematic of 7210
(Control switch 3 closed)

7210 · Control Box · For dividing a track or accessory circuit into 4 different lines controlled by the pairs of buttons · Example: controlling current to 4 sidings in a track circuit · 80 mm (3-1/8") long · 40 mm (1-9/16") wide



Schematic of 7211
(Control switch 3 closed)

7211 · Control Box · On/off switches for 4 different track or accessory circuits · Example: controlling current to 4 sidings in 4 different track circuits · 80 mm (3-1/8") long · 40 mm (1-9/16") wide

Distribution Strip

7209 · Distribution Strip · With 11 single pole sockets · Size 50 × 20 mm (2-3/4" × 1-1/16")

Plug and Socket Assortment

7130 · Plug and Socket Assortment · 100 pieces (66 plugs and 34 sockets) · Quantities for various colors selected according to average requirements

The Standard Wire Colors of the Märklin HO System

Red = Track current (Transformer to center rail or catenary)

Brown = Ground lead from track or control box to transformer

Yellow = Lights and accessories

Blue = Ground return lead from accessories to the control box or circuit track (with green, red and orange plugs)

Wire

The copper conductor of this flexible wire consists of 24 strands, each .10 mm (.004") in diameter for a total cross section of .19 sq. mm (.096 sq. in.). This is quite sufficient even in the event of a short circuit with a 40 VA transformer.

7100 · Wire · Single conductor · Gray · 10 m (33')
7101 · Wire · Single conductor · Blue · 10 m (33')
7102 · Wire · Single conductor · Brown · 10 m (33')
7103 · Wire · Single conductor · Yellow · 10 m (33')
7105 · Wire · Single conductor · Red · 10 m (33')

Staples

7000 · Staples · Pack of 50 · For securing wires to wooden bases

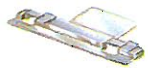
Sockets

7111 · Socket · Brown
7112 · Socket · Yellow
7113 · Socket · Green
7114 · Socket · Orange
7115 · Socket · Red
7117 · Socket · Gray

Plugs with Cross Sockets

7131 · Plug · Brown
7132 · Plug · Yellow
7133 · Plug · Green
7134 · Plug · Orange
7135 · Plug · Red
7137 · Plug · Gray

5022 · Center Rail Insulators · For M track · Insulator is placed between the center rail clips of a track joint to separate track circuits



7522 · Center Rail Insulators · For K track · Insulator is placed between the center rail clips of a track joint to separate track circuits

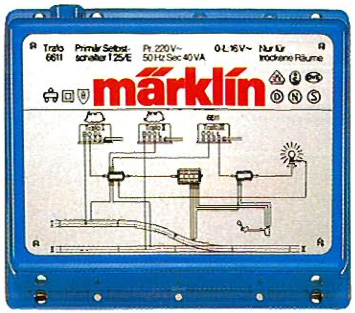
5004 · Center Rail Feeder Wire · For M track · Connects at joints in center rail · Length 750 mm (2' 5-1/2")

7504 · Center Rail Terminal Clip · For K track · Connects at joints in the center rail

7500 · Ground Terminal Clip · For K track · To establish a ground connection

Transformers

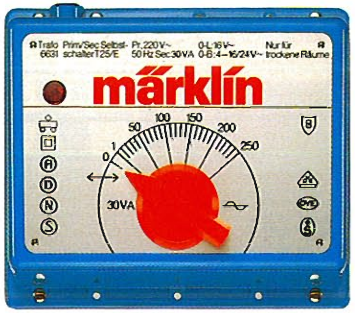
40 VA



6611 220 Volt

Transformer for Lights and Accessories · 40 VA output · Approximately 16 volts AC · Plastic housing · Weight 2.0 kg (4-½ lb.) · Dimensions 158 × 135 × 75 mm (6-½″ × 5-⅜″ × 3″) (Note: Not available in USA · For accessory transformer, use 6001 Digital transformer with 42 VA output)

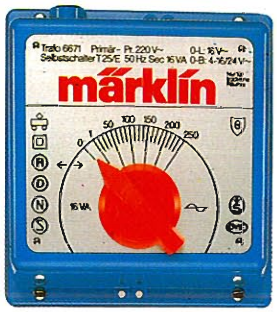
30 VA



6631 220 Volt
6620 100 Volt Japan
6627 110 Volt (60 Hz) USA · UL-tested
6629 240 Volt

Transformer · 30 VA output · Track current adjustable between 4 and 16 volts · 16 volts accessory current · Plastic housing · Red pilot light · Weight 2.1 kg (4-¾ lb) · Dimensions 158 × 135 × 75 mm (6-½″ × 5-⅜″ × 3″)

16 VA



6671 220 Volt
6660 100 Volt Japan
6667 110 Volt (60 Hz) USA · UL-tested
6669 240 Volt

Transformer · 16 VA output · Track current adjustable from 4 to 16 volts · 16 volts accessory current · Plastic housing · Weight 1.2 kg (2-½ lb) · Dimensions 125 × 135 × 75 mm (5″ × 5-⅜″ × 3″)

Safety Tested

Märklin transformers are safe because they have insulation which has been tested to withstand several thousand volts. Also, built-in circuit breakers are included to automatically cut off power when short circuits occur or when the transformer becomes overloaded. A standard wire and plug connects the transformer to house current.

Märklin transformers – Safety tested around the world.

We guarantee trouble free operation of Märklin trains only when used with original Märklin transformers. The transformers must be protected from dampness and are not designed for outdoor operation. Connect only to AC outlets.

Power Consumption of Locomotives and Lights

The output given on the transformer (in VA (watts)) stands for the power available to all users in the circuit. Some examples of calculations:

With a load smaller locomotives (ex.: 3000 tank locomotive) need approximately 9 VA, larger locomotives (ex. 3021 diesel locomotive, 3357 electric locomotive) need about 12 VA. The power consumption for train lighting is determined by the number of light bulbs installed in the cars and is usually less than 2 VA per car.

The wattage left over in the transformer after deducting for the power needed in the track can be used for accessories. For this light bulbs need between 0.5 and 1 VA (see the table "Light Bulbs for Accessories") and turnout and signal mechanisms require about 6 VA at the moment of activation. Additional electric accessories should be connected to an additional accessory transformer.
(Note: 1 VA = 1 watt)

A layout is divided into several track circuits when several trains are to be run independently of each other in conventional operation. Each circuit has its own transformer and at least one feeder track, and is easily separated electrically from the other track circuits by using a third rail insulator (5022 or 7522). The rails have the same electrical potential in the entire Märklin H0 system and do not need to be interrupted.

Track circuits can be closed routes such as most main lines, but they can also be other track segments with independent operation such as branch lines, station areas, storage sidings, switch yards or maintenance facilities. There is thus the possibility of simultaneously operating individual locomotives and fully automatic main lines.

As a rule the catenary for electrified routes is connected as an additional circuit to its own transformer. In this way locomotives used in catenary operation can even be controlled independently of those powered through the track. Several catenary circuits can be separated using the 7022 insulating catenary wire.

The **0380** book "Die Modelleisenbahn Märklin und ihr großes Vorbild" (German text only) gives a great deal of interesting information about electrical operation on Märklin H0 layouts and tips for hooking up track circuits.

Multi-Train Operation with Separate Track Circuits


DB
55 3345
DB Frankfurt/M
Bw Gießen
Gew. Lok u. Tender 108 t
P 77 t
Br Gew. G 65 t
Wasser 16,5m³
Kohle 7t
Letzte Br 2 Rh 14.64
Gestängebauart: Ie 1918
WM 10
ICE
DB
SOO LINE
Western
W.P.
20315

Everything is digital

Digital Information

märklin digital

What is Digital?

Märklin Digital is a universal, electronic control system for model railroads of different gauges, scales, systems and makes.

By using the most modern micro-processor technology, Märklin Digital is quite easy to hook up and use. Existing layouts can be converted to this electronic control system at any time and in gradual steps. It is even possible to hook the system up to a computer and control it there.

Märklin Digital requires very little wiring, because a central control panel is used along with a single track circuit to carry out a variety of operating, switching and functional possibilities simultaneously on a digitally converted layout. They can be called up or switched on / off at the press of a button.

Since 1985 Märklin Digital has been introduced and expanded in the marketplace step by step. Beginning in 1988, new electronic components introduced into the Digital program will make Märklin Digital the universal, digital control system for model railroads of various gauges, scales, systems and makes.

märklin digital H0

Switching Digitally

Up to 256 solenoid accessories – turnouts, signals, uncoupler tracks, turntables, transfer tables, cranes or lighting circuits – can be switched on a layout from the digital control panel. Only two wires connecting the switching decoders and the control panel are necessary to provide power and transmit switching commands.

Up to four solenoid accessories can be hooked up to each switching decoder. There are two decoders available for digital switching on Märklin H0 layouts. The k 83 decoder activates momentary contacts for switching turnouts, signals and uncoupler tracks; the k 84 decoder activates continuous contacts for operating turntables, transfer tables, cranes or lighting circuits.

Each digital control box (Keyboard) can be used to switch up to 16 solenoid accessories easily with the press of a button. Up to 16 Keyboards can be hooked up without additional wiring to the digital Central Unit.

A large quantity of turnouts and signals can be assembled into routes using the digital routing control box (Memory). Up to 24 routes can be switched at the press of button from each unit. Even track diagram control boards can be hooked up to the Digital system. A special decoder is available for track detection / feedback functions.

märklin digital H0

Operating Digitally with DC Motors

The Red Arrow and ICE are Märklin powered units which are equipped with a DC motor. These units can be converted to Digital operation in the same manner as H0 locomotives of other makes which are equipped with a DC motor, but operated on the Märklin AC system.

The c 81 locomotive decoder is designed for the special requirements of these locomotives. It can be installed in all locomotives without any difficulty as long as the necessary space is available or can be created by a Märklin Digital dealer during the installation process.

märklin digital =

Operating and Switching Digitally with 2-Rail DC H0

Until now the delights of digital operation were limited to Märklin H0 model railroads, but now people with 2-rail DC systems can also operate and switch with Märklin Digital.

Märklin Digital offers a complete 2-rail digital control system for H0. The heart of it is the c 82 locomotive decoder which is tailored to the special requirements of DC. This decoder can handle up to 1.5 amps and can be installed in any make of locomotive as long as the necessary space is available or can be created.

Of course there is constant brilliance train lighting at all times with digital operation, regardless of whether the train is in motion or standing in the station.

märklin digital

What Can Digital Do?

Special decoders for digital operation can be installed in conventional locomotives or powered units as long as the required space is available or can be created. This conversion comes with a warranty when done by trained, authorized Märklin Digital dealers. Digitally converted locomotives can also be operated on conventional systems, naturally.

Conventional layouts can be converted to digital operation at any time – in gradual steps, of course. Passenger and freight cars, track, catenary, signals, circuit tracks and mechanical blocks do not have to be changed for operation with the Märklin Digital system.

By turning a speed control knob or pressing buttons, it is easy to do the following from a central location: simultaneously operate a great many trains and locomotives in a prototypical manner, activate auxilliary functions or switch turnouts, signals and entire routes.

With Märklin Digital up to 80 locomotives can be called up independently of each other and operated simultaneously on a layout, and up to 256 turnouts or signals can be switched. In addition, auxiliary functions can be activated on certain models.

märklin digital H0

Operating Digitally

Each Märklin Digital H0 locomotive has an auxiliary function. It allows the option of turning on / off a smoke generator, TELEX couplers or directional headlights. This digital auxiliary function works while the locomotive is in motion as well as when it is standing still.

The Märklin Digital H0 locomotive decoder transforms incoming digital information from the central control panel into commands. The speed and direction of travel for digital locomotives can be changed at any spot on a layout independent of what is a happening elsewhere on the layout.

Of course, all digitally converted models – regardless of whether they are equipped with a decoder at the factory or by a dealer – can be operated on conventional layouts. However, up to 80 locomotives can be called up on a layout independently of each other only in digital operation.

Many Märklin H0 locomotives and powered units are equipped at the factory with a locomotive decoder. These Märklin Digital H0 models are specially marked. As long as they are in good operating condition, conventional Märklin H0 locomotives can retrofitted by Digital dealers with a c 80 decoder for digital operation. With a 12 month warranty.

märklin digital 1

Operating and Switching Digitally with the "New 1"

Digital auxiliary functions allow digital locomotives in the "new 1" to smoke, whistle or produce sound effects at any spot on the layout, because up to five auxiliary functions can be called up by remote control, even when the locomotive is in motion, with each digital Märklin 1 gauge locomotive decoder.

Turnouts, signals and lighting circuits can be hooked up directly to decoders and switched from a central location. This makes long wires unnecessary.

Beginning in the fall, all locomotives in the scale of 1 : 32 will be available from the factory as Märklin Digital 1 locomotives. Existing Märklin 1 scale locomotives can be converted to digital operation with the installation of a decoder, regardless of whether they have one or two motors.

Starting in 1988, the large Märklin 1 gauge railroad will go into the Digital age. Nostalgia and the latest technology will work together to make the exclusive hobby perfect – regardless of whether the "new 1" is operated in the house or outdoors.

märklin digital Z

Operating and Switching Digitally with mini-club

In digital operation with mini-club, conventional locomotives can be controlled just as in conventional operation.

In the mini-club program Märklin Digital Z means that for the first time locomotives are being offered with decoders already installed. These locomotives can also be operated on conventional systems, of course.

Beginning in 1988, the smallest electric railroad system in the world (scale: 1 : 220) can be operated digitally. The new dimension for Märklin Z mini-club is digital, operating trains and switching accessories.

It has come this far: This year model railroaders for all gauges, systems and makes can have digital operation on their layouts.

Most of the digital control components can be used for any make of equipment. They are presented on these two pages.

All components specially designed for Märklin Digital HO can be found on the following two pages.

In addition, there is an overview of Märklin 2-rail DC Digital on subsequent pages.

Transformer

Märklin Digital provides the necessary power for every layout with only one type of transformer. The transformer has an output of 52 VA (42 VA in the USA) and supplies power to the electronic circuits in the digital components as well as all locomotives, turnouts and signals on the layout.

Power requirements during operation:
for locomotives approx. 10 VA
for turnouts, signals approx. 6 VA
for lights bulbs approx. 1 VA
Note: 1 VA = 1 watt

6000 100 Volts Japan
6001 110 Volts (60 Hz) USA · 42 VA · UL tested
6002 220 Volts
6003 240 Volts

Transformer · Transformer for providing power to the Central Unit or Booster · LED pilot light · 2 pairs of terminal clips · 52 VA output (6002) · 16 volts AC · Plastic housing · Weight 1.6 kg (3.52 lb.) · Size 135 x 120 x 80 mm (5-½" x 4-⅞" x 3-½")

Locomotive-Control

With Märklin Digital up to 80 locomotives can be operated independently of each other in a track circuit. Up to 10 Control 80's are hooked up on the right of the Central Unit. Any locomotive can be called up and operated by any Control 80. When another locomotive is called up, the first locomotive called up continues to operate without change. In this way several digital locomotives can be operated with a Control 80. An auxiliary function can be switched on / off with each digital locomotive.

6035 · **Control 80** · Locomotive controller · Access to as many as 80 locomotives · 10 button keyboard for entering the locomotive address · Two-digit indicator display of the address just called up · Emergency halt button to stop all locomotives on the layout immediately · Release button to resume operation · On / off buttons for locomotive auxiliary function · Size 135 x 120 x 80 mm (5-½" x 4-⅞" x 3-½")

Locomotive Control with Functions

The auxiliary function can be turned on and off on the Control 80 and the Control 80 f functions / locomotive controller; in addition, the latter unit has four buttons for other functions. Lighting circuits can be turned on / off in moving or standing trains or motors can be turned on / off, ex. in the 4999 vista dome car. Every function car is called up with a function address on the Control 80 f. The Control 80 f is the same as the Control 80 in all other respects.

N

6036 · **Control 80 f** · Functions / locomotive controller · Access to as many as 80 locomotives and 80 decoder modules for functions · 10 button keyboard for entering the locomotive or function address · Two-digit indicator display of the address just called up · 4 function buttons · On / off buttons for locomotive auxiliary function · Functions' current status indicated by LED's · Emergency halt and release buttons · Hookup and operation same as for Control 80 · Size 135 x 120 x 80 mm (5-½" x 4-⅞" x 3-½")

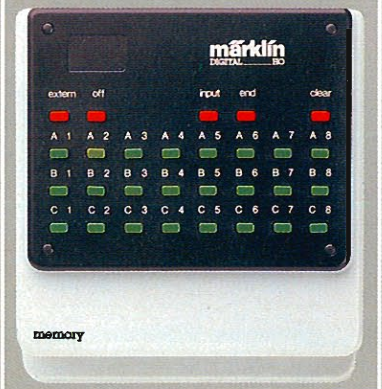
Turnout and Signal Control

Up to 16 turnouts or signals, or as many as 32 uncoupler tracks can be controlled using the Keyboard with its 32 buttons. Up to 16 Keyboards can be plugged into one another so that as many as 256 solenoid accessories can be hooked up to Märklin Digital. The settings for the solenoid accessories are indicated by LED's. The last setting entered for the solenoid accessories remains stored in the Keyboard even after the power to the layout is shut off.

6040 · **Keyboard** · Controller for 16 double solenoid (turnouts, signals) or 32 single solenoid (uncoupler tracks) accessories · LED's indicate the settings for turnouts or signals · Set of 4 coding switches for assigning a specific group of 16 solenoid accessories to this Keyboard · The last LED indications remain stored after the layout is turned off · Size 135 x 120 x 80 mm (5-½" x 4-⅞" x 3-½")

Route Control

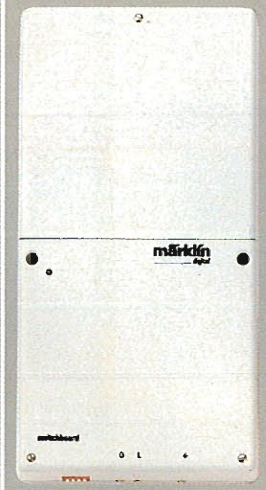
In prototype railroad operations the same combinations of turnouts and signals (routes) are often set in order that a train may enter a station. On the Memory this entire route can be switched with the press of a button. Automatic block operation and staging yard control are also possible. All routes can also be activated using a circuit track on the layout.



6043 · Memory · Route controller · Stores in each of 24 routes the settings for up to 20 turnouts and signals · A maximum of 4 Memories can be hooked up to a Central Unit · Routes can be entered using a Keyboard, Switchboard or Interface · Direct callup using buttons or track detection contacts · LED's indicate valid routes · Socket for hooking up s 88 track detection module · Routes remain stored after the layout is turned off · Size 135 x 120 x 80 mm (5-½" x 4-⅞" x 3-½")

Track Diagram Control Board Hookup

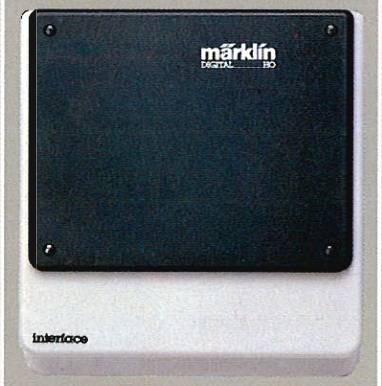
The commands for controlling a route can not only be given by pressing a button on a Keyboard or Memory. They can also be done from most of the track diagram control boards available at most hobby shops and train specialty shops, when these boards are connected to the Märklin Digital system using the Switchboard. The Switchboard has been kept very flat for installation in the base of the track diagram board. It is hooked up to the digital control panel with a flexible adapter cable.



6041 · Switchboard · Digital link to track diagram control boards · Keyboard functions are transferred to the track diagram control board · 16 five-position sockets for turnouts, signals and illuminated indicators · Can be hooked to other Digital units with Adapter 60 or 180 cable · Set of 4 coding switches for assigning a specific group of 16 solenoid accessories to this Switchboard · Settings shown on the track diagram control board remain stored after the layout is shut off · Size 210 x 110 x 32 mm (8-¼" x 4-5⁄16" x 1-¼")

Computer Hookup

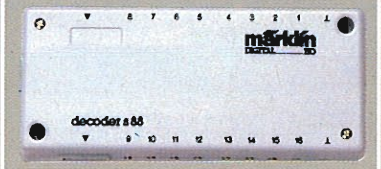
The Interface links a computer with the digital layout. The serial interface connections enable the programming of any type of possible operating schedule on almost all the available computer systems. Using the s 88 track detection module, information can be read into the computer directly from the layout. The Märklin Service Department has developed diskettes with sample programs as well as connecting cables for the more popular makes of computers. These diskettes and cables are available at your Märklin Digital dealer.



6050 · Interface · For connecting with a computer · Serial interface connection RS 232 C (V.24), can be switched to TTL level · Positive or negative logic can be used · Socket for connecting to computer · Socket for connecting to s 88 decoder · Size 135 x 120 x 80 mm (5-½" x 4-⅞" x 3-½")

Feedback Signals from the Layout

With prototypical model railroad operation there must be the possibility of receiving information from the layout, evaluating it and transferring it into new activities. The s 88 track detection module receives the signals from all contacts which switch to ground, ie. from circuit tracks, reed contacts or contact tracks, and conducts them to the Memory or Interface. Here the information is stored and transferred into new commands on demand.



6088 · Decoder s 88 · Track detection module for signal-generating contacts on digital model railroad layouts · For use in conjunction with the Memory or with the Interface and a computer · Special cable for connections to the Memory or Interface · Socket for connecting additional s 88 decoders · 16 sockets for contact connections · Size 23 x 54 x 124 mm (1" x 2-¼" x 5")

Operating and Switching from More Than One Position

If a digital model railroad is to be operated by several people, it is best when the digital components are not plugged directly into one another, but rather placed around the layout. Digital components can be placed 60 cm (23-½") or 180 cm (71") apart with the Adapter 60 or 180. On larger layouts it is necessary to distribute the s 88 under the layout. They can be placed 200 cm (78-¾") apart with the Adapter s 88.

6038 · Adapter 180 · Extension cable for remote installations of Control 80, Keyboard or Memory units · Flat ribbon cable with 2 multi-pin connectors for the side sockets on Digital components · Length 180 cm (71")

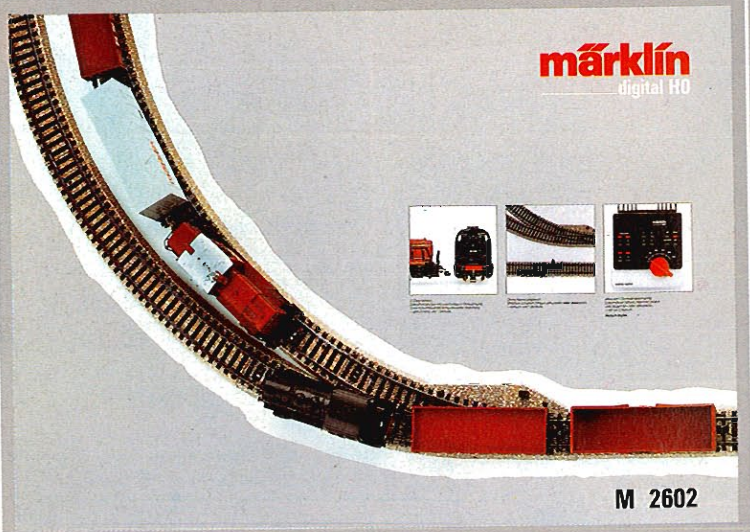
6039 · Adapter 60 · Extension cable for remote installations of Control 80, Keyboard or Memory units · Flat ribbon cable with 2 multi-pin connectors for the side sockets on Digital components · Length 60 cm (23-½")

6089 · Adapter s 88 · Extension cable for use between several s 88 track detection modules, Memory or Interface · Flat ribbon cable with multi-pin connectors · Length 200 cm (78-¾")

The Playful Start

With a digital set for "beginners", Märklin proves that high technology is not just for adults. In addition to the two locomotives, the Central Control is the heart of the set. This special control component for four locomotives and four solenoid accessories unites the elements of a Central Unit with those of the Control 80 and the Keyboard.

The sturdy M track can be used to set up numerous track layouts on which "simply digital" playing is possible. The layout is supplemented by two turnouts as well as an uncoupler track which already have permanently built-in decoders. Of course, the contents of this set can be expanded to a complete digital control system by plugging in additional components.



2601 110 Volts (60 Hz)
2602 220 Volts
Digital Starter Set · 2 Freight Trains with Large M Track Layout and Transformer · Contents: class 260 diesel hydraulic switch engine with TELEX couplers, class 89 tank locomotive with headlights, 2 low side gondolas, 1 gondola, 1 container car, 14 sections 5100 curved track, 4 sections 5106 straight track, 1 section 5107 straight track, 1 section 5111 feeder track, 1 each 5112 uncoupler track with built-in decoder, 1 pair 5140 electric turnouts with built-in decoders, 6 sections 5200 curved track, wire, plugs and freight loads, Digital information booklet, 1 Central Control (combining Keyboard, Central Unit and Control 80 functions) for operating 4 solenoid accessories and 4 Digital locomotives with an auxiliary function and fixed addresses · 1 each 52 VA (42 VA in the USA) transformer · All standard Digital control components can be connected to the Central Control for expansion · Decoder is already built into the turnouts and uncoupler track · Set can be expanded with the entire M track program.

The Central Control in the starter set is not available separately.

Digital Book

The ideal aid for beginners and digital pros. The Digital system is explained in detail in 160 pages. Numerous tricks and sample wiring circuits offer useful information for everyone towards understanding and setting up Märklin Digital layouts.

0303 · Digital Book · All components of the Märklin Digital system · How does Digital work? · From the decoder panel to the central unit to the track detection unit · Directions for using a computer with the Digital system · Possible prototypical applications of the Digital system, such as: signal block and staging yard operation · Examples of circuits and control systems for model railroad equipment of different gauges and manufacturers · English text

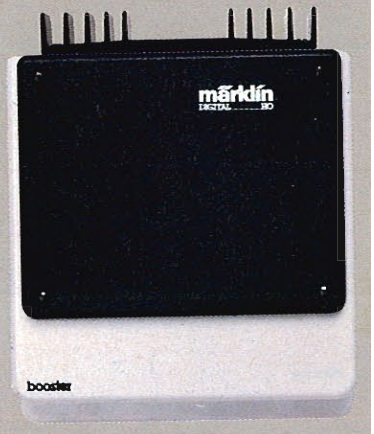
Central Control Panel Electronics

The Central Unit is the "brain" of Märklin Digital. The entire layout is supplied with information and power from it. Individual decoders in locomotives and solenoid accessories evaluate the control information from the Central Unit. The other digital components such as the Control 80, Control 80 f, Interface, Keyboard, Memory or Switchboard are connected either directly on the right or left side of the Central Unit or with special cables.

6020 · Central Unit · Uses 2 wires to supply the layout with power and control commands · Two pairs of terminal clips for connections to the transformer and track · 1 socket for connecting the Booster · LED pilot light · Size 135 x 120 x 80 mm (5-½" x 4-⅞" x 3-½")

Output Booster

The Booster is used on larger layouts with greater power requirements. The entire layout is divided into different power consumption areas. A transformer and a Booster provide power as well as information in each of these areas. In principle any Märklin transformer with 16 volts AC and at least 30 VA can be used to provide power on digital layouts.



6015 · Booster · Signal booster for large digitally controlled layouts · Maximum output current of 2.5 amps · LED pilot light · Two pairs of terminal clips for connections to the transformer and track · 2 sockets for connecting the Central Unit and another Booster · Size 135 x 120 x 80 mm (5-½" x 4-⅞" x 3-½")

Digital Functions car

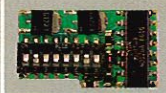
Starting now all that is needed is the press of a button and a waiter serves meals and drinks at each table in the dome area. This is possible for the first time in the digital vista dome car in conjunction with the Control 80 f functions / locomotive controller. The first digital functions car in which several functions are possible such as switching the ceiling or even the table lights on and off, either when the train is moving or stopped in the station.

N

4999 · Digital Vista Dome Car with Functions · ADm 101 of the Swiss travel agency Mittelthurgau, used on the German Federal Railroad · 1st class · Interior details with figures · Automatic couplers · Length 27 cm (10-5/8") · Built-in function decoder for 4 remote controlled functions · Functions operated with the Control 80 f

Locomotive Decoder for AC / DC Motors

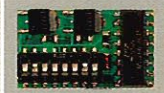
The c 80 decoder fulfills several tasks. It controlls the speed as well as the direction for a locomotive. In addition, it recognizes all information intended for it. Moreover, it has a set of coding switches with which its individual address can be set. This address can be changed at any time. Your Digital dealer can convert your Märklin locomotive to a digital locomotive. It is a prerequisite that the locomotive be in good operating condition.



6080 · c 80 Decoder · Locomotive decoder for converting conventional Märklin H0 locomotives with AC/DC motors to digital locomotives · Replaces conventional reverse unit · Set of coding switches for setting the locomotive's address · Connection for remote controlled auxiliary function · Guaranteed only when installed by authorized Digital dealer · Size 36 x 21 x 9 mm (1-7/8" x 13/16" x 3/8")

Locomotive Decoder for DC Motors

The Red Arrow and ICE are examples of Märklin powered units equipped with a DC motor. Locomotives are offered by other manufacturers with DC motors which operate on Märklin track. The c 81 decoder was developed to enable the conversion of these units to Digital. It can be installed in the locomotives described above as long as there is sufficient space or as long as space can be created. The locomotive must also be in good operating condition.



6081 · c 81 Decoder · Locomotive decoder for converting H0 locomotives with DC motors operated on 3-rail AC systems · Replaces conventional reverse unit · Set of coding switches for setting the locomotive's address · Connection for remote controlled auxiliary function · Guaranteed only when installed by authorized Digital dealer · Size 36 x 21 x 9 mm (1-7/8" 13/16" x 3/8")

Turnout and Signal Decoder

The k 83 decoder (decoder unit for turnouts and signals) transmits the digital switching commands to 4 turnouts or signals on your layout. It is mounted close to the accessories it controls either above or below the layout base board. It receives its switching commands from a Keyboard, Switchboard, Memory or Interface with a computer. Each k 83 decoder is set for a particular accessory group by means of a set of coding switches.

6083 · k 83 Decoder · Decoder panel for turnouts, signals or uncoupler tracks on Märklin Digital layouts · For 4 double or 8 single solenoid accessories · 4 triple sockets for accessories · 2 pairs of sockets for connecting to the Central Unit, the track or as the link to other k 83 or k 84 decoders · Coding switches which can be set for any of a number of possible addresses · 2 resistors included for signals · Size 22 x 54 x 100 mm (1" x 2" x 4")

Decoder with Continuous Contact

Often the plans call for digital switching of not only turnouts and signals, but also lighting circuits, turntables, cranes or other electric accessories. The k 84 decoder, like the k 83 decoder, can be mounted under the layout and transmits the commands for motors as well as on/off commands for the electromagnet on the Märklin 7051 crane, for example. The switching commands are entered at a Keyboard, Memory, through a Switchboard or an Interface and computer.

6084 · k 84 Decoder · Decoder panel with continuous contacts for switching lighting circuits, motors and other electric accessories on a Märklin digital layout · 4 triple sockets with potential-free relays · 2 pairs of sockets for connecting to the Central Unit, the track or as the link to other k 84 or k 83 decoders · Coding switches which can be set for any of a number of possible addresses · 2 wood screws included for mounting the decoder · Size 22 x 54 x 100 mm (1" x 2" x 4")

The Central Control Panel

The Central Unit= is the "brain" of Märklin two-rail Digital. The entire layout is supplied with information and power from it. The other digital components are plugged in on the right and left of the Central Unit=. An analog (conventional) locomotive can also be controlled on the Digital system with the address 80 on the Control 80. The direction of travel in which each locomotive is traveling is stored when the layout is turned off.

6027 · Central Unit= · Central Unit for the operation of two-rail layouts · Uses 2 wires to supply the layout with power and control commands · Three pairs of terminal clips for connections to the transformer, 1 and H0 track (16 volts), Z track (10 volts) · 1 socket for connecting the Booster · Maximum output current 2.5 amps · LED pilot light · Reset button · Slider switch for turning off the analog address 80 · Direction storage for all locomotives on the track · Size 135 x 120 x 80 mm (5-½" x 4-⅞" x 3-½")

Coding Electronically

The locomotive decoder in two-rail DC Digital is electronically coded, since locomotives for all of the gauges and systems which are converted to Märklin two-rail Digital do not have space for the coding switches normally found in the c 80 and c 81 decoders. This coding process takes place in a flash with the Programmer without the need to open the locomotive. It is also very easy to obtain a readout of the current locomotive address.

6032 · Programmer · Programmer and reader for DC decoders in 1 gauge, H0 two-rail DC and Z · Desired address coded by entering the address at the Control 80 or Control 80 f · Two-digit display of the successful coding · Search button for the readout of a locomotive address (also possible with the c 80 and c 81 decoders) · Size 135 x 120 x 80 mm (5-½" x 4-⅞" x 3-½")

märklin digital 1

In 1988 the Märklin 1, the largest of our railroad systems, enters the Digital age. Digital operating or switching, it is possible starting in the fall.

Märklin Digital 1 now brings two main advantages:

1. Damage to wiring from rodents is extremely high with outdoor operation. With Märklin Digital 1 you can operate the trains conventionally but switch digitally through the track. By using a Mixer (6017) and the k 86 (6086) turnout decoder (equipped for 2 switching mechanisms), you achieve trouble-free operation, even outdoors and with long routes.

2. Switching and operating digitally. Here the Mixer brings increased output to the track so that several locomotives can be operated on a single track circuit. There are two locomotive decoders available, the 6085 decoder for all single motor locomotives and the 86085 decoder for all double motor locomotives. Both of the decoders have five auxiliary functions so that you can have sound effects anywhere on the layout by remote control using the Control 80 f.

märklin digital Z

In 1986 we showed the first possibilities for digital conversion of the smallest railroad system in the world; it is now ready. The mini-club can be operated digitally with an extremely miniaturized locomotive decoder. No trailing car with a built-in decoder is necessary in order to roll on into the digital future with the new "Mikado", the Chiemgau Railroad or the Orient Express. Of course, digital locomotives also operate on a conventional system.

This year locomotives equipped at the factory for digital operation will be offered. This program will be expanded in the coming years. For the foreseeable future, however, it will not be technically feasible to develop a decoder so small that it will fit in any locomotive. But with Märklin Digital Z you can control an analog (conventional) locomotive on the Digital system by selecting the address 80 on the Control 80.

Switching (accessories) and simultaneous operation on a digital system is possible with the Central Unit=, digital locomotives and the k 87= turnout decoder (6087). If you are planning only to control turnouts digitally, then you can set this up with the Central Unit and the k 83 and k 84 turnouts. Digital train operation (in Z scale) with the Central Unit (6020) is not possible.

märklin digital =

With the digital entry into the area of two-rail DC H0, Märklin is setting a milestone on the way to a universal form of model railroad control that embraces all systems and gauges.

The c 82 locomotive decoder (6082) can be installed in locomotives of any make, as long as there is sufficient space or as long as space can be created. Of course, the locomotive must be in good operating condition. Digital locomotives can operate on conventional track circuits as well as on the Digital system. Control of locomotives is always dependent on the locomotive in question, hence there is no problem in making a transition between the systems. If the conventional area has the correct polarity, the locomotive will continue to operate. If the polarity is wrong, the locomotive will gradually stop and can then be operated from a conventional transformer. With a prototypical, permanently built-in, delayed acceleration circuit, a train will slowly gain speed after stopping at a signal. Turnouts and signals are switched with the k 87= decoder (6087). It is set up for 4 double solenoid turnout or signal mechanisms.

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