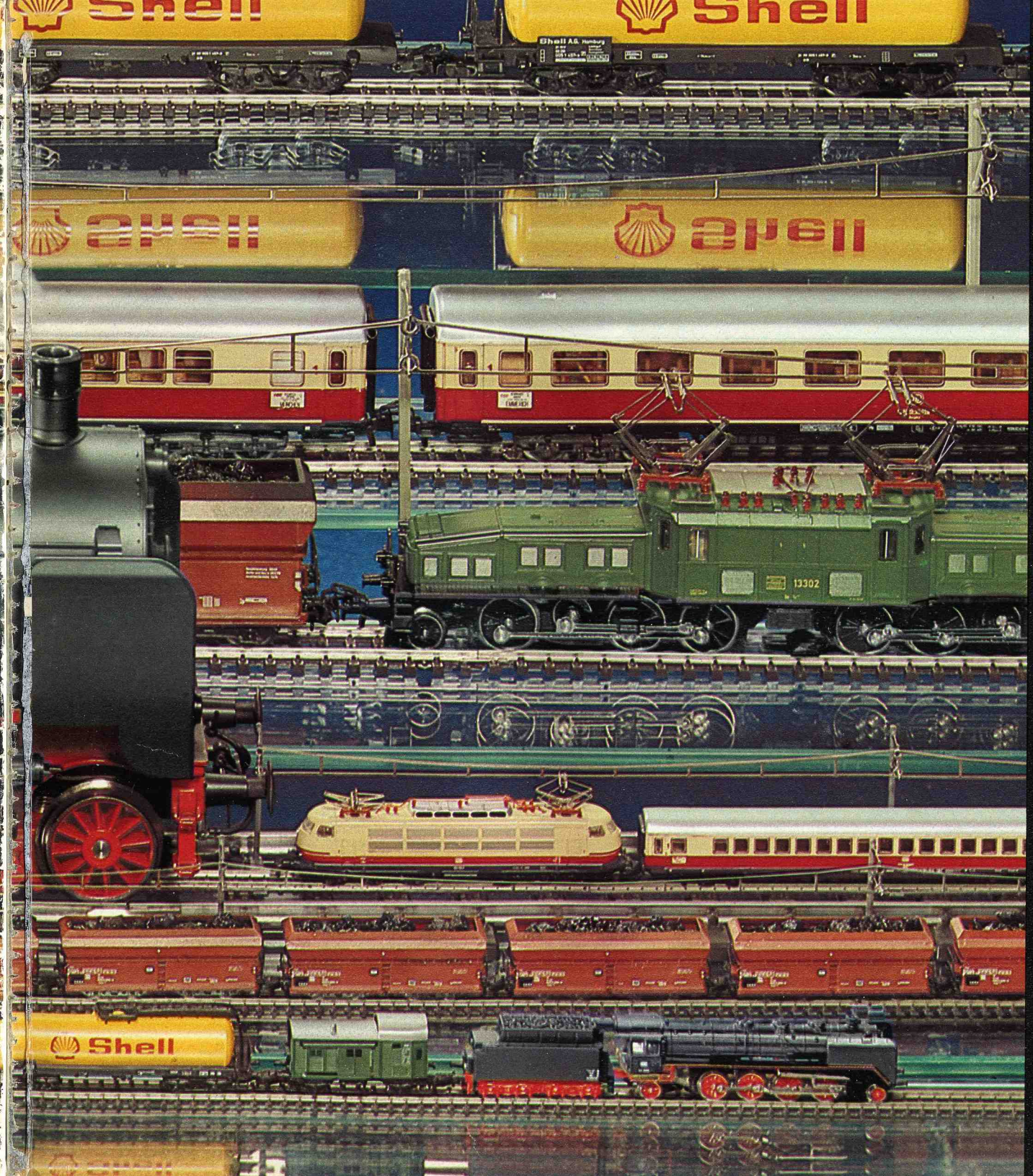
1979 E


DB
38.1803
BD Wuppertal
BwWt-Langerfeld
Shell
Shell
Shell
Shell

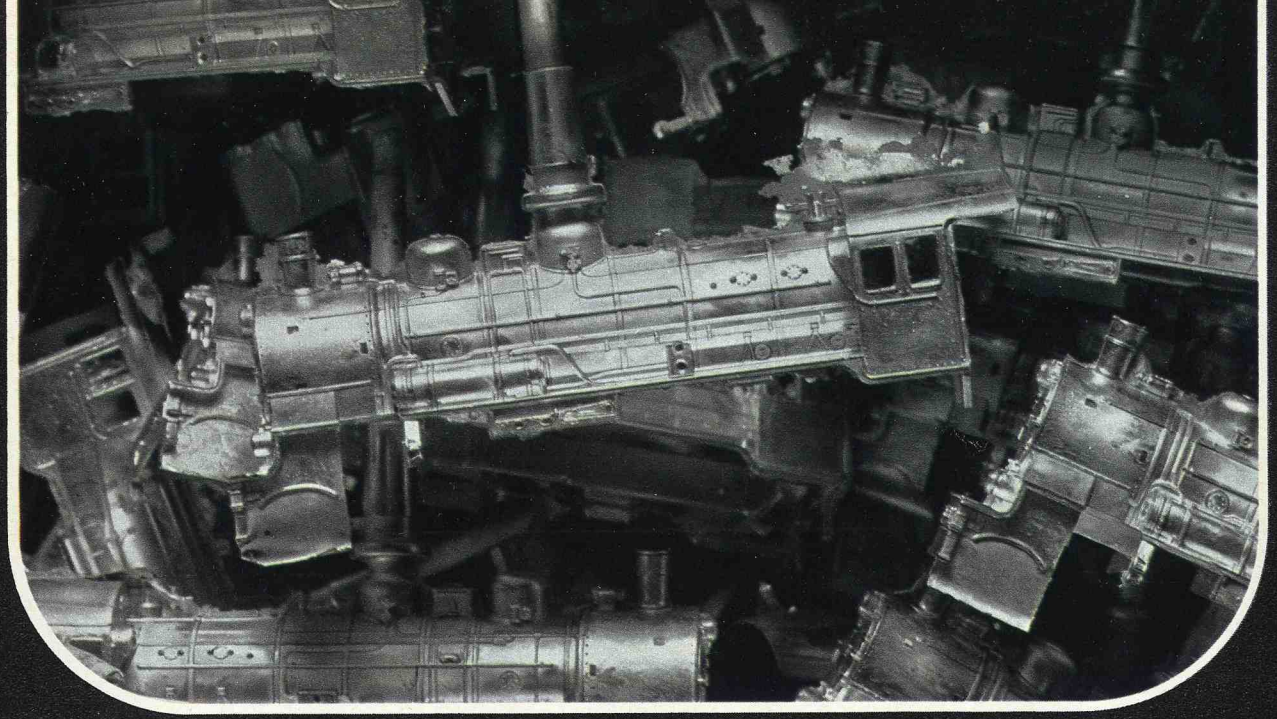


Märklin in 3 gauges

1. **Märklin mini-club**
   the smallest electric railway in the world with a track gauge of 6.5 mm (1/4"), designated Z gauge. Efficient, unique, attractive and compact.

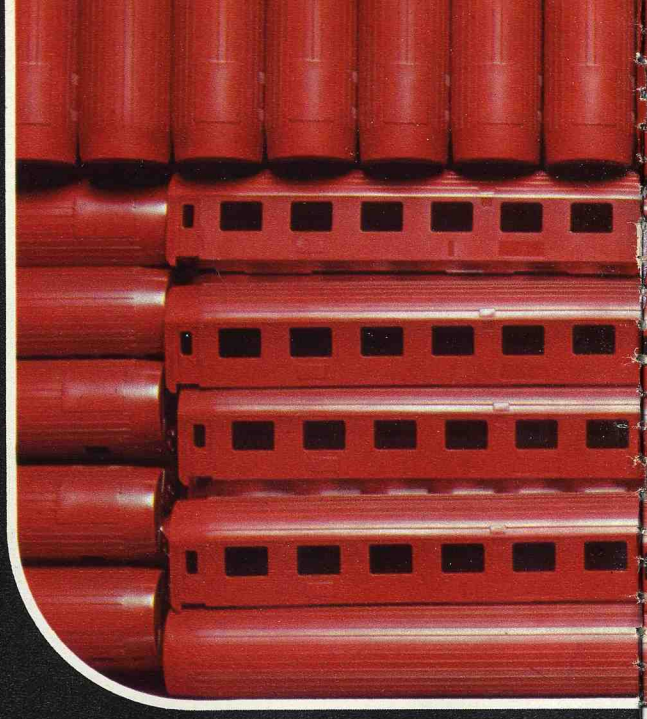
2. **Märklin HO**
   sets the pace for model railroads with its wide scope and with its Märklin center conductor technique. The ideal gauge for handy-sized railroad operation.

3. **Märklin I**
   large scale model railroad for use in or out of doors. They are particularly good fun for children and are amazingly realistic.



"Metal miracles"

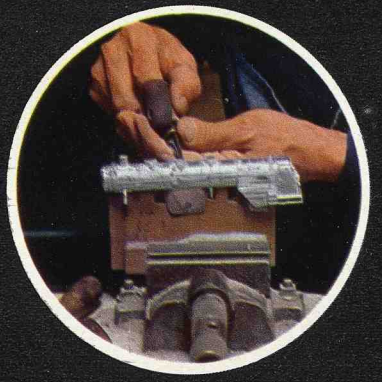
The illustration shows die cast zinc locomotive moldings before being machined.
We work miracles with ordinary metal. This is what guarantees the continued superiority of Märklin products. To date we have manufactured more than 17 million locomotives.



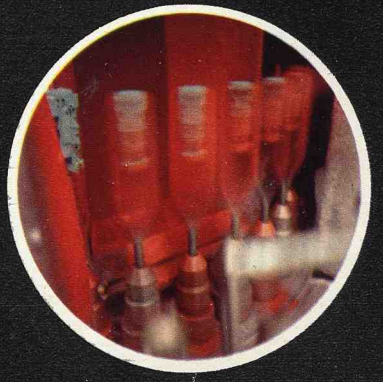
A lot of trains

Märklin – quality and progress

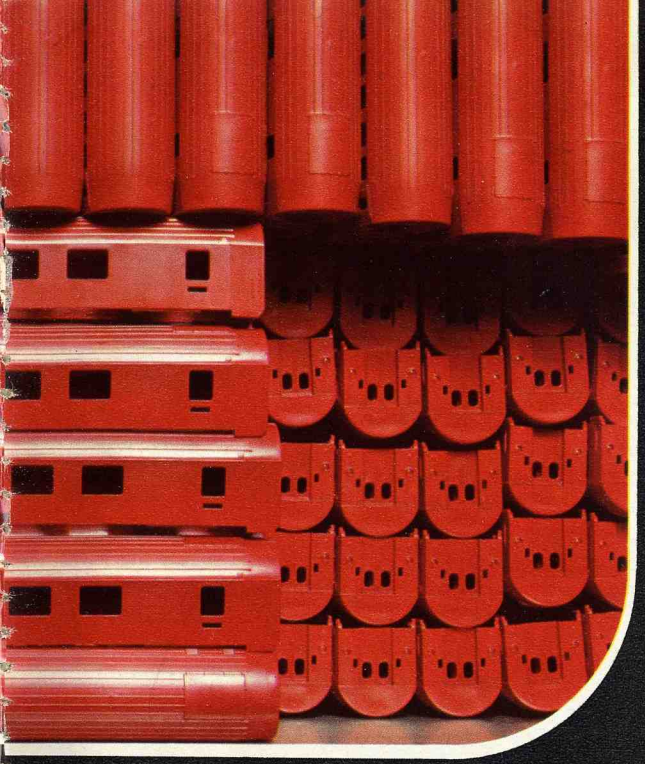
Removing burrs from a die cast zinc molding



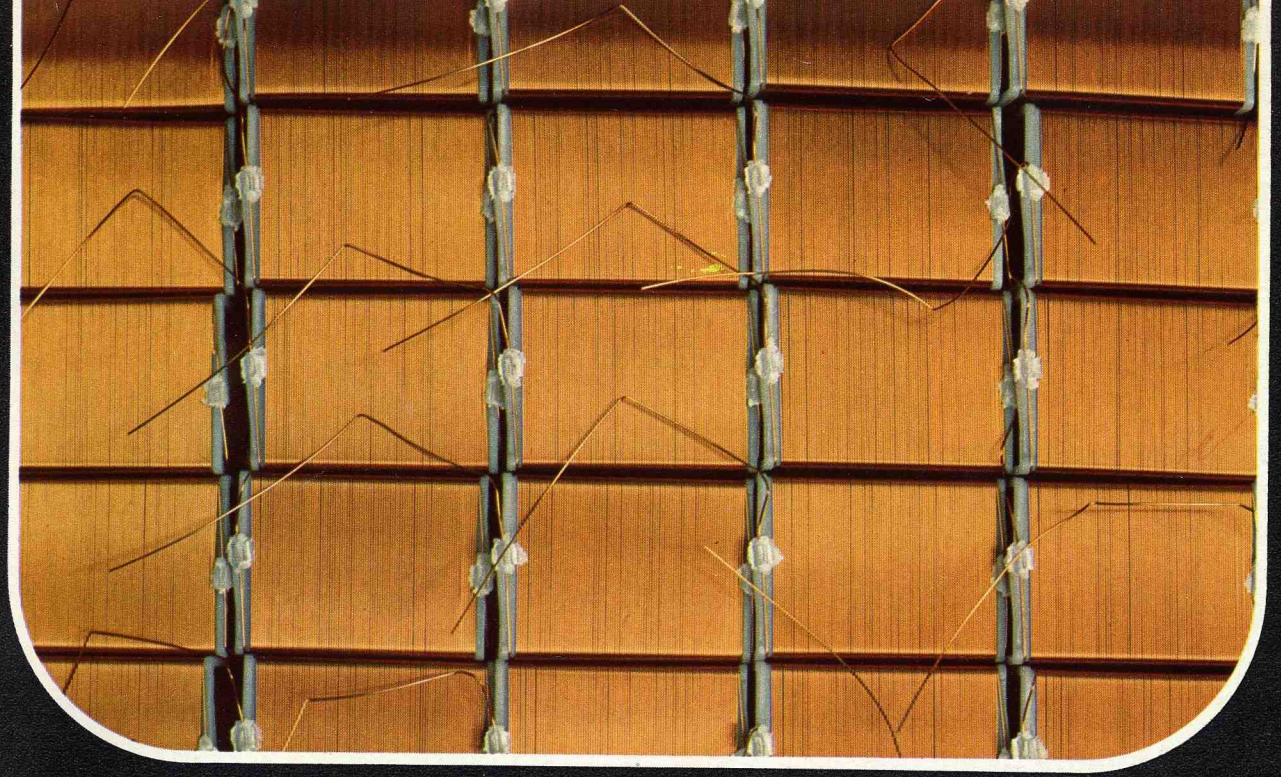
Spray painting all round under automatic control



Assembling the Heusinger reversing gear



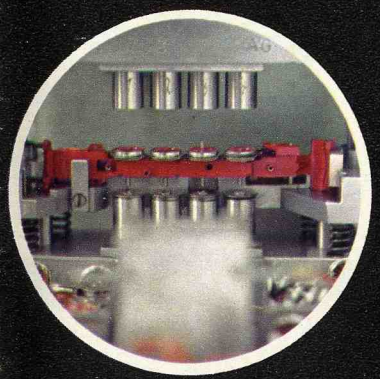
This is what moldings of railroad cars look like, made of special synthetic material, before further processing faithfully adds the accurate details. So far we have produced more than 50 million passenger and freight cars. Märklin cars are in use in many countries, and they take first place on any model railroad track.



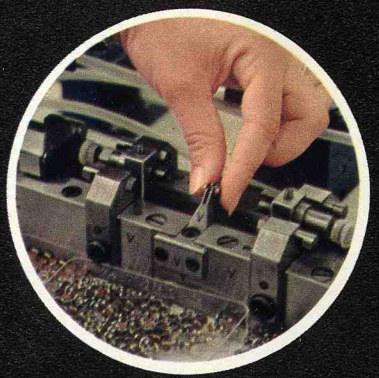
Cable message

Here you see copper wire coils before they are assembled in Märklin transformers.
Our electric technology is live wire stuff. We have produced more than 5 million kilometers of wire – enough to run 14 leads to the moon. We regard keeping in touch with Märklin owners as a particularly important line of communication.

Assembling a locomotive frame



Fitting wheels to an axle



The paint finish of a locomotive body

Endurance tests and final check-out

Contents

märklin

Gebr. Märklin & Cie. GmbH
Postfach 8 60/8 80
D-7320 Göppingen

Trade mark

It is not possible to supply private customers directly from the factory. We reserve the right to make alterations, and availability of stock is not guaranteed. Accuracy of quoted dimensions not guaranteed. – This catalog supersedes all previous issues.

150 10 – MTa 06 79 th

1979 E

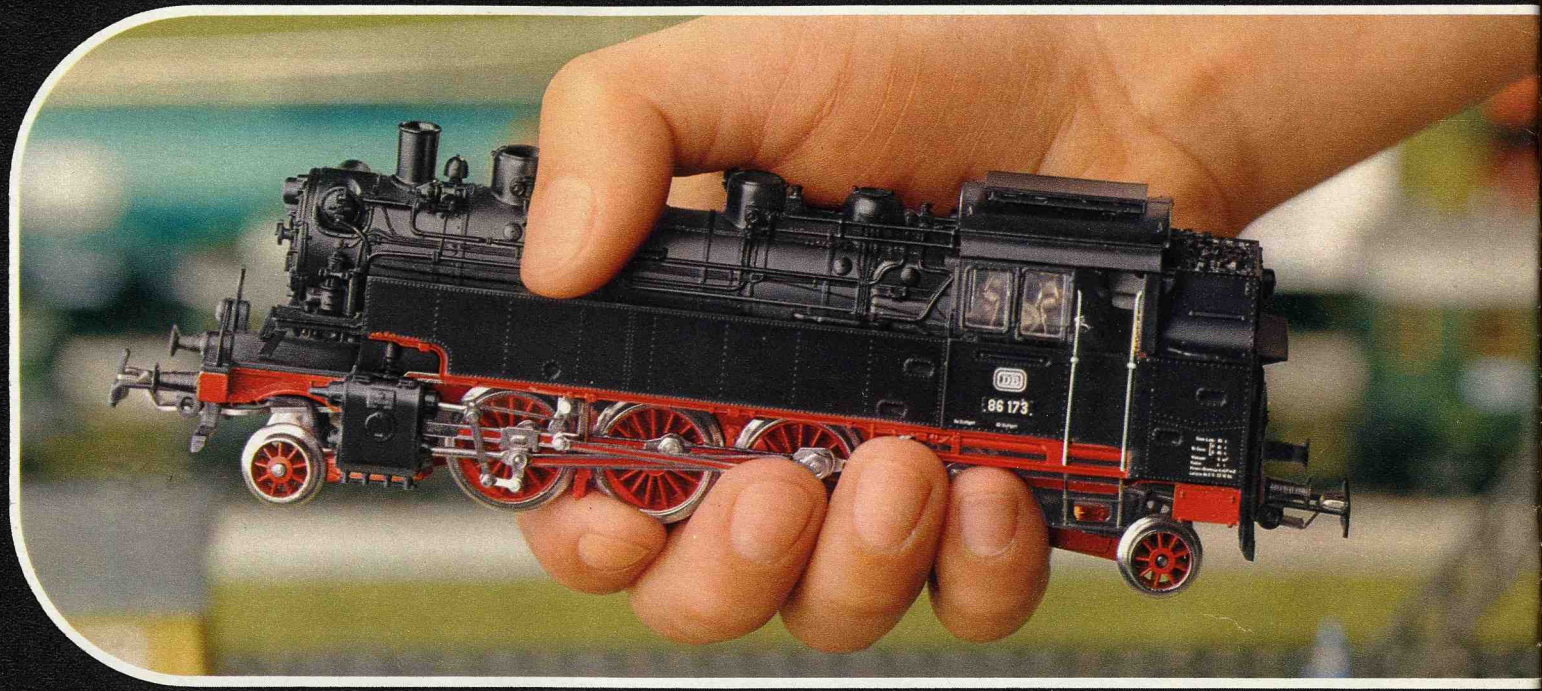
märklin HO

Märklin HO – a railroad of your own

Märklin HO – 1:87 scale model railroad

Why do so many railroad enthusiasts choose Märklin HO? Because they appreciate its precision manufacture, its accuracy of detailed scale modeling, its reliability, its handy size, its robustness and its integrity.

Märklin HO models will stand up to vigorous handling. Yet with all their robustness they are masterpieces of beautiful scale modeling of real life railroad vehicles.



Märklin HO – the trouble-free contact stud system

Capture the real railroad atmosphere

Anyone who has seen a Märklin HO railroad operating understands its appeal, with its powerful locomotives, the sound of the trains on the tracks and the unmistakable railroad atmosphere which HO gauge provides.

Limitless scope and trouble-free growth

The scope and variety of the Märklin HO System are such that growth of layouts and requirements can be almost unlimited.

Short of space?

Interesting Märklin HO layouts do not have to take up a lot of room. A little planning can achieve much: layouts can be built along walls, in corners, on three levels, or just on a shelf. A double track only occupies a width of 15 cm (6″).

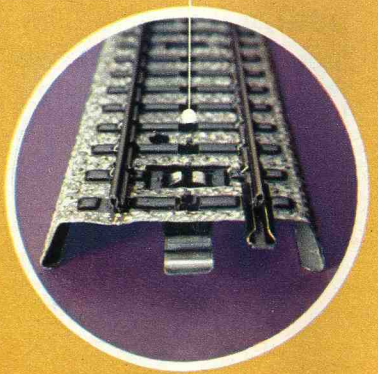
Technological standard?

Märklin HO is the only railroad with the center track stud contact system, which ensures such reliable locomotive operation.

Märklin HO – easy to use

The unique Märklin stud contact system

Traction current is supplied to motors via stud contacts and pick-up shoes. The shoe is always in contact with several studs, ensuring current supply by several routes. The current return path is also duplicated, as it uses both rails of the track. This makes for simple assembly and reliable operation.



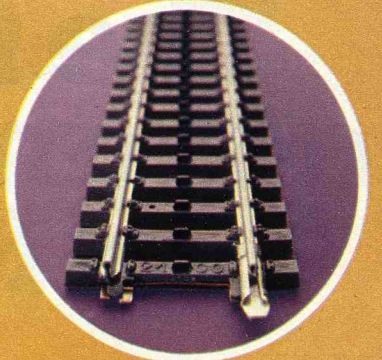
The robust M-track with metal track body

Simple for beginners – suits experienced operators too

Märklin HO does not demand previous technical knowledge. Rapid progress is possible.

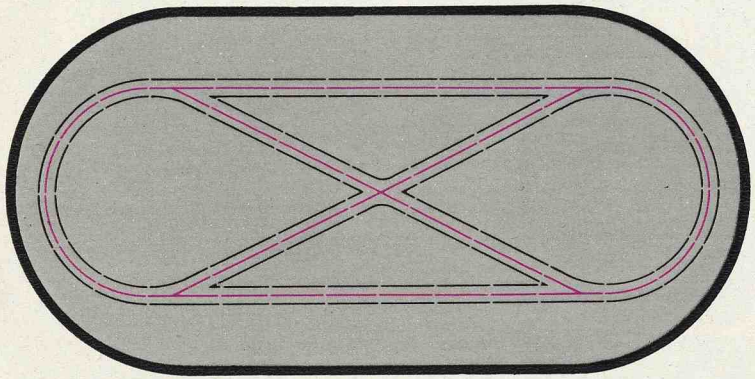
The reliable current path ensures trouble free operation on the most complex of layouts. For large layouts with underground tracks and stations this reliability is essential.

The true-to-life K-track with plastic cross-ties



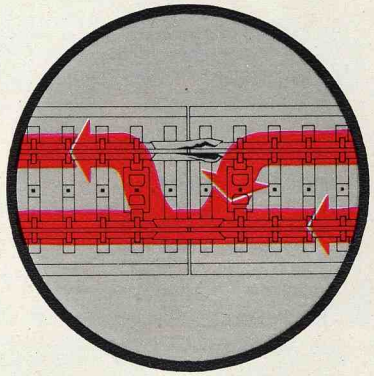
Märklin HO – a comprehensive system

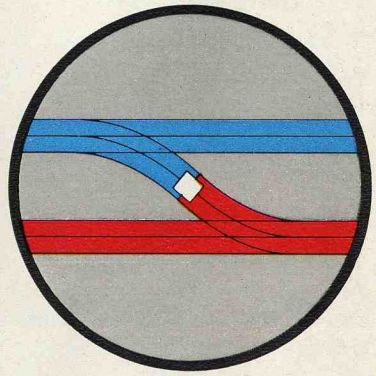
This catalog demonstrates the width of the Märklin range with its good balance of models, and accessories ranging from the rotating crane to the transfer table.



Simple circuitry

All kinds of track configurations are possible, including reversing loops, and complex electrical circuitry is not required.





The important advantages of Märklin

Reliable current path,

because even if one of the two rail joint clips should get distorted the other one will still ensure a perfect connection.

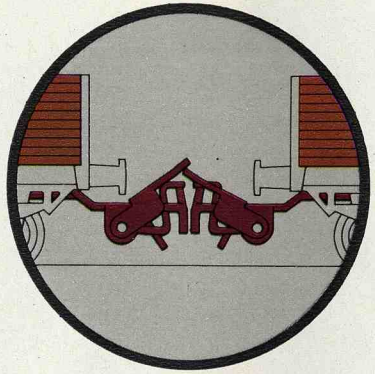
Circuit separation

using center conductor isolator 5022 for M-tracks, or center conductor isolator 7522 for K-tracks. Special isolating track sections are not required.

It's time for Märklin

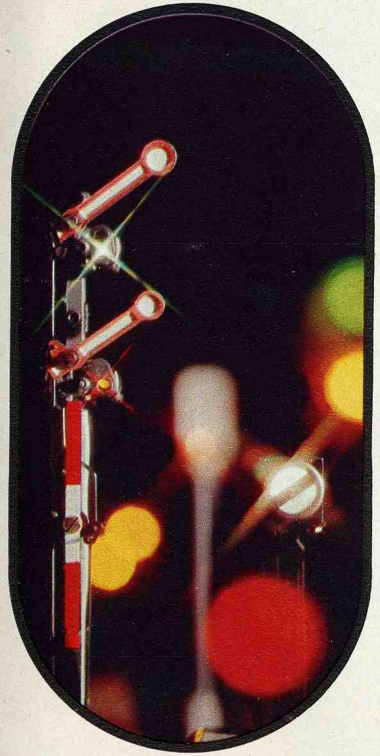
RELEX coupling

After uncoupling, cars can be pushed for parking without the coupling re-engaging. This feature is essential in a realistic switching and marshaling operation.



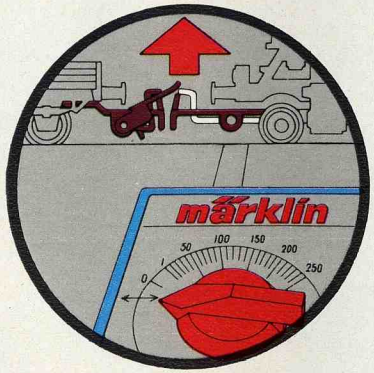
Märklin HO signals

The robust Märklin signals enable realistic and genuine train traffic control to be operated. They are indispensable for fully automatic train control.



Märklin catenary system

Electric locomotives are operated realistically with a catenary system. This provides another advantage: two trains can be operated independently on the same track. The Märklin catenary system is matched to the HO system and works in the same way as in real life.



TELEX coupling

With the TELEX coupling, uncoupling from a locomotive can be carried out at any point on the layout by remote control from the transformer.

Direction reversing switch

With Märklin HO the direction of motion is controlled by a switch in the locomotive rather than in the track. This means that two locomotives on the same electrical circuit can be traveling in opposite directions.

Climb aboard and let's go

2920 S 220 Volt
2924 S 240 Volt
2926 S 110 Volt (60 Hz)
2927 S 110 Volt (60 Hz) USA
2929 S 100 Volt Japan

Local passenger train with transformer · With tank locomotive, 2 passenger cars, 12 curved track sections 5100, 1 straight track section 5106, 1 feeder track section 5131 with built-in capacitor for radio interference suppression and 1 transformer · Length of train 35 cm (1 ft 1-3/4")

2930 S 220 Volt
2934 S 240 Volt
2936 S 110 Volt (60 Hz)
2937 S 110 Volt (60 Hz) USA
2939 S 100 Volt Japan

Freight train with transformer · With locomotive 3000, 2 freight cars, 12 curved track sections 5100, 1 straight track section 5106, 1 feeder track section 5131 with built-in capacitor for radio interference suppression and 1 transformer · Length of train 34.5 cm (1 ft 1-1/2")

2940 220 Volt
2944 240 Volt
2947 110 Volt (60 Hz)
2949 100 Volt Japan

Passenger train with grade crossing and transformer · With tank locomotive, 2 passenger cars, 12 curved track sections 5100, 2 straight track sections 5106, 1 feeder track section 5131 with built-in capacitor for radio interference suppression, 1 mechanically operated grade crossing 7390, 2 automobiles and 1 transformer · Length of train 35 cm (1 ft 1-3/4")

The gift packs on this page are ready for use now and can be extended.

The transformers in the basic sets and in set 2950–2959 (page 12) are not available separately.

Like all Märklin railroad transformers, these ones have connections for traction current and current for lights and solenoid-operated items, as well as providing an overvoltage pulse for reversing locomotives. These transformers can also be used to provide power for bigger locomotives or additional turnouts or signals.

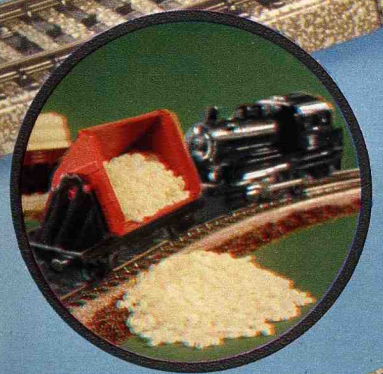
Connect transformers to Alternating Current (AC) mains supply only

Märklin HO basic sets – ready to use – the ideal gift

2940

2930

2920

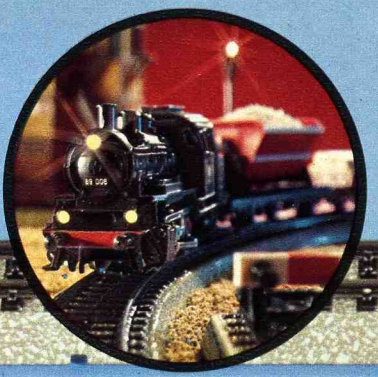


Your set can soon be extended – with the SET track gift program (see pages 64/65), for example.

2950 220 Volt
2954 240 Volt
2957 110 Volt (60 Hz)
2959 100 Volt Japan

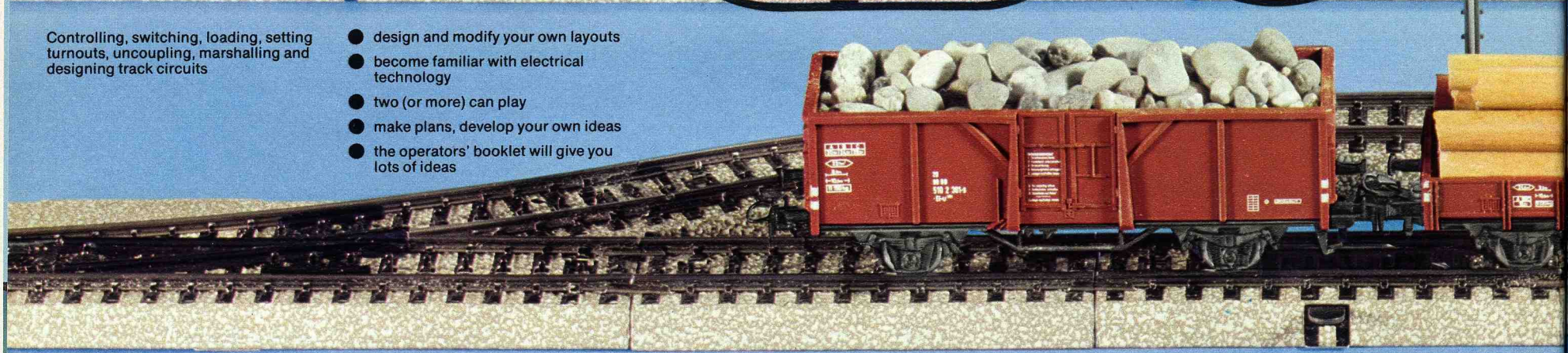
Freight train with transformer · With locomotive 3000, 1 tipping bucket car 4413, 1 low-sided car 4423, 1 open freight car 4430, 13 curved track sections 5100, 5 straight track sections 5106, 1 straight track section 5107, 1 uncoupling track section 5112, 1 light standard 5113, 1 feeder track section 5131 with built-in capacitor for radio interference suppression, 1 left-hand turnout 5221, 1 control box 7072, 1 bumper 7190, leads, plugs, sleeves, simulated freight, 1 transformer and 1 operator's booklet · Length of train 47.5 cm (1 ft 6-3/4")

The transformer in this set is not available separately. It must be connected only to an Alternating Current (AC) supply.



Controlling, switching, loading, setting turnouts, uncoupling, marshalling and designing track circuits

- design and modify your own layouts
- become familiar with electrical technology
- two (or more) can play
- make plans, develop your own ideas
- the operators' booklet will give you lots of ideas



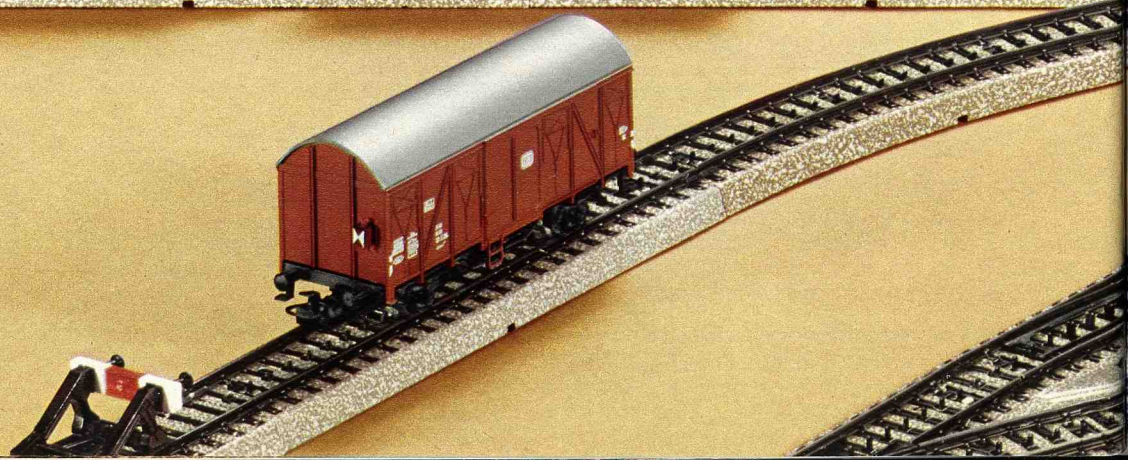
2875 new

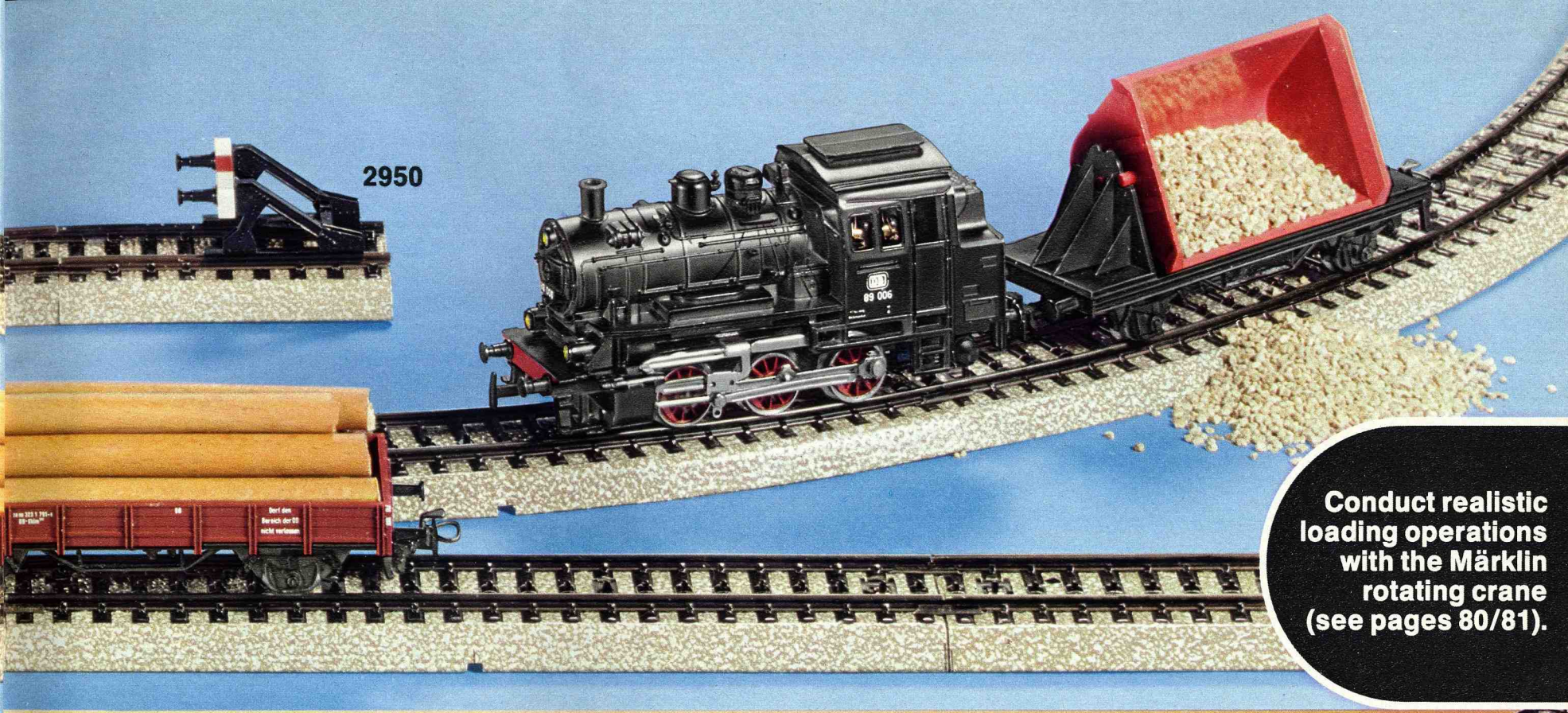
Large freight train · With diesel locomotive 3072, 1 box car 4411, 1 open freight car 4431, 1 tank car 4442, 1 low sided car 4474 with load, 1 automobile transporter 4613, 12 curved track sections 5100, 19 straight track sections 5106, 1 feeder track section 5131 with built-in capacitor for radio interference suppression, 1 pair of turnouts 5202, 1 right hand turnout 5202, 2 curved track sections 5206, 1 double slip switch 5207, 1 control box 7072, 3 bumpers 7190, 1 distribution strip 7209, leads, plugs and sleeves · Length of train 79.5 cm (2 ft 5–16")

Develop to multi-train operations using signals (see pages 72/73).

All kinds of operation are possible, and you have a large parking area, realistic models and a really worthwhile stock of track

- locomotive with working headlights and RELEX couplings
- freight cars with true-to-life loads
- working taillights on last car
- double slip switch and single turnouts
- many parking tracks





Conduct realistic loading operations with the Märklin rotating crane (see pages 80/81).

Start with more railroad

2875 new

Train sets – a special gift

Any model railroader will be glad to have one of these true-to-life train sets in its quality gift pack.

For those who like the former German State Railways: E 04 with express coaches

2850

Express train gift set · With electric express locomotive E 04 14 in the original lettering of the former German State Railways · Also contains 2 express coaches 4136 (C4ü bay 11) and 1 express baggage car 4137 (Pw4ü bay 09) · Slide-in destination boards for particular routes · Length of train 85 cm (2 ft 9-1/2")

■ In 1932 the firm of AEG was commissioned by the former German State Railways to build the type E 04 locomotive for use on the express service between Munich and Stuttgart. Although this was the original plan, the first machines to be delivered, in 1933, were put into service on routes in central Germany, and deliveries to the Munich railway administration did not take place until later. The maximum speed of the first eight locomotives was 110 km/h (68 mph), and this was raised to 130 km/h (81 mph) for all subsequent machines. In high speed trials on 28 June 1933, locomotive E 04 09, pulling a load of 309 tons, achieved a cruising speed of 145 km/h (90 mph) on the line between Munich and Stuttgart, and a maximum speed of 151.5 km/h (94 mph) on the line between Munich and Augsburg.

In 1911, the coach building firm of J. Rathgeber in Munich received an order from the Royal Bavarian Railways for 20 type C4ü – bay. 11 express coaches, and a further 14 were ordered from MAN in Nuremberg. These cars, which weighed 40.4 tons each, contained 64 passenger seats and were provided with gas lighting and steam heating. They were given the serial numbers "München 13031–13064". After being incorporated in the stocks of the German State Railway Company in 1924, the cars were modified successively to receive electric lighting, sleeve buffers and strengthened couplings. From 1931 onward, the cars still in service went under the serial numbers "17936 – 966 München".

The first batch of express baggage cars type Pw4ü – bay. 09 supplied by the Munich firm Rathgeber in 1909 consisted of 12 vehicles. They were provided with gas lighting and steam heating, and their empty weight was 29.6 tons. They would take a freight load of 8 tons. 20 further cars of this type were ordered later. Serial numbers of the first batch: 17667 – 678, of the second batch: 17864 – 873, and of the third batch: 17851 – 860.

For technical description of express locomotive E 04 see pages 26/27, and for express coaches 4136 and 4137 see pages 44/45.

2850

2852 **new**

For technical description of the high speed locomotive 3054 see pages 26/27 and for TEE coaches see pages 50/51.

For modern railroad enthusiasts: The TEE with interior lighting

2852 new

TEE train · With electric high speed locomotive 3054, 1 TEE open-interior coach 4096, 1 TEE dining car 4097 and 1 TEE compartment car 4098 with taillights · In this set all cars are also fitted with interior lighting · Also includes 10 realistically colored figures to go inside the cars, and destination plates for various routes · Length of train 107 cm (3 ft 6-1/8")

■ The TRANS-EUROP-EXPRESS (TEE) started a new chapter in the story of express traffic on major railroads. The first TEE – a high speed diesel powered railcar – operated for the first time in 1957. It soon became apparent, however, that the future of the TEE concept lay in locomotive-drawn trains, in which the supply of passenger seats could be more readily adapted to meet changing demand. As electrification proceeded, moreover, diesel powered trains became uneconomical.

In 1965 the first prototype of the new Class 103 was delivered. Series production, however, did not start until 1970. This express locomotive is designed for a maximum speed of 200 km/h (125 mph) and therefore has special safety features, including several independent braking systems and automatic signal transmission.

The TEE coaches are also of recent design. They have a maximum permitted speed in the range 160–200 km/h (100–125 mph) and are exceptionally luxurious.

When the inter-city network was set up, in 1971, the TEE trains became Inter-City Trains. The earliest TEE railcar had its own individual color scheme of beige and red, and this scheme was retained with the introduction of the locomotive-drawn trains. Today these colors represent the highest standard of fast, comfortable rail travel.

Taillight car fitted with light-emitting diodes

Steam locomotives

The history of steam power on the railroads goes back to the early part of the last century. The first German steam locomotive travelled from Nuremberg to Fürth on the 7th December 1835. After this the steam locomotive era developed rapidly and chaotically.

Railroads were regarded as status symbols. Thus every nation and every principality developed their own railroad companies and networks and constructed their own locomotives. No state bothered much about the problems of connections with neighbouring countries. Thus the Nuremberg – Fürth route, for example, remained separate from the main network for 87 years, and the Baden State Railway used the wide gauge of 1.60 m (5 ft 3″) while its neighbours used the usual 1.435 m (4 ft 8-$^1/_2$″) gauge.

Some efforts were made to achieve a measure of standardization, but these did not meet with much success until the turn of the century. By then there were in Germany only 8 separate state railroad organisations left: in Prussia-Hesse, Bavaria, Württemberg, Baden, Saxony, Oldenburg, Mecklenburg and the Palatinate, and the only place where the Imperial German Railways existed was in Alsace-Lorraine.

In 1920 the Imperial Government concluded an agreement with the provincial states by which all the state railroads came under the control of the Empire. Standardisation had been achieved at last.

All the locomotives in Germany at the time received new designations. The Bavarian S 3/6, for example (Märklin model 3092), became the class 18^4, while the Prussian T 12 became the class 74 (Märklin model 3095).

At the same time, it was decided to design new, standard types of locomotive, conforming to the following requirements:

1. number of different types to be minimized
2. as few variants as possible of any type
3. components to be interchangeable between types.

This is why the class 41 locomotive (Märklin model 3082), for example, has the same boiler as the class 03 (Märklin model 3085). These standard locomotives also received the latest technical innovations, like the class 03, for example, which became the streamlined locomotive 03^{10} (Märklin model 3089).

The last design period for steam locomotives was in the 1940's. In the preceding years, railroads had suffered a general decline because of concentration of effort on autobahn construction, and a considerable amount of updating was due.

Requirements had changed: raw materials were scarce. Lack of skilled personnel meant that maintenance must be simplified. Tractive power and resistance to frost had increased in importance. These factors influenced the design of classes 52 and 53 (Märklin model 3102).

The steam locomotive era ended in the 1950's. The machines still in service in the Federal German Republic were overhauled and redesignated, but no more new types were designed. In fact more and more steam locomotives were taken out of service, some finding their way to museums. Nowadays they only run on special trips organised by steam enthusiasts.

All models have die cast zinc frames · 2 non-skid tires

3087/3090

Tank locomotive modeled on a 0-6-0 type used on branch lines · 1 driven axle · Coupling hooks at each end · Length over buffers 10.8 cm (4-1/4")

= 7154 = 7185

3000

Tank locomotive for passenger and freight train service · Class 89 with wheel arrangement 0-6-0 · 3 driven axles · Three working headlights · Coupling hooks at each end · Length over buffers 11 cm (4-3/8")

= 7154 = 7185 = 60010

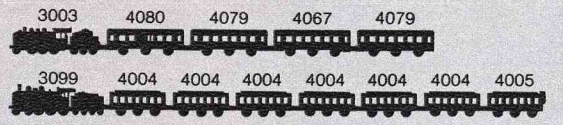
3095

Tank locomotive · German Federal Railways' Class 74 · Wheel arrangement 2-6-0 · 3 driven axles · Simulated Heusinger reversing gear · Three working headlights · Coupling hook in front, RELEX coupling (pages 62/63) at rear · Length over buffers 13.5 cm (5-5/16")

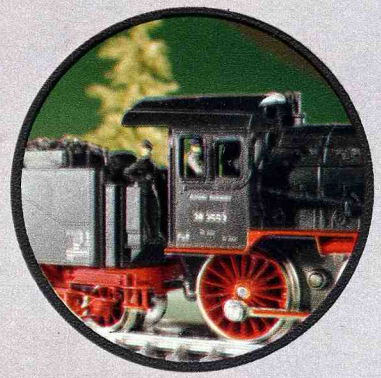
= 7153 = 7185 = 60010

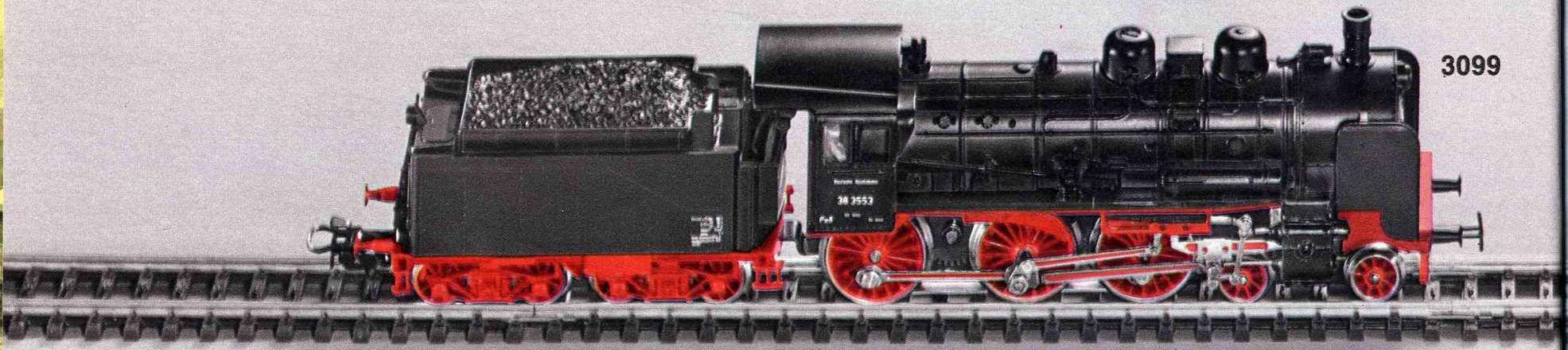
■ This tank locomotive was put into service in 1902 by the Royal Berlin Railways. Almost 1000 machines were built until production ceased in 1921, and they were used for local passenger services and as switching locomotives. They were between 11.8 m (38 ft 9") and 12 m (39 ft 5") in length and they weighed 70 tons. They could reach a speed of 80 km/h (50 mph) either forwards or backwards.

Examples of marshaling of trains:



The Märklin magazine provides up-to-date information on full-scale railroads.



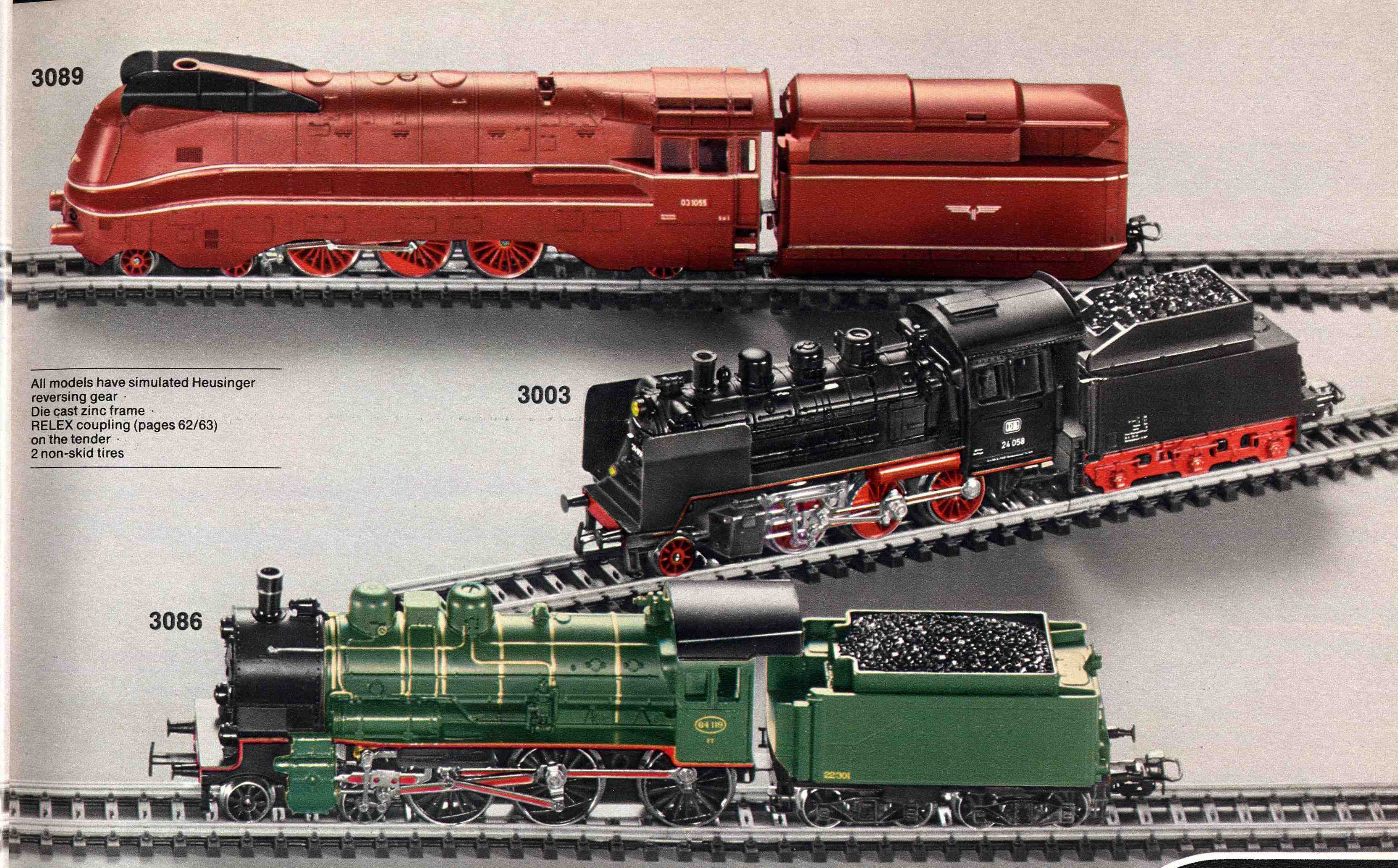


3099

Locomotive with tender · Former German State Railways' Class 38 · Wheel arrangement 4-6-0 · 3 driven axles · Three working headlights · Metal body · Figures of driver and fireman · Coupling hook in front · Length over buffers 21.8 cm (8-5/8")

= 7152 = 7185 = 60015

■ The P8, designed for the Prussian State Railways in 1906, became well-known for its performance and its low running costs. Prussia alone received 3370 of these machines. After the formation of the German State Railway Company they were used throughout Germany. With small modifications they were also put into service by Belgian State Railways, as the Class 64. The Class 38 locomotive could still be seen pulling express trains in Southern Germany as recently as the 1960's.



All models have simulated Heusinger reversing gear · Die cast zinc frame · RELEX coupling (pages 62/63) on the tender · 2 non-skid tires

3089

Streamlined express locomotive with tender · Class 03^{10} · Wheel arrangement 4-6-2 · 3 axles driven through coupling rods · 2 working headlights · Metal body · Length over buffers 27.4 cm (10-3/4")

= 7152 = 7185 = 60015

■ Streamlining had proved worthwhile for high speed locomotives. It was therefore adopted for the 03^{10} from 1937 onwards. The frame was left uncovered for ease of maintenance. Maximum speed 140 km/h (87 mph). Axle load 17 tons.

3003

Locomotive with tender · German Federal Railways' Class 24 · Wheel arrangement 2-6-0 · 3 driven axles · Three working headlights · Coupling hook in front · Length over buffers 20 cm (7-7/8")

= 7153 = 7185 = 60010

■ Standard locomotives (3003 and 3086) for passenger and freight services. Maximum speed 90 km/h (56 mph).

3086 Belgium

Locomotive with tender · Belgian State Railways' (NMBS/SNCB) class 64 · Wheel arrangement 4-6-0 · 3 driven axles · Three working headlights · Metal body · Coupling hook in front · Length over buffers 21.8 cm (8-5/8")

= 7152 = 7185 = 60015

What trains used to look like.
See also page 40.

3083

3092

K.BAY. STS.B.

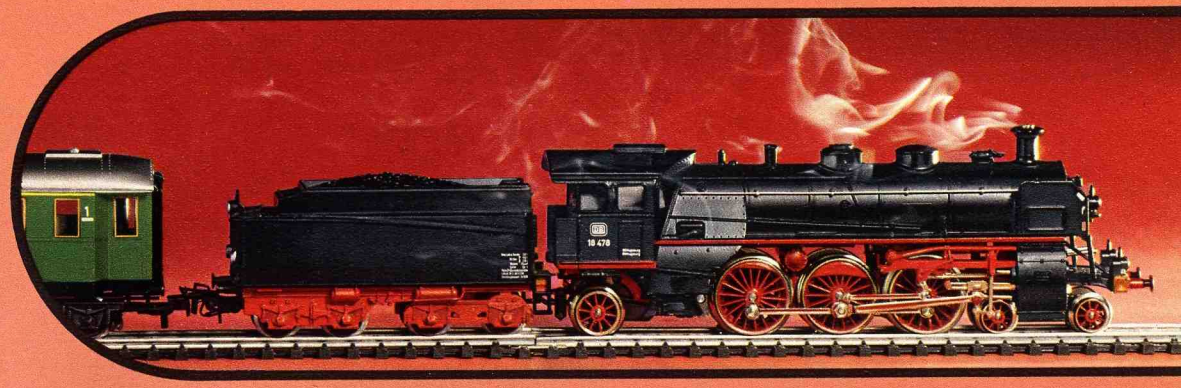
3093

3092/3093/3083

Express locomotive with tender · Wheel arrangement 4-6-2 · 3 driven axles · 2 non-skid tires · Simulated Heusinger reversing gear · Three working headlights · Metal body · Die cast zinc frame · RELEX coupling (pages 62/63) on the tender · Length over buffers 24.9 cm (9-3/4") · Can be fitted with smoke

⓪ = 7152 ⌓ = 7185 ⚲ = 60015

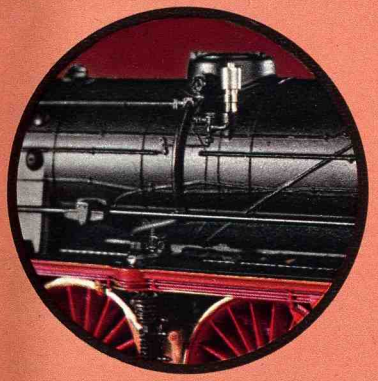
■ The first Bavarian S 3/6 appeared in 1908. The total number built was well over 100, of which as many as 30 were of the model i. After 1918 11 machines were supplied to France, where they were used, with minor modifications, as the Class 231. They were designated as Class 18[4] by the former German State Railways and as Class 18 by the German Federal Railways.
This locomotive was well-known for its elegance and its performance and was frequently used to pull international expresses such as the "Rheingold" and the "Orient Express". Maximum speed was 120 km/h (75 mph). Working weight 92.3 tons. Length over buffers 21.22 m (69 ft 7-1/2").



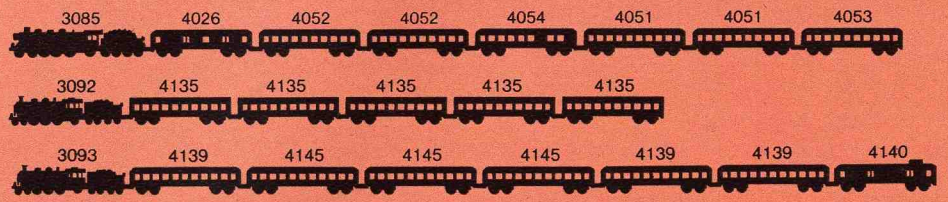
3092 – S 3/6, model i, of the former Royal Bavarian State Railways (original color scheme)

3093 – German Federal Railways' Class 18[4] (formerly S 3/6)

3083 – The former French State Railways' Class 231 (formerly S 3/6)



Examples of marshaling of trains:



Märklin spares service – security for years–see pages 38/39 for further details.

3085

3085

Express locomotive with tender · German Federal Railways' Class 003 · Wheel arrangement 4-6-2 · 3 axles driven through concealed gear wheels · 2 non-skid tires · Simulated Heusinger reversing gear · Three working headlights · Die cast zinc frame · RELEX coupling (pages 62/63) on the tender · Length over buffers 27.7 cm (10-7/8") · Can be fitted with smoke set 7226 (page 38)

⓪ = 7152 ⌓ = 7164 ⚲ = 60015

■ In the 1920's locomotives with an axle load of 20 tons were constructed. This proved unsuitable for the track. So from 1930 onwards 300 of this lighter version were built. Maximum speed was 130 km/h (80 mph). Power 1450 kW. Overall length 23.90 m (78 ft 5").


3084
3096
3082
050082-7
86 173
41 334
41 334

3084

Heavy freight locomotive with cab tender · German Federal Railways' Class 050 · Wheel arrangement 2-10-0 · 5 axles driven through concealed gears · 4 non-skid tires · Coupling hook in front, RELEX coupling (pages 62/63) on the tender · Good cornering performance due to division of frame into two groups of driving wheels, flexibly coupled together · Length over buffers 26.1 cm (10-1/4") · Can be fitted with smoke set 7226 (page 38)

= 7153 = 7164 = 60015

■ With its low axle load this locomotive could also be used on branch lines. Because of this versatility, more than 3000 machines of this type were built during the years 1939–1943. No less than 2000 of these were taken over by German Federal Railways. After 1961 some of the tenders were fitted with drivers' cabs, as on this Märklin model. Maximum speed 80 km/h (50 mph). Length over buffers 22.94 m (75 ft 3-1/8").

3096

Tank locomotive with Märklin TELEX coupling · German Federal Railways' Class 86 · Wheel arrangement 2-8-2 · 4 axles driven through coupling rods · 2 non-skid tires · TELEX coupling at each end · Length over buffers 15.8 cm (6-1/4")

= 7153 = 7164 = 60015

■ A total of 774 of these standard locomotives were built. 385 of them entered service with German Federal Railways and were used for mixed traffic services on branch lines. The length was 13.82 m (45 ft 4-1/8"), the weight 88.5 tons and the maximum speed 80 km/h (50 mph).

3082

Freight locomotive with tender · German Federal Railways' Class 041 · Wheel arrangement 2-8-2 · 4 axles driven through concealed gears · 2 non-skid tires · Coupling hook in front, RELEX coupling (pages 62/63) on the tender · Length over buffers 27.5 cm (10-7/8") · Can be fitted with smoke set 7226 (page 38)

= 7153 = 7164 = 60015

■ The first of a total of 366 of these locomotives was delivered in 1936. Although intended as a high speed freight locomotive, it proved to be a good general purpose locomotive for medium weight trains. Maximum speed was 90 km/h (56 mph).

The Märklin TELEX coupling
on Märklin models 3065 and 3096. Enables cars to be uncoupled at any point on the track, by remote control from the transformer.

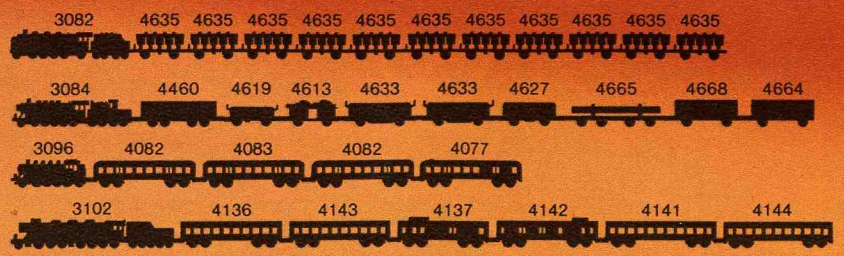
3102 new

Heavy freight locomotive with tender · Modeled on the Borsig design for a heavy freight locomotive for the former German State Railways · Mallet type locomotive · Wheel arrangement 1 C-4 · 4 axles driven through spur gears · 4 non-skid tires · Two working headlights on locomotive and tender · Coupling hook in front, RELEX coupling (pages 62/63) on the tender · Good cornering performance due to division of frame into two flexibly coupled driving sections · Can be fitted with 2 smoke sets 7226 (page 38) · Length over buffers 31.4 cm (1 ft 3/8")

= 7153 = 7185 = 60015

■ In 1943 the German State Railways commissioned the development of a super-heavy freight locomotive. The specification was for a machine that would pull a load of 1700 tons up an incline of 8‰ on a curve of radius 360 metres, at a speed of at least 20 km/h (12.5 mph), a maximum speed of 80 km/h (50 mph) forwards or backwards, and an axle load of 20 tons. Several firms submitted designs. The Borsig I is one of the most interesting, with its 4 cylinder Mallet type machine. The long boiler was mounted on a pivoting support on the front frame section. The design was deliberately kept simple and robust. In the event, this locomotive, with its double Heusinger reversing gear, was never built. Now it is – as a Märklin model.

Examples of marshaling of trains:



All models have working headlights · Simulated Heusinger reversing gear · Die cast zinc frame

100 years of electric locomotives

The first electric locomotive was revealed to the public in Germany almost half a century after the first steam locomotive. It was put into service on 31st May, 1879. It could travel at 13 km/h (8 mph) unladen and 7 km/h (4.4 mph) pulling a train. Modern speeds of 150 km/h (94 mph) and 200 km/h (125 mph) show the progress that has been made.

There were even more teething troubles than with the steam engines: different electrical systems, different frequencies, different overhead line heights, and only short sections of electrified track, separated from each other.

During the pre-war German State Railways era there were some conspicuous achievements: in 1933 the E 04 locomotive (Märklin model 3049) reached a speed of 151 km/h (94.4 mph). The E 94 (Märklin model 3022) pulled a load of 600 tons up an incline of 25‰.

The real breakthrough, however, has taken place in the German Federal Railways era. Standard classes have been produced (Märklin models 3034, 3037, 3039). The express freight locomotive 151 was developed (Märklin models 3057, 3058). The high speed locomotive 103 was built (Märklin model 3054).

3044

Switching locomotive · Multi-system industrial locomotive type EA 800 · Wheel arrangement 0-6-0 · 3 driven axles · 2 non-skid tires · Coupling hook at each end · Length over buffers 11.2 cm (4-3/8″)

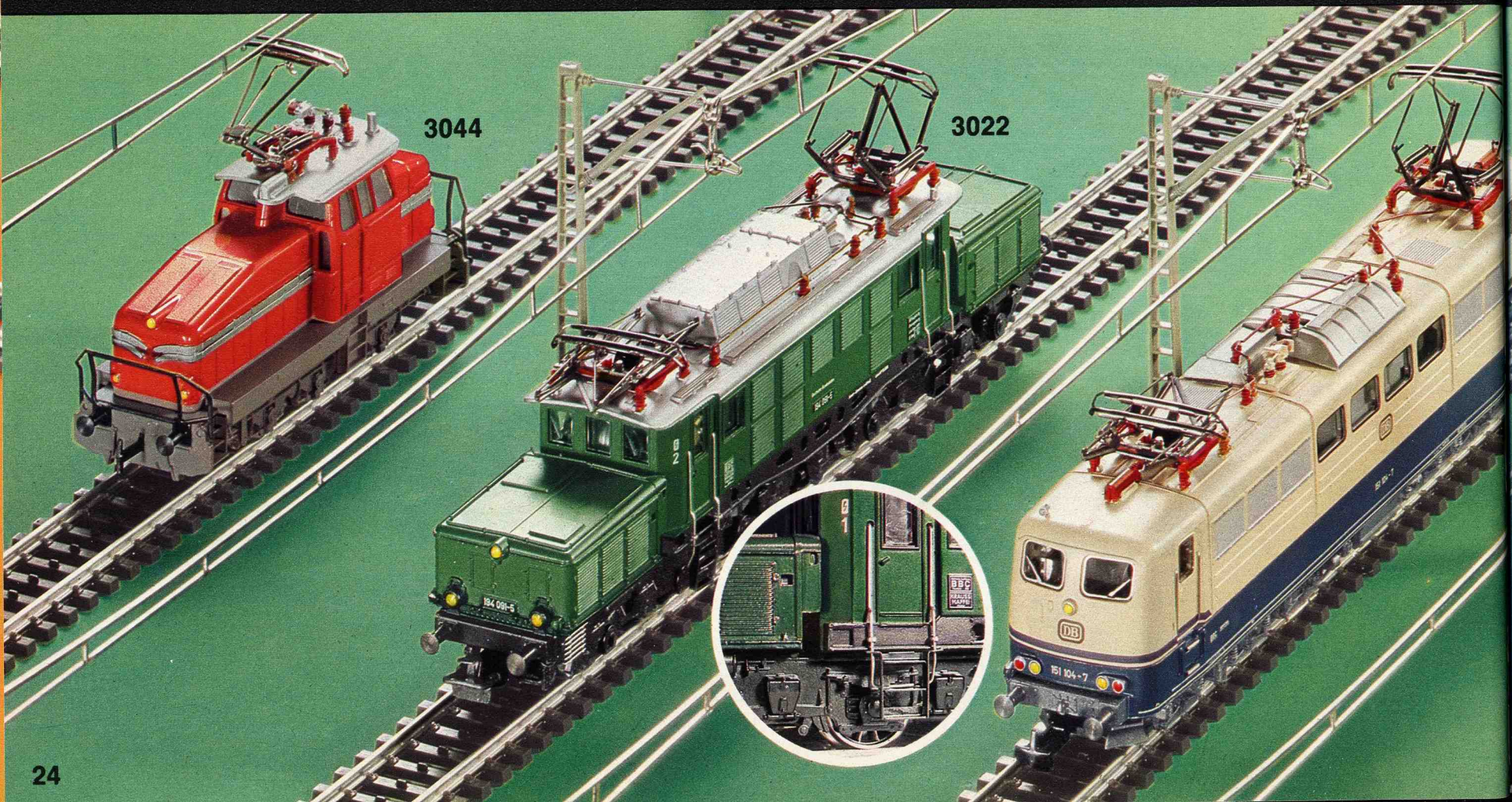
= 7154 = 7185 = 60015

3022

Electric freight locomotive · German Federal Railways' Class 194 · Wheel arrangement C-C · 3 driven axles · 4 non-skid tires · Three-section metal body · RELEX coupling (pages 62/63) at each end · Length over buffers 21 cm (8-1/4″)

= 7153 = 7164 = 60015

■ The Class 194 locomotive is a heavyweight, with its 6 motors, its starting power of 4670 kW, a total weight of



120 tons and a tractive force on starting of 40 tons. However, it can only manage a maximum speed of 90 km/h (56 mph).

3057/3058

Freight locomotive · German Federal Railways' Class 151 · Wheel arrangement C-C · 3 driven axles · 4 non-skid tires · Coupling hook at each end · Length over buffers 22.2 cm (8-3/4")

⬮ = 7153 ⌓ = 7164 💡 = 60015

■ As the speeds of heavy freight trains increased there arose a need for this new, heavy type of locomotive. The Class 151 can pull a train weighing 1000 tons at a speed of 120 km/h (75 mph) on the level. It is 19.49 m (63 ft 11-1/4") long. Tractive force on starting is 45 tons. Working weight 118 tons. It has 6 traction motors with a total continuous rating of 6540 kW.

3034/3037

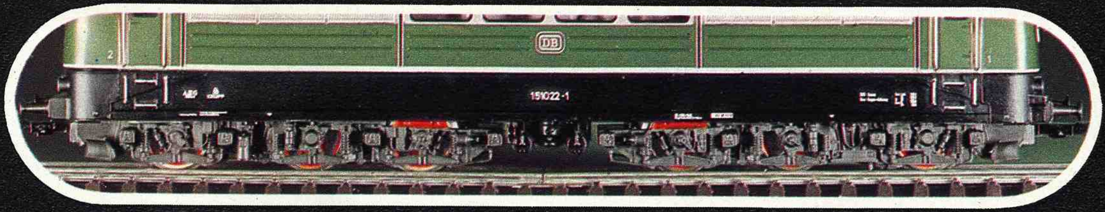
Multi-purpose locomotive · German Federal Railways' Class 141 locomotive · Wheel arrangement B-B · 2 driven axles · 4 non-skid tires · Metal body · Coupling hook with pre-uncoupler at each end · Length over buffers 17.5 cm (6-7/8")

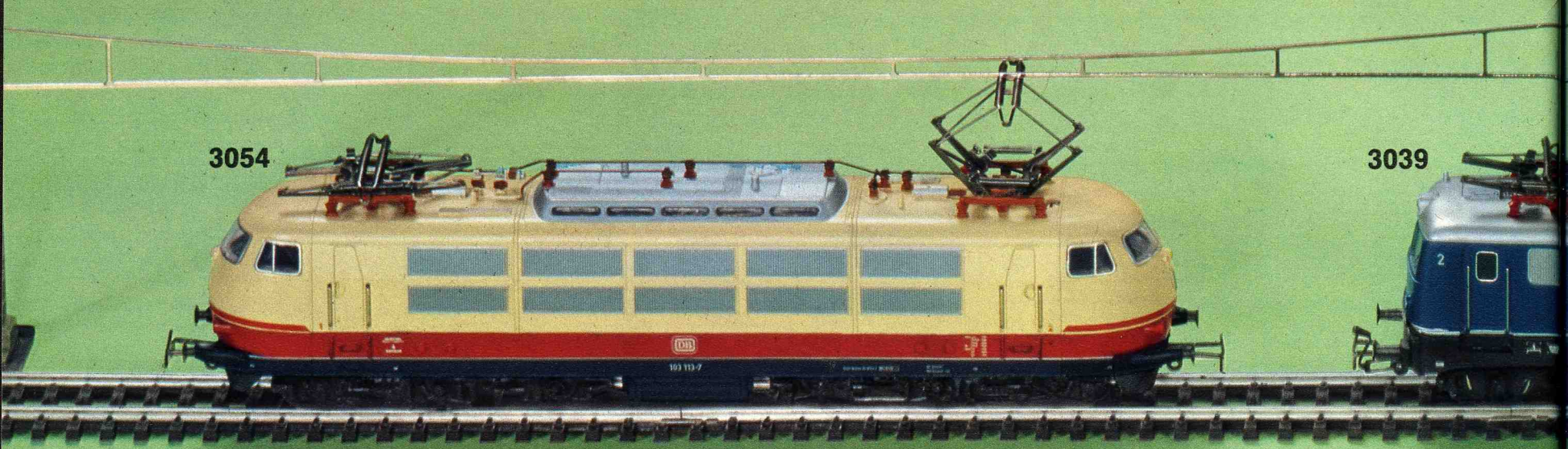
⬮ = 7153 ⌓ = 7164 💡 = 60015

■ The Class 141 locomotive has a working weight of 66.4 tons and a length of 15.66 m (51 ft 4-1/2"). Its four motors are rated at a total of 2280 kW continuous. The maximum speed is 120 km/h (74.5 mph). The locomotive is used for passenger and freight services.

All models have a lever for selecting operation by overhead line or track supply ·
Three working headlights at each end ·
Frame and running gear made of die cast zinc ·
Spring-loaded pantograph current collectors on roof

Electric locomotives should be powered from overhead lines as in real life.
See pages 76/77 for more details.





3039

Express locomotive · German Federal Railways' Class 110 · Wheel arrangement B-B · 2 driven axles · 4 non-skid tires · Metal body · Coupling hook with pre-uncoupler at each end · Length over buffers 18.1 cm (7-1/8")

= 7153 = 7164 = 60015

■ Class 110 electric locomotives were procured for German Federal Railways from 1956 onwards. Maximum permitted speed of the 110 as an express locomotive is 150 km/h (93 mph). The Class 110 locomotive has 4 motors giving a total of 3620 kW. The locomotive weighs 85 tons and measures 16.44 m (53 ft 11-1/4") over the buffers.

3042 3155 new

Express locomotive · German Federal Railways' Class 111 · Wheel arrangement B-B · 2 driven axles · 4 non-skid tires · RELEX coupling (pages 62/63) at each end · Length over buffers 19.1 cm (7-1/2")

= 7153 = 7164 = 60015

■ The Class 111 is a further development of the well-proved Class 110. With this locomotive emphasis was placed on optimizing the drivers's cab layout, reducing track loading and increasing running safety. Weight 83 tons. Length 16.75 m (54 ft 10"). Maximum speed 150 km/h (93 mph).

■ Since 1978 this locomotive has also been in service on the S-Bahn (urban elevated railway system) in the Ruhr district. It has its own S-Bahn color scheme of light gray and orange. At the moment the Class 111 is pulling the well-known silver-colored cars (Märklin models 4077, 4082, 4083).

3049

Express locomotive · German Federal Railways' Class 104 · Wheel arrangement 2-6-2 · 3 driven axles · 2 non-skid tires · 2 sprung trucks · Coupling hook at each end · Length over buffers 17.8 cm (7")

= 7153 = 7185 = 60015

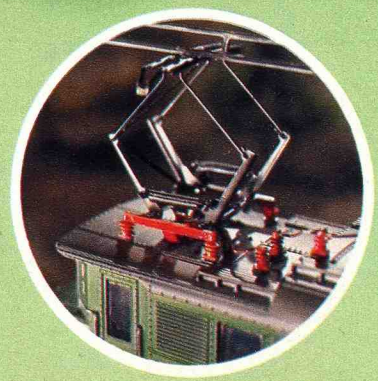
■ Of the 23 original Class 04 machines, only locomotives 17–22 were transferred to German Federal Railways. They have been operating since 1968 under the numbers 104 017 – 104 022 and are now in process of being withdrawn from Federal Railways service.

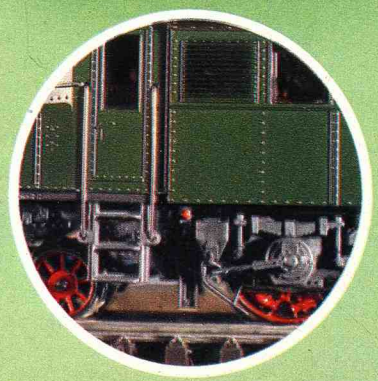
3054

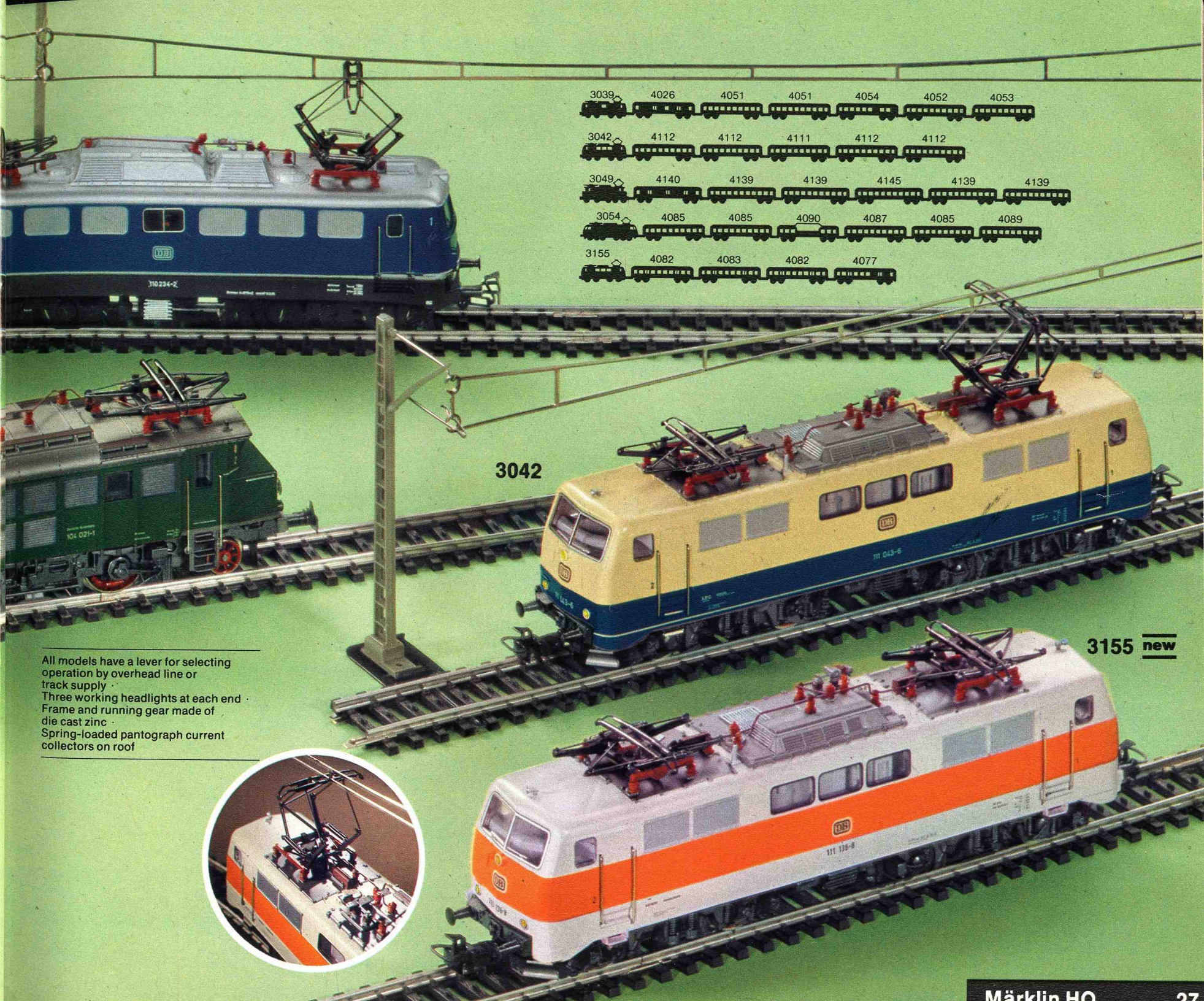
High speed locomotive · German Federal Railways' Class 103 · Wheel arrangement C-C · 3 driven axles · 4 non-skid tires · Body in the TEE colors, beige and red · Coupling hook at each end · Length over buffers 21.9 cm (8-5/8")

= 7153 = 7164 = 60015

■ This is the strongest, fastest and most elegant electric high speed locomotive in service with German Federal Railways at present. It is 19.50 m (63 ft 11-3/4") long and has 6 motors driving 6 axles. With its almost 6600 kW hourly rating, its working weight of 112 tons and its mighty tractive force on starting of 32 000 kg it caters not only for present but also for future requirements. On suitable tracks, expresses pulled by the "103" travel at speeds of up to 200 km/h (125 mph).







All models have a lever for selecting operation by overhead line or track supply ·
Three working headlights at each end ·
Frame and running gear made of die cast zinc ·
Spring-loaded pantograph current collectors on roof

All models have a lever for selecting operation by overhead line or track supply ·
Three working headlights at each end ·
Die cast zinc frame ·
Spring loaded pantograph current-collectors on roof

3041

3050

3151 new

3151 4138 4138 4138 4138

3056 4627 4619 4627 4633 4619 4613 4613 4698

3050 4066 4066 4068 4066 4066

3041 4085 4085 4087 4085 4085 4085 4089

3041 Austria

Multi-purpose locomotive · Austrian Federal Railways' (ÖBB) Class 1043 · Wheel arrangement B-B · 2 driven axles · 4 non-skid tires · Coupling hook at each end · Length over buffers 17.5 cm (6-$^{7}/_{8}$")

0 = 7153 = 7164 = 60015

■ After extensive trials with this locomotive, which was built by the Swedish firm ASEA, Austrian Federal Railways made an initial purchase of 4 machines. The 16-$^{2}/_{3}$ Hz alternating current supply from the overhead line is converted to direct current by means of thyristors. The 4 motors develop almost 3680 kW, enabling the 77.4 ton, 15.5 m (50 ft 10-$^{1}/_{4}$") long locomotive to reach a maximum speed of 135 km/h (84 mph).

3050 Switzerland

Powerful multi-purpose locomotive · A model of Swiss Federal Railways' (SBB) Class Ae 6/6 · Wheel arrangement C-C · 3 driven axles · 4 non-skid tires · Metal body · Locomotive has the crest of Berne Canton · Crests of the other Swiss cantons are also included · Coupling hook at each end · Length over buffers 20 cm (7-$^{7}/_{8}$")

0 = 7153 = 7164 = 60015

■ The Ae 6/6 is used to pull international passenger and freight trains. Weight 120 tons. Tractive power 4400 kW. 6 motors. Maximum speed 125 km/h (78 mph). It has enormous starting power and climbing performance.

3151 Switzerland new

Express locomotive · A model of Swiss Federal Railways' (SBB) Class Ae 3/6^{II} · Wheel arrangement 4-6-2 · 3 driven axles · 2 non-skid tires · 1 sprung steering truck, 1 sprung running track · RELEX coupling (pages 62/63) at each end · Length over buffers 16 cm (6-$^{5}/_{16}$")

0 = 7152 = 7185 = 60015

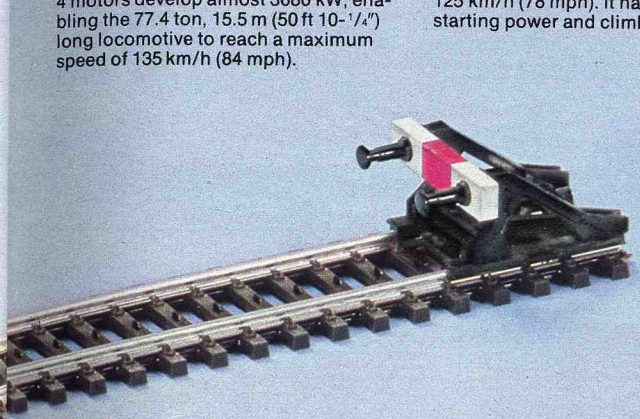
■ Swiss Railways had 60 of these lowland express locomotives built in the years 1924–1926. Tractive power was provided through connecting rod drive, but the machines performed well in service. An original maximum speed of 90 km/h (56 mph) was later raised to 100 km/h (62.5 mph). These locomotives were used on passenger services.

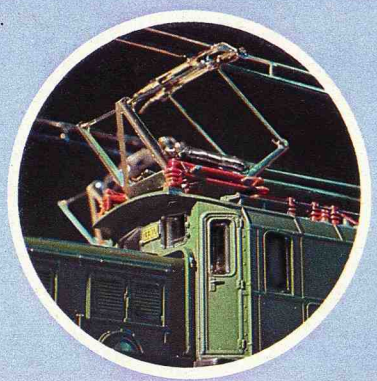
3056 Switzerland

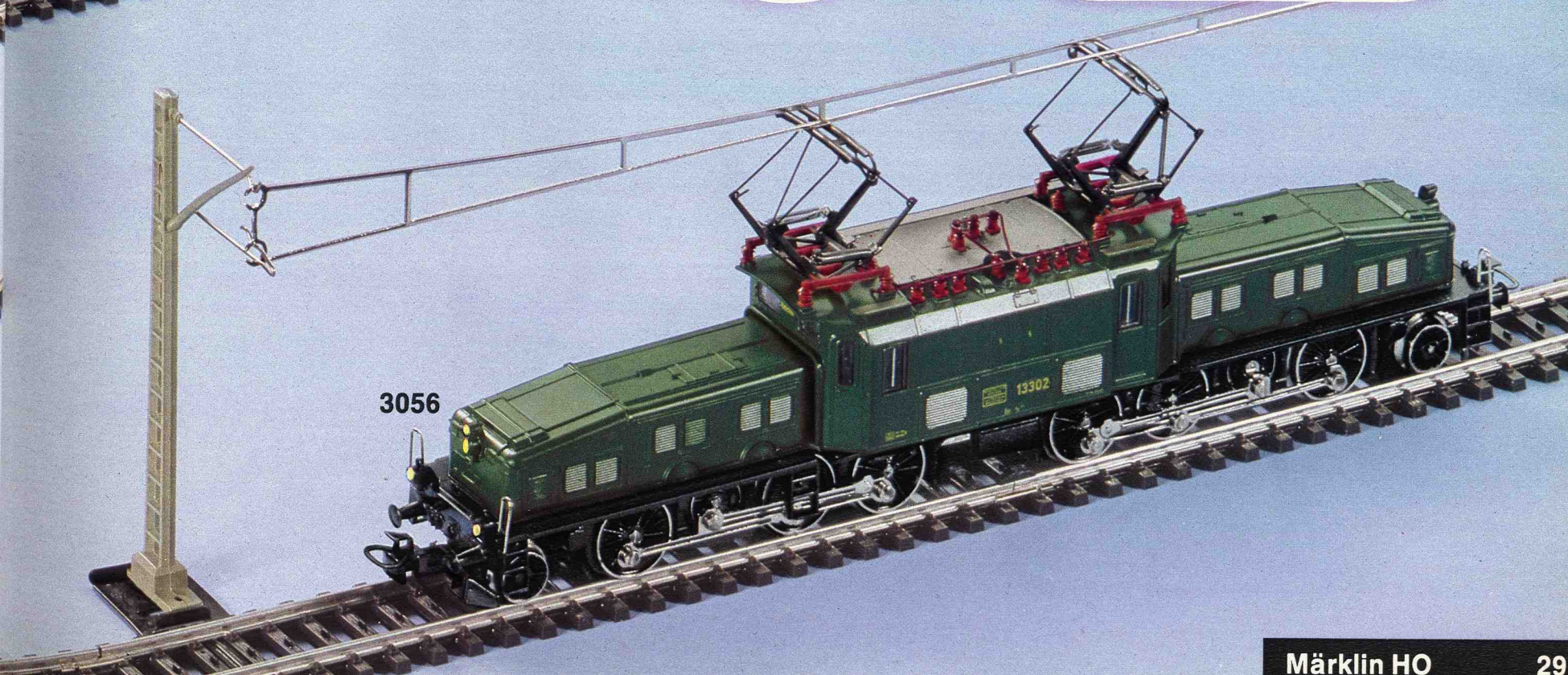
Heavy freight locomotive "Crocodile" · A model of Swiss Federal Railways' (SBB) Class Be 6/8^{III} · Wheel arrangement 1C-C1 · 3 driven axles · 4 non-skid tires · Body in 3 sections · Trucks flexibly coupled, giving good cornering performance · RELEX coupling (pages 62/63) at ea h end · Length over buffers 22.8 cm (9")

0 = 7153 = 7164 = 60015

■ 18 locomotives of the Be 6/8^{III} type were put into service in 1926 and 1927 on the Gotthard route. With a length of 20.06 m (65 ft 9-$^{3}/_{4}$") and a motor power of 1800 kW, giving a maximum speed of 75 km/h (47 mph), they were for many years one of the most impressive sights in the Swiss heavy freight train service.







3035 Italy

Electric locomotive · Italian State Railways' (FS) Class E 424 · Wheel arrangement B-B · 2 driven axles · 4 non-skid tires · Metal body · Coupling hook with pre-uncoupler at each end · Length over buffers 17.5 cm (6-7/8")

= 7153 = 7164 = 60015

All models have a lever for selecting operation by overhead line or track supply ·
Working lamps or headlights at each end ·
Frame made of die cast zinc ·
Spring-loaded pantograph current collectors on roof

3038 France

High power locomotive · The Société Nationale des Chemins de Fer Français (SNCF) Class BB 9200 · Wheel arrangement B-B · 2 driven axles · 4 non-skid tires · Metal body · Coupling hook with pre-uncoupler at each end · Length over buffers 18 cm (7-1/16")

= 7153 = 7164 = 60015

■ The locomotives of Class BB 9200 have 4 motors with a total power of 4050 kW, hourly rating. They weigh 80 tons. On certain stretches of track they travel as fast as 160 km/h (100 mph).

3030 Sweden

Multi-purpose locomotive · Swedish State Railways' (SJ) Class Da · Wheel arrangement 2-6-2 · 3 driven axles · Jackshaft driven through spur gears · 2 non-skid tires · Metal body · RELEX coupling (pages 62/63) at each end · Length over buffers 14.7 cm (5-3/4")

= 7153 = 7185 = 60015

■ Used as the standard electric locomotive for passenger and freight service. Since these machines have only one motor and the low axle loading of 15 or 17 tons, they are fitted with main driving rods so that individual wheels do not "run away" on starting.

3043 Sweden

Multi-purpose locomotive · Swedish State Railways' (SJ) Class Rc · Wheel arrangement B-B · 2 driven axles · 4 non-skid tires · Coupling hook at each end · Length over buffers 17.5 cm (6-7/8")

= 7153 = 7164 = 60015

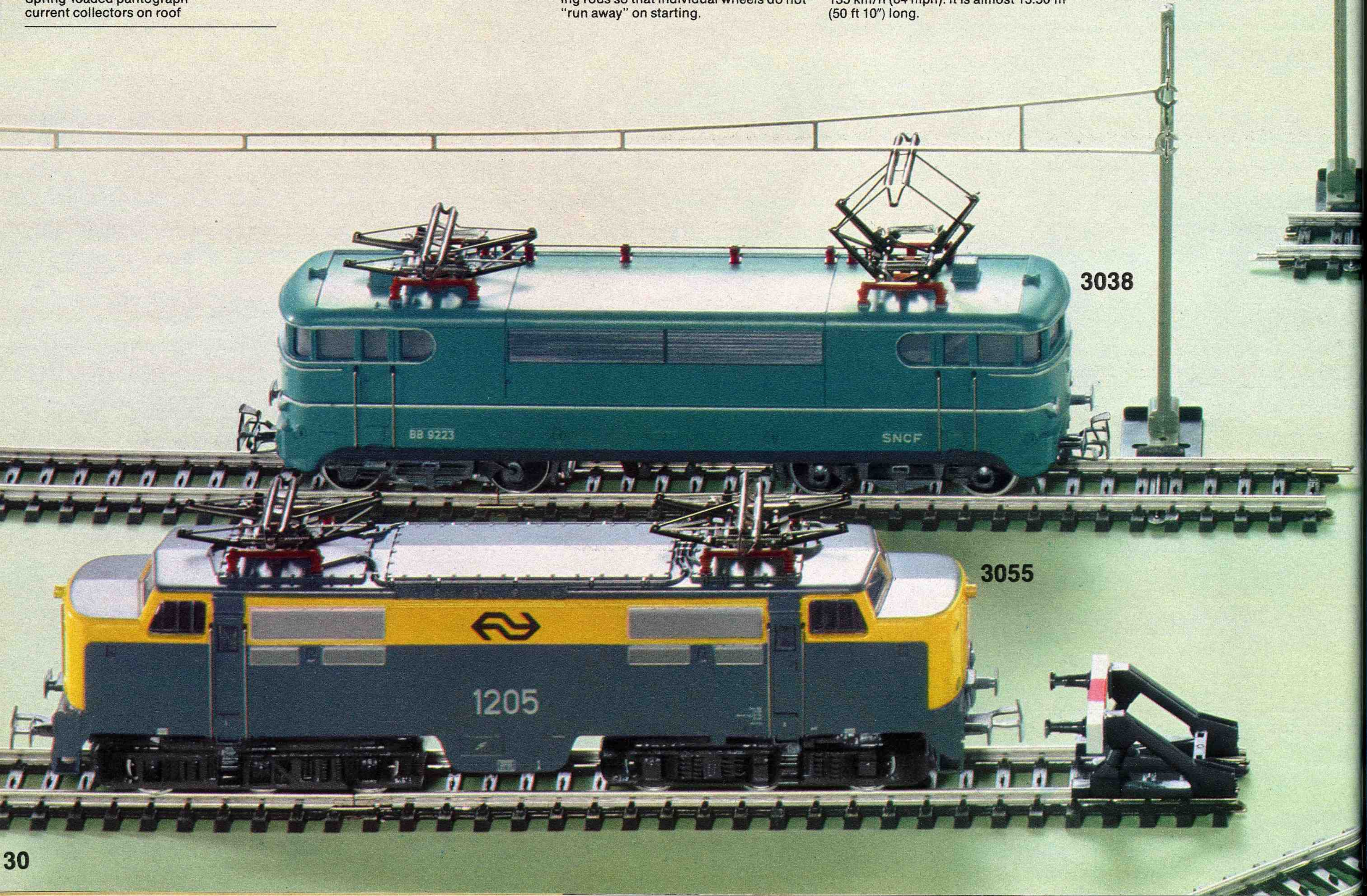
■ In these machines of very advanced design, the 16-2/3 Hz alternating current supply from the overhead line is converted by thyristors into direct current, which drives the four motors, developing a power of almost 3680 kW. The machine weighs 76 tons and can reach a speed of 135 km/h (84 mph). It is almost 15.50 m (50 ft 10") long.

3055 Netherlands

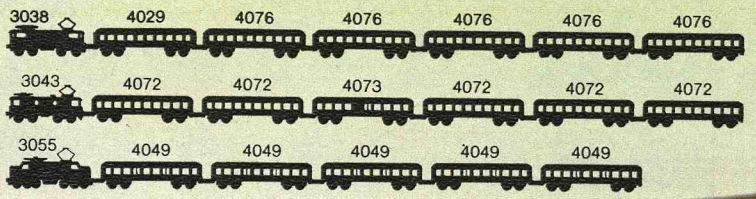
Electric locomotive · A model of the Netherlands Railways' (NS) Class 1200 · Wheel arrangement C-C · 3 driven axles · 4 non-skid tires · Metal body · Coupling hook at each end · Length over buffers 19.6 cm (7-3/4")

= 7154 = 7164

= 60015



Examples of marshaling of trains:



3035

3043

3030

Diesel locomotives – the third form of power

Although the first diesel engine was built as early as 1893, the series production in Germany of efficient diesel locomotives only began in the 1950's.

3 types underwent trials and entered production. Among them were the V 200 (Märklin model 3021), which went into series production with a more powerful motor in 1962, and the V 60 (Märklin models 3064, 3065), which was also constructed in large numbers.

By the 1960's, development had proceeded far enough to enable motors and transmissions rated at almost 1500 kW to be produced. This era started in 1964 with the V 160 (Märklin models 3074, 3075), which even then developed no less than 1400 kW.

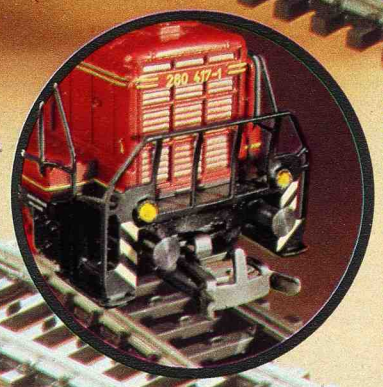
Since then diesel locomotives have established themselves firmly as Federal Railways' railcars: there were 3117 of them on 31st December 1977.

3078

3080

3064
3065

3072



3064/3065

Diesel-hydraulic switching locomotive · German Federal Railways' Class 260 · Wheel arrangement 0-6-0 · 3 driven axles · 2 non-skid tires · Length over buffers 12 cm (4-3/4″)

= 7153 = 7185 = 60010

3064 – Coupling hook with pre-uncoupler at each end

3065 – Märklin TELEX coupling (see pages 22/23) at each end

3072

Diesel-hydraulic multi-purpose locomotive · German Federal Railways' Class 212 · Wheel arrangement B-B · 2 driven axles · 4 non-skid tires · Narrow front and rear ends to scale · RELEX coupling (pages 62/63) at each end · Length over buffers 14.1 cm (5-1/2″)

= 7154 = 7164 = 60010

■ The 212 is a multi-purpose diesel locomotive with a working weight of 63.2 tons and a length of over 12 m (39 ft 4″). The new types develop about 1000 kW, and this power is transmitted by means of cardan shafts to the 4 axles arranged in 2 trucks. A two-speed gearbox is used. The gear ratio must be selected while the vehicle is stationary. In low gear the locomotive exerts its maximum tractive force, but has a maximum speed of only 65 km/h (40 mph), while in higher gear it reaches 100 km/h (62 mph).

3078

Industrial locomotive · Type DHG 500 · Wheel arrangement 0-6-0 · 3 driven axles · 2 non-skid tires · Coupling hook at each end · Length over buffers 11.2 cm (4-3/8")

= 7154 = 7185 = 60015

3080

Industrial locomotive · Wheel arrangement 0-6-0 · 3 driven axles · 2 non-skid tires · Coupling hook at each end · Length over buffers 11.2 cm (4-3/8")

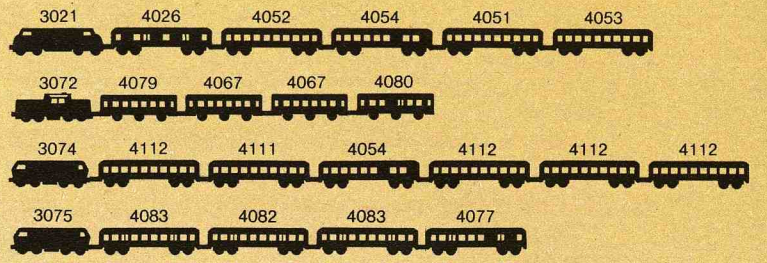
= 7154 = 7185

3021

Diesel-hydraulic express locomotive · German Federal Railways' Class 220 · Wheel arrangement B-B · 2 driven axles · 4 non-skid tires · Metal body · Coupling hook with pre-uncoupler at each end · Length over buffers 21 cm (8-1/4")

= 7154 = 7183 = 60010

Examples of marshaling of trains:



3021

3074

3075

3074/3075

Multi-purpose locomotive · German Federal Railways' Class 216 · Wheel arrangement B-B · 2 driven axles · 4 non-skid tires · RELEX coupling (pages 62/63) at each end · Length over buffers 18.2 cm (7-1/8")

= 7154 = 7164 = 60015

■ The Class 216 diesel locomotive is used for mainline duty over medium distances. The working weight with full fuel tanks is 79 tons. It develops a power of 1400 kW, giving a maximum speed of 120 km/h (75 mph).

All locomotives (except 3080) have three working headlights at each end · Die cast zinc frame

3067 Denmark

Diesel-electric multi-purpose locomotive · A model of the Danish State Railways' (DSB) Type My 1100 · Wheel arrangement A1A-A1A · 3 driven axles · 4 non-skid tires · Three working headlights at each end · Metal body · Coupling hook at each end · Length over buffers 20.5 cm (8-1/8")

= 7154 = 7164 = 60015

■ These Danish State Railways (DSB) Class My 1100 multi-purpose locomotives have diesel-electric drive. With this system, electric motors on the axles are provided with current from the generators, which in turn are driven by diesel motors. This locomotive is very similar to the Belgian Type 204.

3066 Belgium

Diesel-electric multi-purpose locomotive · A model of the Belgian State Railways' (NMBS/SNCB) Type 204 · Wheel arrangement C-C · 3 driven axles · 4 non-skid tires · Three working headlights at each end · Metal body · Coupling hook at each end · Length over buffers 20.5 cm (8-1/8")

= 7154 = 7164 = 60015

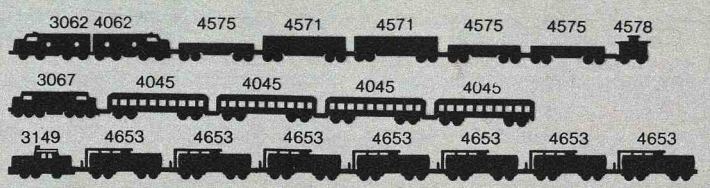
■ The Type 204 locomotive, which develops about 1300 kW, is used to pull both light freight trains and passenger trains, including expresses. Its maximum speed is 140 km/h (87 mph).

3149 Belgium new

Switching locomotive · A model of the Belgian State Railways' (NMBS/SNCB) Class 80 · Wheel arrangement 0-6-0 · 3 driven axles · 2 non-skid tires · Two working headlights at each end · Die cast zinc frame · Coupling hook with pre-uncoupler at each end · Length over buffers 12 cm (4-3/4")

= 7153 = 7185 = 60010

Examples of marshaling of trains:



3067

3066

3149 new

3060+4060 USA Type F 7 locomotive of the Atchison Topeka and Santa Fé Railway

3062+4062 USA Type F 7 locomotive of the Rio Grande Railway Company

3060/3062

Diesel locomotive · Type F 7, made by the Electro-Motive Division of General Motors · Wheel arrangement B-B · 2 driven axles · 4 non-skid tires · Two working headlights · Metal body · Coupling hook with pre-uncoupler at driver's cab end · RELEX coupling (pages 62/63) at other end · Length 17.5 cm (6-7/8")

= 7154 = 7185 = 60015

4060/4062

Supplementary section, unpowered · Matches the Type F 7 · Headlights and coupling hook with pre-uncoupler at driver's cab end · Length 17.5 cm (6-7/8")

= 7185 = 60015

3071

TEE high speed railcar · A model of the Netherlands-Swiss TRANS-EUROP-EXPRESS train in the beige und red TEE colors · In three parts

Locomotive section: 3 driven axles · 4 non-skid tires · Die cast zinc frame

Combined first class and dining car, and spacious first class compartment car with driver's section

Special couplings connect the 3 units very closely together · The walk-ways between the cars have specially tightly closing covers · At each end of the train there are 3 headlights and 2 red taillights which operate in accordance with the direction of motion · A current pick-up shoe at each end of the train, the leading one always collecting the current · Length of model 70 cm (2 ft 3-$^{9}/_{16}$")

= 7154 = 7164 = 60001 r

= 7175 = 60015 w

4071

TEE compartment coach · 1st class · Flexible covers for the walk-ways to adjoining cars · Special coupling fitting the TEE train only · Length 23.3 cm (9-$^{3}/_{16}$")

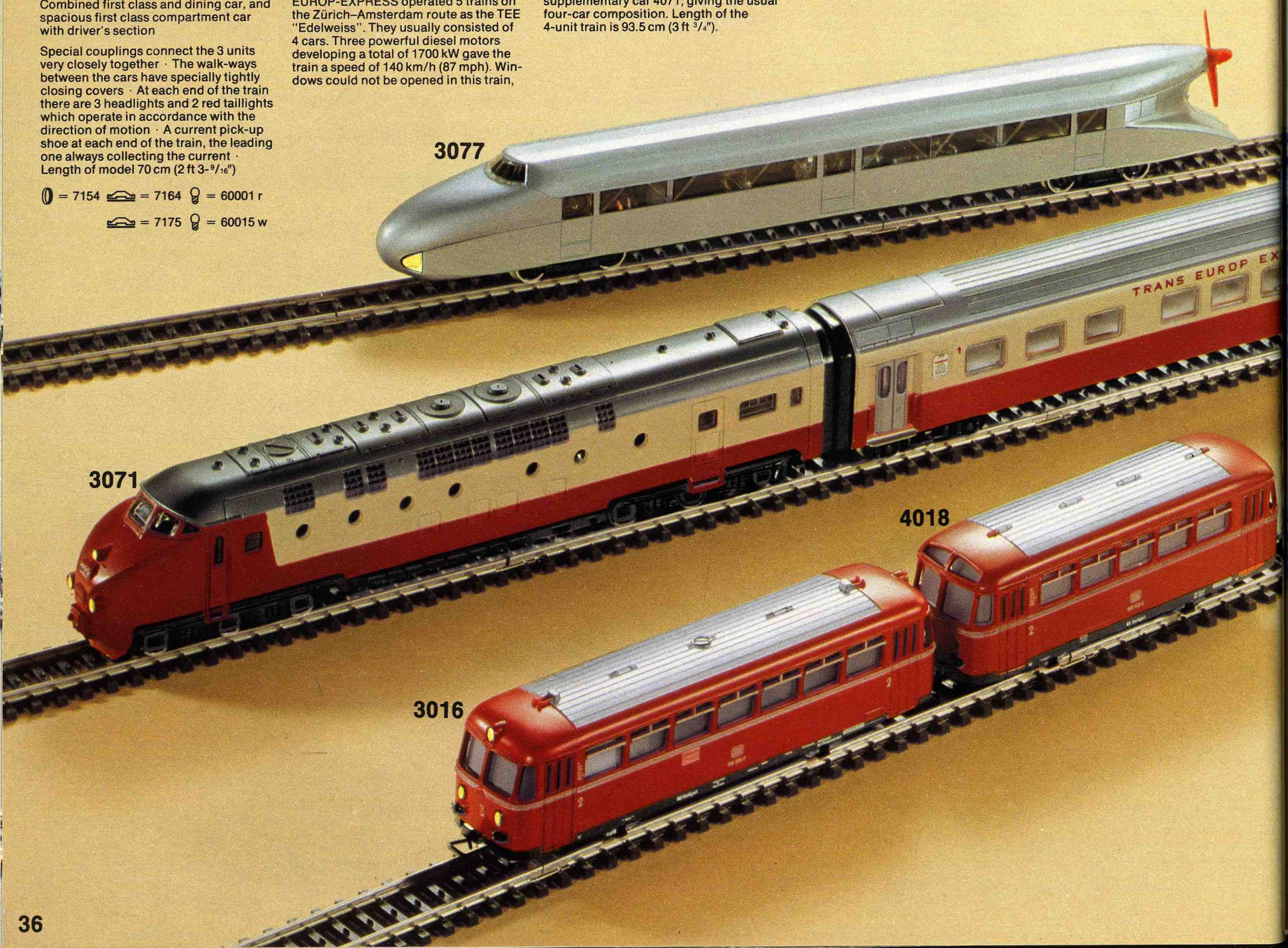
■ The Netherlands-Swiss TRANS-EUROP-EXPRESS operated 5 trains on the Zürich–Amsterdam route as the TEE "Edelweiss". They usually consisted of 4 cars. Three powerful diesel motors developing a total of 1700 kW gave the train a speed of 140 km/h (87 mph). Windows could not be opened in this train, as every car was fully air-conditioned. As in all TEE trains, there were only 1st class coaches, containing 114 seats. The dining car section could seat 32.

The TEE train illustrated consists of the three-part unit 3071 together with the supplementary car 4071, giving the usual four-car composition. Length of the 4-unit train is 93.5 cm (3 ft $^{3}/_{4}$").

3077

Rail Zeppelin based on Kruckenberg's system · 4 axles · 2 driven axles · 4 non-skid tires · As the traction voltage is slowly increased from 4 V, first the propeller spins up, driven by a special motor, and then the locomotive starts to roll · 2 working headlights · Die cast zinc frame · Length 28.8 cm (11-$^{3}/_{8}$")

= 7154 = 7164 = 60015



■ In 1931 the Rail Zeppelin attained the world record speed of 230 km/h (143 mph). It was powered by a 450 kW BMW aircraft engine, driving a propeller.

4071

4028

3028

3016

Railbus · A model of the German Federal Railways' Type 795 · One driven axle · 2 non-skid tires · Three working headlights at each end · Interior lighting · Die cast zinc frame · Special symmetrical couplings at each end for coupling the cars tightly together · Length over buffers 14.7 cm (5-3/4")

= 7153 = 7164 = 60010

4018

Railbus trailer · A model of the German Federal Railways' Type 995 · Red taillights operate at either end · Interior lighting · Special symmetrical coupling, to fit railbus only · Length over buffers 12 cm (4-3/4")

= 7175 = 60010

3028

Electric railcar · German Federal Railways' Type 515 battery-powered railcar · Wheel arrangement B-2 · 2 driven axles · 4 non-skid tires · At each end of the locomotive there are 3 headlights and 2 red taillights which operate in accordance with the direction of motion · Interior fittings · Interior lighting · Coupling hook at each end · Length over buffers 24 cm (9-1/2")

= 7154 = 7164 = 60001 r

= 60015 w

4028

Control car to go with railcar 3028 · A model of the German Federal Railways' Type 815 · Interior fittings · Interior lighting · When coupled to railcar 3028, 3 headlights or 2 red taillights operate at either end of the train, depending on the direction of motion · Coupling eye at one end, coupling hook at the other · Length over buffers 24 cm (9-1/2")

= 7164 = 60001 r

= 60015 w

Märklin service

Spare parts giving security for years

Instructions for fitting non-skid tires, current pick-up shoes, light bulbs and reverser unit springs will be found in the "instructions for use"

Light bulbs
for the following items

60000
2161, 3015, 4044, 4077, 4081, 5117, 5128, 5137, 5140, 5202, 7036, 7037, 7038, 7039, 7040, 7041, 7042, 7051, 7077, 7191, 7280, 7281, 7282, 7283, 7284

60001 red
3028, 3071, 3076, 3150, 4028, 7079, 7188, 7339, 7539

60002 green
7188, 7339, 7539

60010
3000, 3003, 3016, 3021, 3031, 3064, 3065, 3072, 3095, 3149, 4018, 4506, 5113, 7046, 7047, 7048, 7323

60015
3022, 3028, 3030, 3034, 3035, 3037, 3038, 3039, 3040, 3041, 3042, 3043, 3044, 3049, 3050, 3054, 3055, 3056, 3057, 3058, 3060, 3062, 3066, 3067, 3068, 3071, 3074, 3075, 3076, 3077, 3078, 3082, 3083, 3084, 3085, 3086, 3089, 3092, 3093, 3094, 3096, 3098, 3099, 3102, 3150, 3151, 3155, 4028, 4053, 4060, 4062, 4089, 6631, 7197, 7320, 7322, 7324, 7325, 7326, 7327, 7328

60020
7073, 7074

60200
7242

60201 red
7239, 7240, 7241, 7292, 7592

60202 green
7187, 7236, 7237, 7238, 7239, 7240, 7241

60204 orange
7187, 7236, 7237, 7238, 7240, 7241

Non-skid tires
for locomotives

7152
3083, 3085, 3086, 3089, 3092, 3093, 3094, 3098, 3099, 3151

7153
3003, 3015, 3016, 3022, 3030, 3034, 3035, 3037, 3038, 3039, 3040, 3041, 3042, 3043, 3049, 3050, 3054, 3056, 3057, 3058, 3064, 3065, 3082, 3084, 3095, 3096, 3102, 3149, 3155

7154
3000, 3021, 3028, 3031, 3044, 3055, 3060, 3062, 3066, 3067, 3068, 3071, 3072, 3074, 3075, 3076, 3077, 3078, 3080, 3087, 3090, 3150

Current pick-up shoes
for the following locomotives, cars and lighting sets

7164
3016, 3022, 3028, 3034, 3035, 3037, 3038, 3039, 3040, 3041, 3042, 3043, 3050, 3054, 3055, 3056, 3057, 3058, 3066, 3067, 3068, 3071 front, 3072, 3074, 3075, 3076, 3077, 3082, 3084, 3085, 3096, 3150, 3155, 4028

7175
3015, 3071 rear, 3150, 4018, 4044, 4053, 4077, 4081, 4089, 7197, 7198, 7320, 7322, 7323, 7324

7183
3021

7185
3000, 3003, 3030, 3031, 3044, 3049, 3060, 3062, 3064, 3065, 3078, 3080, 3083, 3086, 3087, 3089, 3090, 3092, 3093, 3094, 3095, 3098, 3099, 3102, 3149, 3151, 4060, 4062

Reverser unit springs

7194
Pack with 5 springs for reversing switches

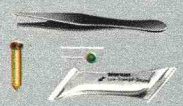
7218 **Pantograph current collector** with fixing screw

7219 **Single bar current collector** with fixing screw · The catenary system must be very carefully set up when 7219 is used

60030 **Pair of carbon brushes** for most HO gauge locomotives

60035 **Pair of carbon brushes** for locomotive 3015

60146 **Pair of carbon brushes** for locomotives 3034, 3035, 3037, 3038, 3039, 3042, 3049, 3056, 3057, 3058, 3082, 3084, 3085, 3102, 3151 and 3155



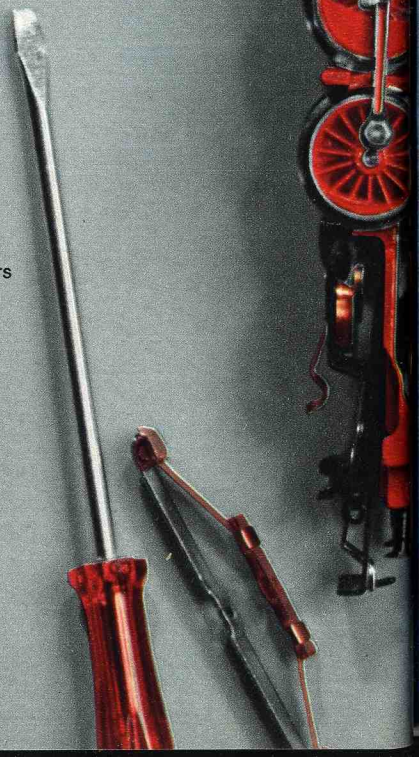
7226 **Smoke set** · Consisting of smoke unit (to fit locomotives 3082, 3084, 3085 and 3102), substitute steam pipe, cleaning wire, pair of tweezers and a capsule of smoke fluid

0241 **Smoke fluid** in plastic capsule as refill for smoke set 7226

7224 **Re-railing device** · Makes it easier to set multi-axled vehicles on the track · Length 300 mm (11-13/16") · Height 25 mm (1")

7001 **Coupling gauge** made of nickel plated steel sheet for checking locomotive and car couplings

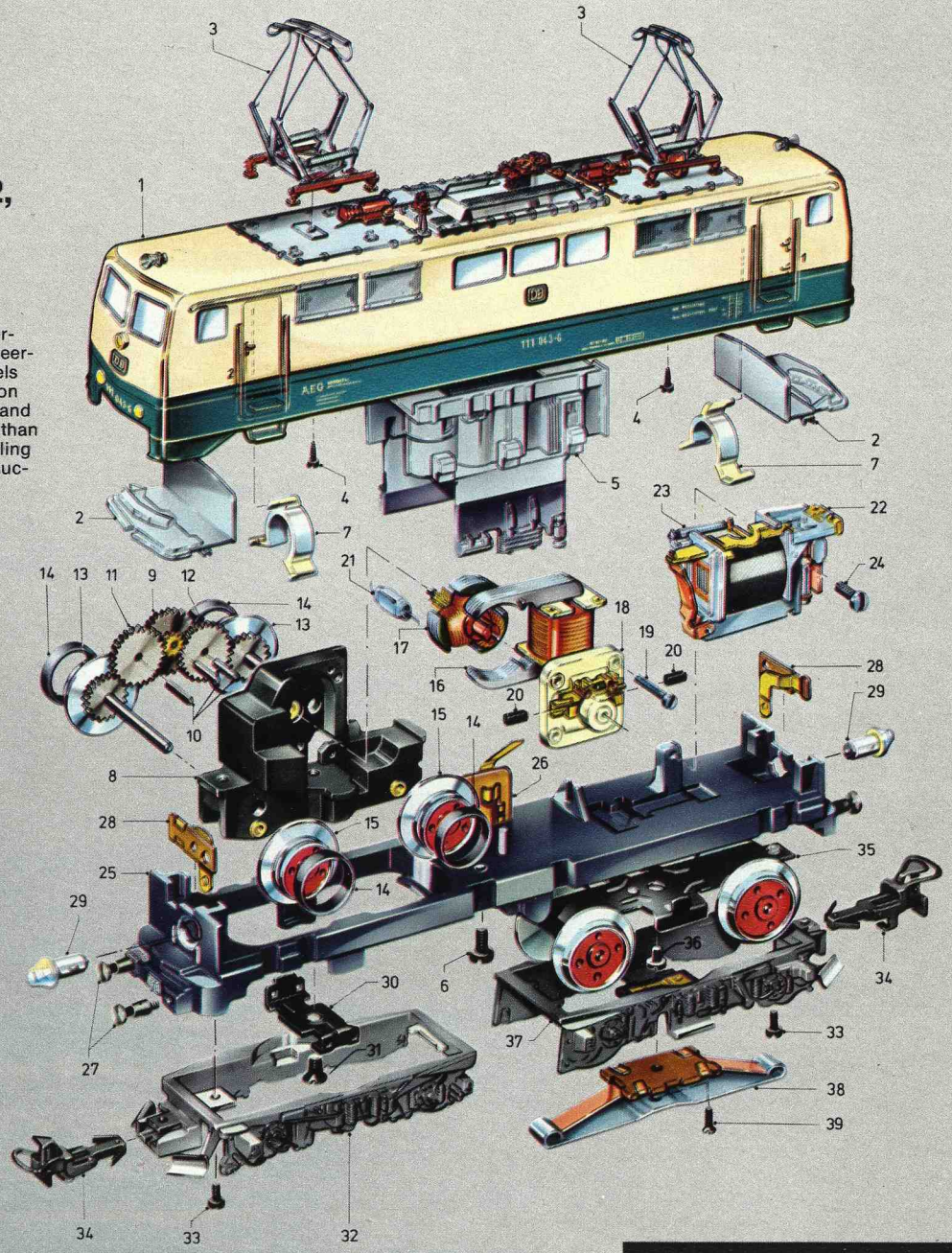
7199 **Bottle of oil** · Contains about 10 cc lubricating oil for locomotives and cars



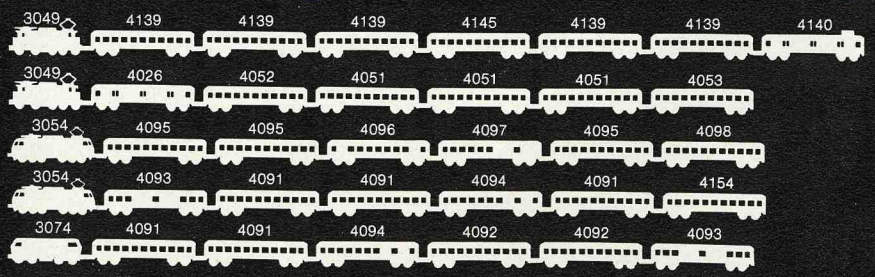
Item No	Description
1	Locomotive body (complete) with
2	Driver's cab
3	Pantograph current collector
4	Cheese-head screw
5	Interior fittings
6	Cheese-head screw
7	Lighting lens
	Motor frame (complete) with main components:
8	Driving track
	Mounted on it are:
9	Cluster gear
10	Bearing pin
11	Idler gear
12	Gear wheel
13	Part of driving axle with
14	Non-skid tire
15	Driving wheel with non-skid tire also
16	Field magnet
17	Armature
18	Motor end plate
19	Cheese-head screw
20	Pair of brushes
21	VHF choke
22	Reversing switch unit with
23	Switch unit spring and
24	Cheese-head screw
25	Support beam
26	Changeover switch
27	Buffer
28	Spring plate
29	Light bulb
30	Support plate
31	Round-head countersunk screw
32	Steering truck frame
33	Cheese-head screw
34	Coupling
35	Steering truck (complete)
36	Cheese-head screw
37	Steering truck frame
38	Current pick-up shoe
39	Countersunk screw

Electric locomotive 3042, Class 111

Märklin locomotives are masterpieces of realistic model engineering. The reliable working models are composed of many precision made parts. Delicately formed and yet powerful and robust. More than 100 years' experience of modeling – that's the basis of Märklin's success

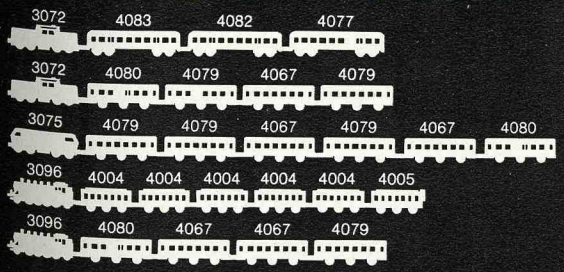


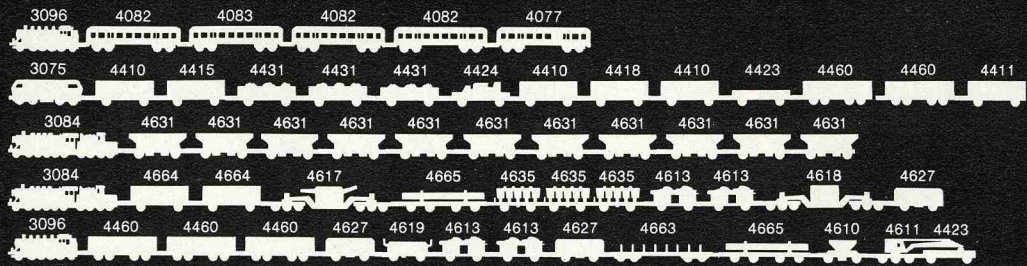
Train operating rules



Examples of marshaling of trains

In real life, the composition of trains is governed by strict regulations. For example: Cars may only be drawn by a locomotive having a maximum speed no higher than their own maximum permitted speed. Maximum figures for length and number of axles of a train may not be exceeded. Passenger trains must be formed only of cars having steering trucks or steering axles. If a combination of these is used, the cars with trucks must be at the front of the train. Cars without trucks may only with special permission be included in passenger trains having a maximum speed higher than 90 km/h (56 mph).
Freight cars may only be combined with passenger cars in special circumstances. In forming freight trains, the fact that the maximum speed of 80, 100 or 120 km/h (50, 63 or 75 mph) depends on the total weight must be borne in mind. Unusual loads which exceed the usual capacity of a car may only be included in a train in special circumstances. Detailed rules for the composition of trains are included in operator's regulations.
The model railroader is not bound by these rules, of course. However, correct train composition adds to the authenticity of the operation.





Passenger cars old-style and modern

Local service coaches
Platform and entrance at each end · Unglazed window · Length 11.5 cm (4-1/2")

4000
2nd class

4040
2nd class

Prussian coaches
Car sides divided into 6 compartments · Windows glazed with "cellon" panes · Length 13 cm (5-1/8") · Can be fitted with interior lighting set = 7074 (see pages 52/53)

4004
Compartment car without brakeman's cab

4005
Compartment car with brakeman's cab

Württemberg coaches
Platform and entrance at each end · Imitation ventilators on roof · Windows inset in plastic frames · Length 11 cm (4-3/8") · Can be fitted with interior lighting set = 7323 (see pages 52/53)

4007
Model of a private railroad coach

4008
Model of the type Pwi No. 0116911 Stgt. · Baggage car with superstructure for conductor's cab

Enclosed coaches
German Federal Railways local service coaches · Windows inset in plastic frames · Simulated rubber beading · Length 15.2 cm (6") · Can be fitted with interior lighting set = 7074 (see pages 52/53)

4067
Model of type AB3yge · 1st and 2nd class

4079
Model of type B3yge · 2nd class

4080
Model of type BD3yge · 2nd class with baggage compartment

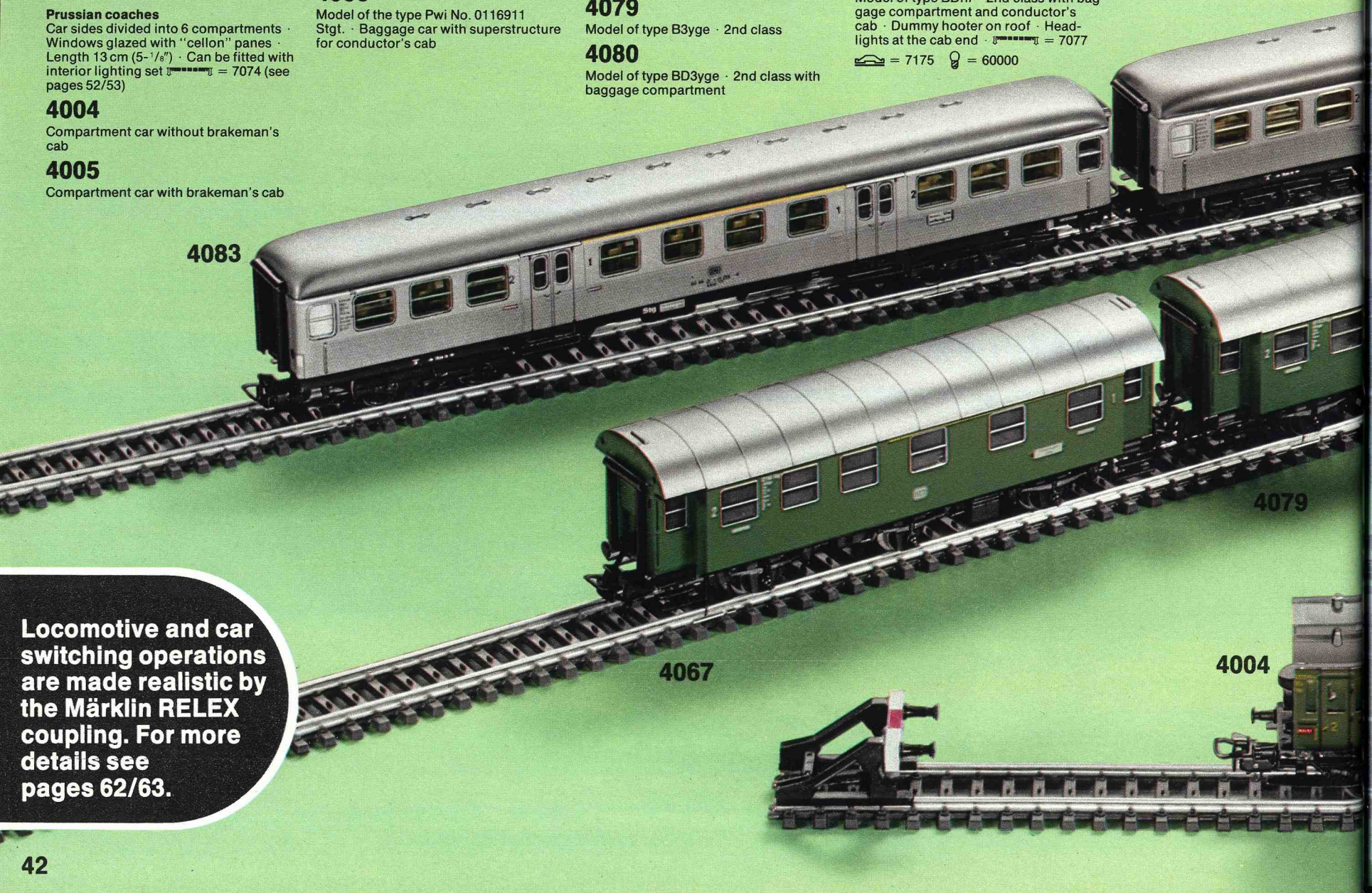
Silver-colored coaches
German Federal Railways local service coaches · Car body stainless steel-colored with peacock's eye pattern · Interior fittings · Windows inset in plastic frames · Length 24 cm (9-1/2") · Can be fitted with interior lighting set (see pages 52/53)

4077
Model of type BDnf · 2nd class with baggage compartment and conductor's cab · Dummy hooter on roof · Headlights at the cab end · = 7077

= 7175 = 60000

4082
Model of type Bnb · 2nd class · = 7077 + 7198

4083
Model of type ABnb · 1st and 2nd class · = 7077 + 7198



Locomotive and car switching operations are made realistic by the Märklin RELEX coupling. For more details see pages 62/63.

All cars are fitted with RELEX couplings (see pages 62/63).
All cars except 4000 and 4040 can be fitted with interior lighting (see pages 52/53).

The Märklin magazine contains information and assembly instructions for locomotives and cars.

Express coaches of the former Royal Bavarian Railways

Windows inset in plastic frames · Interior fittings · Imitation ventilators on roof · Length 22 cm (8-5/8") · Can be fitted with interior lighting set = 7328 (see pages 52/53)

4135

Model of type CCü · 3rd class

Older-style express coaches of the former German State Railways

Windows inset in plastic frames · Can be fitted with interior lighting set = 7328 (see pages 52/53)

4136

Model of type C4ü bay 11 · 3rd class · Interior fittings · Imitation ventilators on roof · Length 22 cm (8-5/8")

4137

Model of type Pw4ü bay 09 · Baggage car with roof superstructure · Length 20 cm (7-7/8")

new 4143

Model of type ABC4ü bay 11 · 1st/2nd/3rd class · Interior fittings · Imitation ventilators on roof · Length 23.2 cm (9-1/8")

4135

4136

4137

Standard-type express coaches of former German State Railways

Windows inset in plastic frames · Görlitz type trucks · Can be fitted with interior lighting set = 7327 (see pages 52/53)

4141

Model of type C4ü 31 DR · 3rd class · Interior fittings · Length 25 cm (9-7/8")

4142

Model of type Pw4ü 30 DR · Baggage car with roof superstructure · Length 22.6 cm (8-7/8")

new 4144

Model of type B4i 30 DR · 2nd class · Interior fittings · Length 25 cm (9-7/8")

4142

4141

4139

All coaches have destination plates for various routes and are capable of being fitted with interior lighting sets (see pages 52/53).

Interior fittings for cars 4037, 4045, 4049, 4066, 4067, 4072, 4073, 4079 and 4080

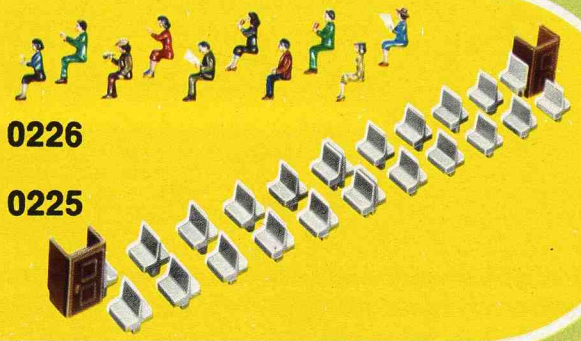
Interior fittings and figures are made in finely detailed plastic, the figures being hand painted. Illustrated installation instructions are included with every set.

0225

Set of interior fittings for express coaches, with 18 single-colored double seats, 6 single seats and 2 rest rooms

0226

Pack with 10 realistically-colored figures to supplement the interior fittings



Standard-type express coaches of German Federal Railways

Windows inset in plastic frames · Görlitz type trucks · Can be fitted with interior lighting set = 7327 (see pages 52/53)

4139

Model of type Büe[354] DB · 2nd class · Interior fittings · Length 25 cm (9-7/8")

4140

Model of type Düe[932] DB · Baggage car with roof superstructure · Length 22.6 cm (8-7/8")

new

4145

Model of type Ayse[604] DB · 1st class · Interior fittings · Length 25 cm (9-7/8")

4143 new

4144 new

4140

4145 new

German Federal Railways TEE coaches

Can also be used as Intercity coaches · Windows inset in plastic frames · Length 24 cm (9-1/2") · Can be fitted with interior lighting sets ⊓═══⊓ (see pages 52/53)

4085

Model of type Avm · Compartment car · Interior fittings with side corridor · ⊓═══⊓ = 7320

4087

Model of type WRm · Dining car · Interior fittings with kitchen and dining sections · ⊓═══⊓ = 7320

4089

Model of type Avm · Similar to 4085, b with current pick-up shoe, lighting uni for interior lighting, and taillights · ⊓═══⊓ = 7320
= 7175 = 60015

4090

Model of type ADm · Dome car · Interi fittings · Transparent plastic observati dome · ⊓═══⊓ = 7322

German Federal Railways express coaches

Windows inset in plastic frames · Length 24 cm (9-1/2") · Can be fitted with interior lighting sets ▭ (see pages 52/53)

4026

Model of type D ym · Baggage car · ▭ = 7077 + 7198

4051

Model of type A üm · 1st class · Interior fittings · ▭ = 7077 + 7198

4052

Model of type B üm · 2nd class · Interior fittings · ▭ = 7077 + 7198

4053

Model of type A üm · Similar to 4051, but with taillights and current pick-up shoe · ▭ = 7077 + 7198 ▭ = 7175 = 60015

4054

Model of type WR üm[132] · Dining car · Interior fittings with kitchen and dining sections · ▭ = 7320

4111

Model of type A üm · 1st class · Interior fittings · ▭ = 7077 + 7198

4112

Model of type B üm · 2nd class · Interior fittings · ▭ = 7077 + 7198

All cars are fitted with RELEX couplings (see pages 62/63) and can be fitted with interior lighting sets ▭ (see pages 52/53).

German Federal Railways express sleeping car

4150

Model of type WLABsm · TEN version · 1st and 2nd class · Interior fittings · Windows inset in plastic frames · Length 27 cm (10-5/8") · Can take interior lighting set ▭ = 7325

Express sleeping car of the German Sleeping and Diner Car Co. (DSG)

4064

Model of type WLABüm series 33200 · 1st and 2nd class · Windows inset in plastic frames · Length 24 cm (9-1/2") Can be fitted with interior lighting set ▭ = 7320

German Federal Railways express coach

4037

Model of a more old-fashioned type · 2nd class · Length 22 cm (8-5/8") · Can be fitted with interior lighting set ▭ = 7077 + 7198

International express coaches

Windows inset in plastic frames · Can be fitted with interior lighting sets (see pages 52/53)

International Sleeping Car Co.'s express sleeping car

4029

Model of type ISG No. 4581 · Length 24 cm (9-1/2") · = 7077 + 7198

Danish Railways' express coach

4045

Model of type B 2300 · 2nd class · Length 24 cm (9-1/2") · = 7077 + 7198

Netherlands Railways' express coaches

4049

Model of type B 6600 · 2nd class · Length 24 cm (9-1/2") · = 7320

4151

Model of TEN coach · 1st and 2nd class sleeping car · Interior fittings · Length 27 cm (10-5/8") · = 7325

Swedish Railways' express coaches

4072

Model of type Bo 1 · 2nd class · Length 23.7 cm (9-3/8") · = 7197

4073

Model of type RBo 2 · Dining car · Length 23.7 cm (9-3/8") · = 7197

Swiss Federal Railways' express coaches

4066

Model of Series A 2500 · 1st class · Roof with longitudinal ribs and imitation ventilators · Length 24 cm (9-1/2") · = 7320

4068

Model of Type RIC · Dining car · Screwed-on roof with longitudinal ribs · Single bar current collector on roof · Length 24 cm (9-1/2") · = 7077

4138 new

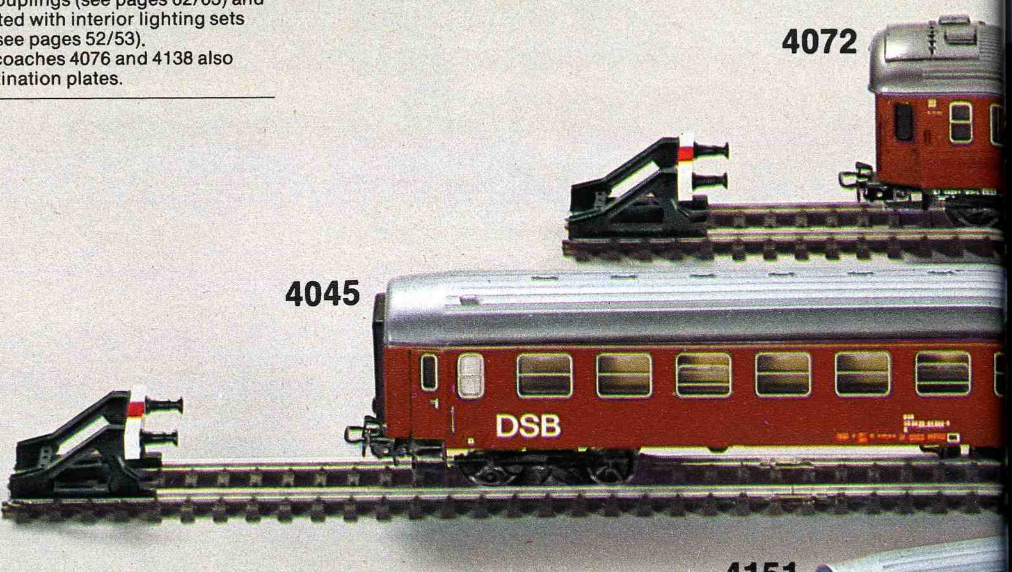
Model of the old-fashioned type C4ü · 3rd class · Interior fittings · Roof with imitation ventilators · Length 22.2 cm (8") · = 7328

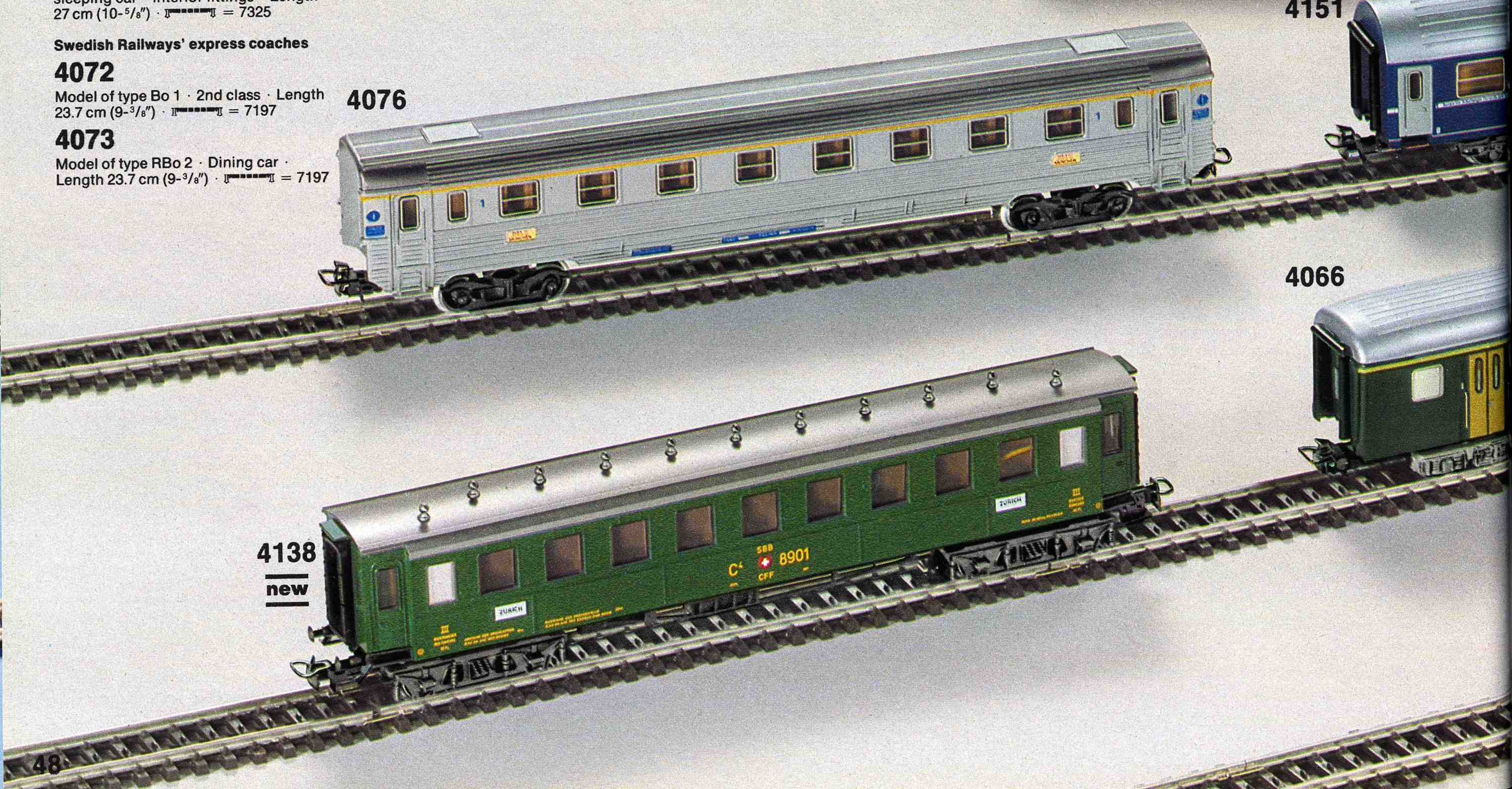
French Railways' express coach

4076

Model of type A8myfi · 1st class · Interior fittings · Length 24 cm (9-1/2") · = 7197

All cars (except 4138) are fitted with RELEX couplings (see pages 62/63) and can be fitted with interior lighting sets (see pages 52/53).
Express coaches 4076 and 4138 also have destination plates.





Passenger cars without interior fittings can be fitted out by yourself (see pages 44/45).

Illuminating diodes provide a gentle, steady light.

new

4154

4094

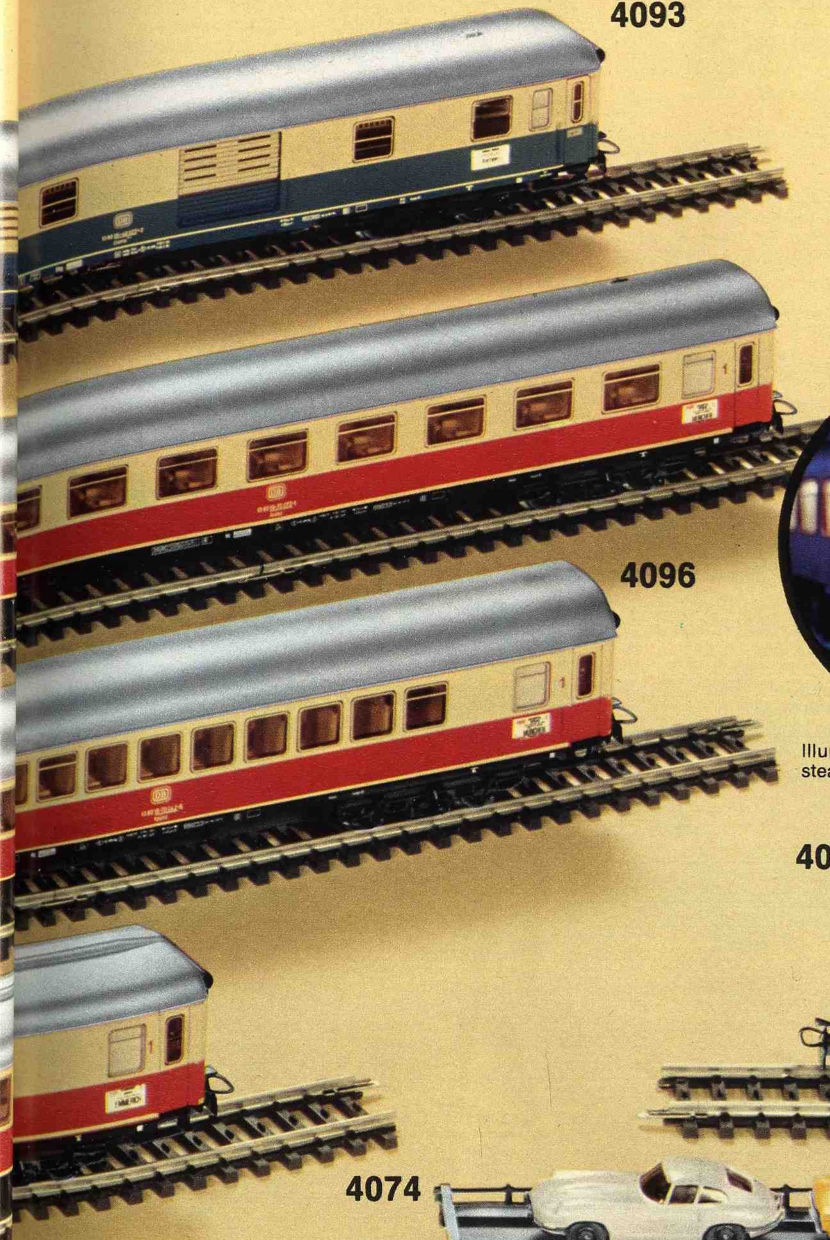
4092

4095

4091

4097

4099



German Federal Railways' express coaches
Windows inset in plastic frames · Length 27 cm (10-5/8") · Can be fitted with interior lighting sets (see pages 52/53)

4091
Model of type A üm^{201} · 1st class · Interior fittings · = 7325

4092
Model of type B üm^{234} · 2nd class · Interior fittings · = 7325

4093
Model of type D üm^{902} · Baggage car · Moveable roller shutters on each side · = 7325

4094
Model of type WR ümh^{132} · Dining car · Interior fittings for kitchen and dining sections · = 7325

4154
new
Model of type B üm^{234} · Similar to 4092, but with current pick-up shoe and illuminating diode taillights · = 7325
= 41494

German Federal Railways' automobile rack cars

4074
Model of type DDm 915 · Length 26.4 cm (10-3/8") · With 8 WIKING miniature automobiles aboard

4084
Model of type DDm 915 · Length 26.4 cm (10-3/8")

German Federal Railways' TEE coaches
Can also be used as Intercity coaches · Windows inset in plastic frames · Length 27 cm (10-5/8") · Can be fitted with interior lighting sets (see pages 52/53)

4095
Model of type Avm · Compartment car · Interior fittings with side corridor · = 7325

4096
Model of type Apm · Open-interior coach · Interior fittings, seats in one single and one double row with separating walkway · = 7325

4097
Model of type WRm · Dining car · Interior fittings for kitchen and dining section · = 7325

4098
new
Model of type Avm · Similar to 4095, but with current pick-up shoe and illuminating diode taillights · = 7325
= 41494

4099
Model of type ADm · Dome car · Interior fittings for bar, seating compartments and raised row of seats · Transparent plastic observation dome · = 7325

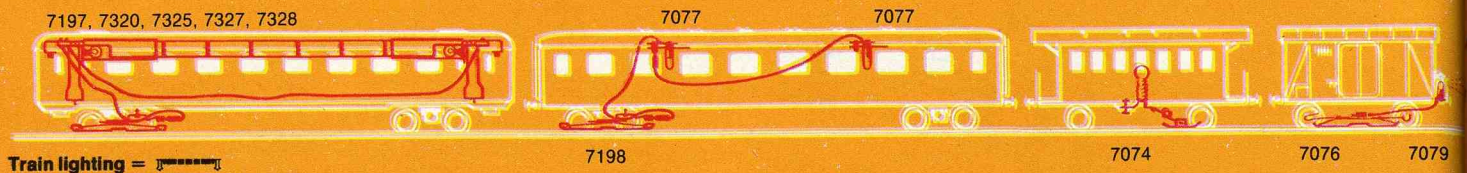
All cars are fitted with RELEX couplings (see pages 62/63). All cars except 4074 and 4084 can be fitted with interior lighting sets (see pages 52/53) and have destination plates for various routes.

new

Illuminating diodes provide a gentle, steady light.

Train lighting

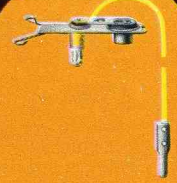
All cars except 4000 and 4040 can be fitted with interior lighting. The installation of the various types of lighting is shown on this plan. Strip lighting units are supplied together with installation instructions.



Train lighting =

7076

Current pick-up shoe for taillight 7079 when used on passenger cars 4000 and 4040



7077

Interior lighting set for most express coaches · With socket for connecting additional lighting sets · Light bulb

= 60000

7198

Current pick-up shoe for interior lighting set 7077

= 7175

7079

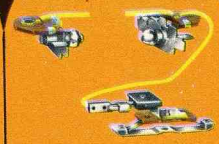
Taillight including bulb · Clips onto buffer · For use on cars with metal buffers only · For connecting it up, 7074, 7076, 7077 or 7198 is required

= 60001 (red)

7074

Interior lighting set for passenger cars 4004, 4005, 4067, 4079 and 4080 · With socket for connecting additional lighting sets · Light bulb

= 60020

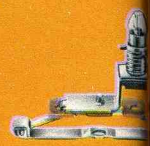


7322

Interior lighting set for TEE coach 4090 · Consists of current pick-up shoe 7198, 2 lamp sockets and 2 bulbs · Installation instructions are included

= 7175

= 60015

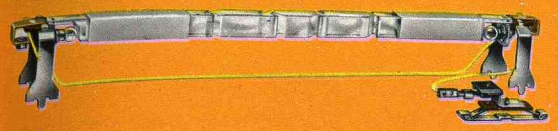


7323

Interior lighting for cars 4007 an 4008 · Light bu

= 7175

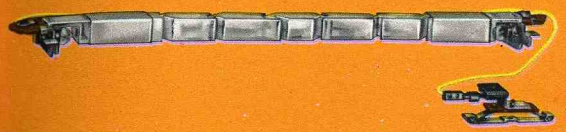
= 60010



7197

Interior lighting set for express coaches 4072, 4073 and 4076 · Consists of current pick-up shoe 7198, light diffuser, 2 lamp sockets and 2 bulbs · Installation instructions are included

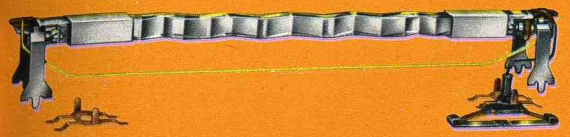
= 7175 = 60015



7320

Interior lighting set for TEE coaches 4085, 4087 and express coaches 4049, 4054, 4064, 4066 and 4069 · Consists of current pick-up shoe 7198, light diffuser, 2 lamp sockets and 2 bulbs · Installation instructions are included

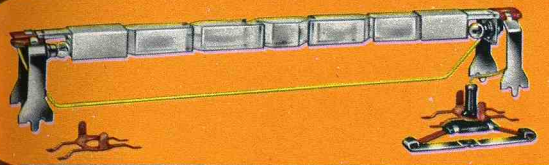
= 7175 = 60015



7325

Interior lighting set for express coaches 4091, 4092, 4093, 4094 and 4154 marked "A" on bottom of car, TEE coaches 4095, 4096, 4097, 4098, 4099 and express sleeping cars 4150 and 4151 · Consists of current pick-up shoe, light diffuser, 2 lamp sockets and 2 bulbs · Installation instructions are included

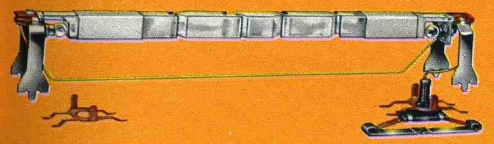
= 41494 = 60015



7327

Interior lighting set for express coaches 4139, 4140, 4141, 4142, 4144 and 4145 · Consists of current pick-up shoe, light diffuser, 2 lamp sockets and 2 bulbs · Installation instructions are included

= 41494 = 60015



new

7328

Interior lighting set for express coaches 4135, 4136, 4137, 4138 and 4143 · Consists of current pick-up shoe, light diffuser, 2 lamp sockets and 2 bulbs · Installation instructions are included

= 41494 = 60015

Freight trains
on the track

4511
Pulverized coal car · Length 10 cm (4″)

4413
Tipping bucket car · Bucket can tip to either side or be latched in the upright position · Length 11.5 cm (4-1/2″)

4414
Box car for transporting bananas · Model of German Federal Railways' type Ibbls · Length 11.5 cm (4-1/2″)

4415
Refrigerator car · Model of German Federal Railways' type Ichqrs 377 · Length 11.5 cm (4-1/2″)

4416
Beer car · Model of car owned by the Dortmunder Kronen brewery · Length 11.5 cm (4-1/2″)

4417
Beer car · Model of car owned by the Alpirsbacher Klosterbräu brewery · Length 11.5 cm (4-1/2″)

4418
Beer car · Model of car owned by the Duisburg König brewery · Length 11.5 cm (4-1/2″)

4423
Low-sided car · Model of German Federal Railways' type Kklm 505 · Length 11.5 cm (4-1/2")

4424
Low-sided car · Loaded with WIKING commercial vehicle · Length 11.5 cm (4-1/2")

4430
Open freight car · Model of German Federal Railways' type El-u · Length 11.5 cm (4-1/2")

4431
Open freight car (DB-El-u) · With removable load, representing coal · Length 11.5 cm (4-1/2")

4432 new
Wine car · Model of an old-fashioned private car · Length 11.5 cm (4-1/2")

4440
Tank car · ARAL · Length 11.5 cm (4-1/2")

4441
Tank car · ESSO · Length 11.5 cm (4-1/2")

4442
Tank car · SHELL · Length 11.5 cm (4-1/2")

4460 new
Car with swivelling roof · Model of German Federal Railways' type Taes 890 · Length 16 cm (6-3/8")

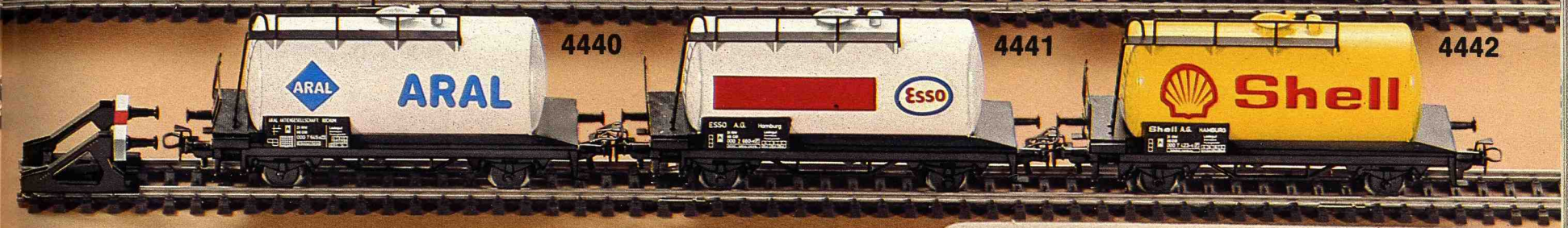
4473
Low-sided car · Model of German Federal Railways' type Rlmms · Length 16 cm (6-3/8")

4474
Low-sided car · Loaded with WIKING grade builder and WIKING shovel loader · Length 16 cm (6-3/8")

4475
Low-sided car with wagon sheet · Length 16 cm (6-3/8")

4415 4416 4417 4418

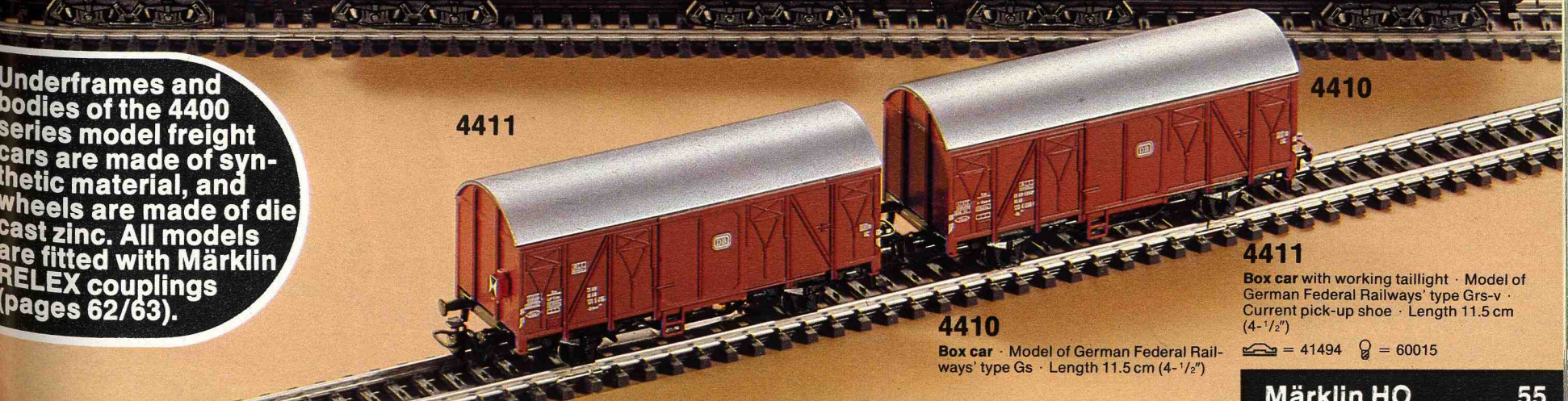
4440 4441 4442



4473 4474 4475

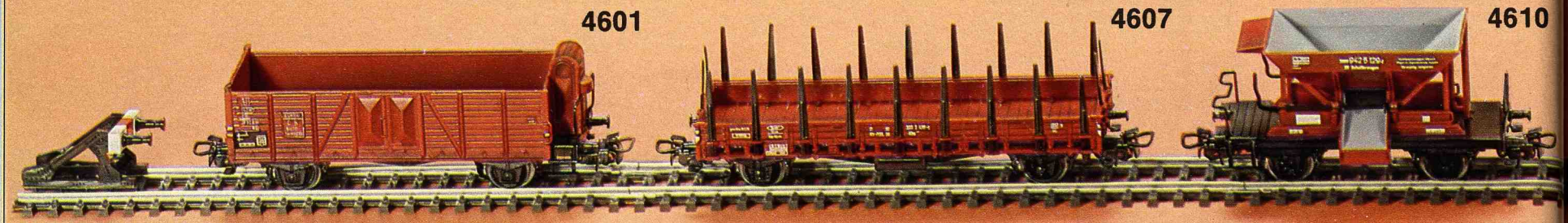
Underframes and bodies of the 4400 series model freight cars are made of synthetic material, and wheels are made of die cast zinc. All models are fitted with Märklin RELEX couplings (pages 62/63).

4411 4410



4410
Box car · Model of German Federal Railways' type Gs · Length 11.5 cm (4-1/2")

4411
Box car with working taillight · Model of German Federal Railways' type Grs-v · Current pick-up shoe · Length 11.5 cm (4-1/2")
= 41494 = 60015



4601

Open freight car with brake man's cab (DB-Omm 33) · Length 11.5 cm (4-1/2″)

4607

Low-sided car (DB-Rmms 33) with removable stanchions which can be stored in the sliding box under the car floor · Length 13 cm (5-1/8″)

4610

Ballast car with unloading doors operated by hand lever · Length 9.5 cm (3-3/4″)

4624

High capacity freight car (saddle bottomed car) · Model of German Federal Railways' type OOtz 50 · Length 13.3 cm (5-1/4″)

■ This type of car is generally used in international traffic for transporting coal, coke, ore etc., generally in permanently made-up high capacity trains.

4626

High capacity freight car with hinged hatches on roof · Model of German Federal Railways' type KKt 57 · All hatches will open · Length 13.3 cm (5-1/4″)

■ On a number of high capacity freight cars, fixed covers are fitted to provide the protection from the elements necessary for bulk materials such as grain.

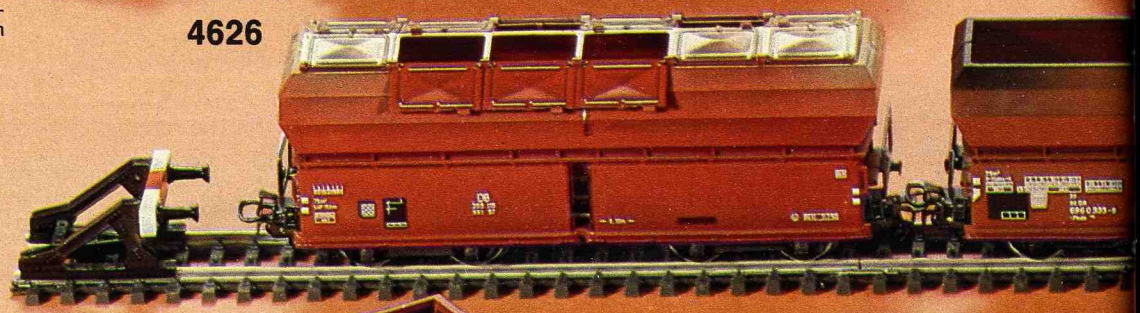
4627

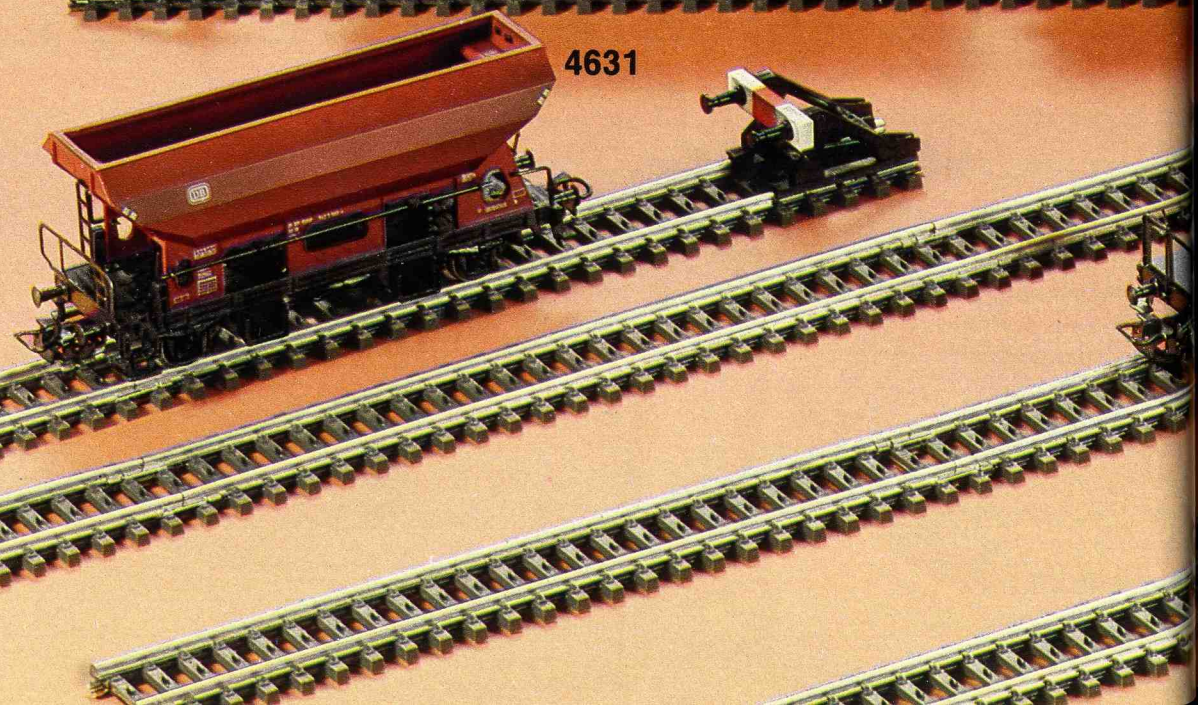
Box car · Model of German Federal Railways' type Glmmehs 57 · Length 13.3 cm (5-1/4″)

4631

Side dumping car · Model of German Federal Railways' type Otmm 70 · Length 11.2 cm (4-3/8″)

The discharge doors can be operated by hand levers, or by remote control using uncoupling track sections 5112 (pages 62/63) and 2197 (pages 68/69).





The series 4600 model freight cars are particularly finely detailed. All the models are fitted with Märklin RELEX couplings (pages 62/63).

4611

Crane car with rotating crane, movable boom and boom support · Crane hook can be raised and lowered by hand cranking · Length of underframe 9 cm (3-1/2") · (Low-sided car 4423 is not included in the price, but is recommended for use when moving the crane car)

4612

Automobile transporter with high level rack · Not loaded · Length 11.5 cm (4-1/2") · (On German Federal Railways' two of these cars are always coupled together to form a unit known as Off 52)

4613

Automobile transporter with high level rack · Loaded with 4 WIKING miniature automobiles · Length 11.5 cm (4-1/2")

4617

Well car · Loaded with transformer · Length 25 cm (9-7/8")

4618

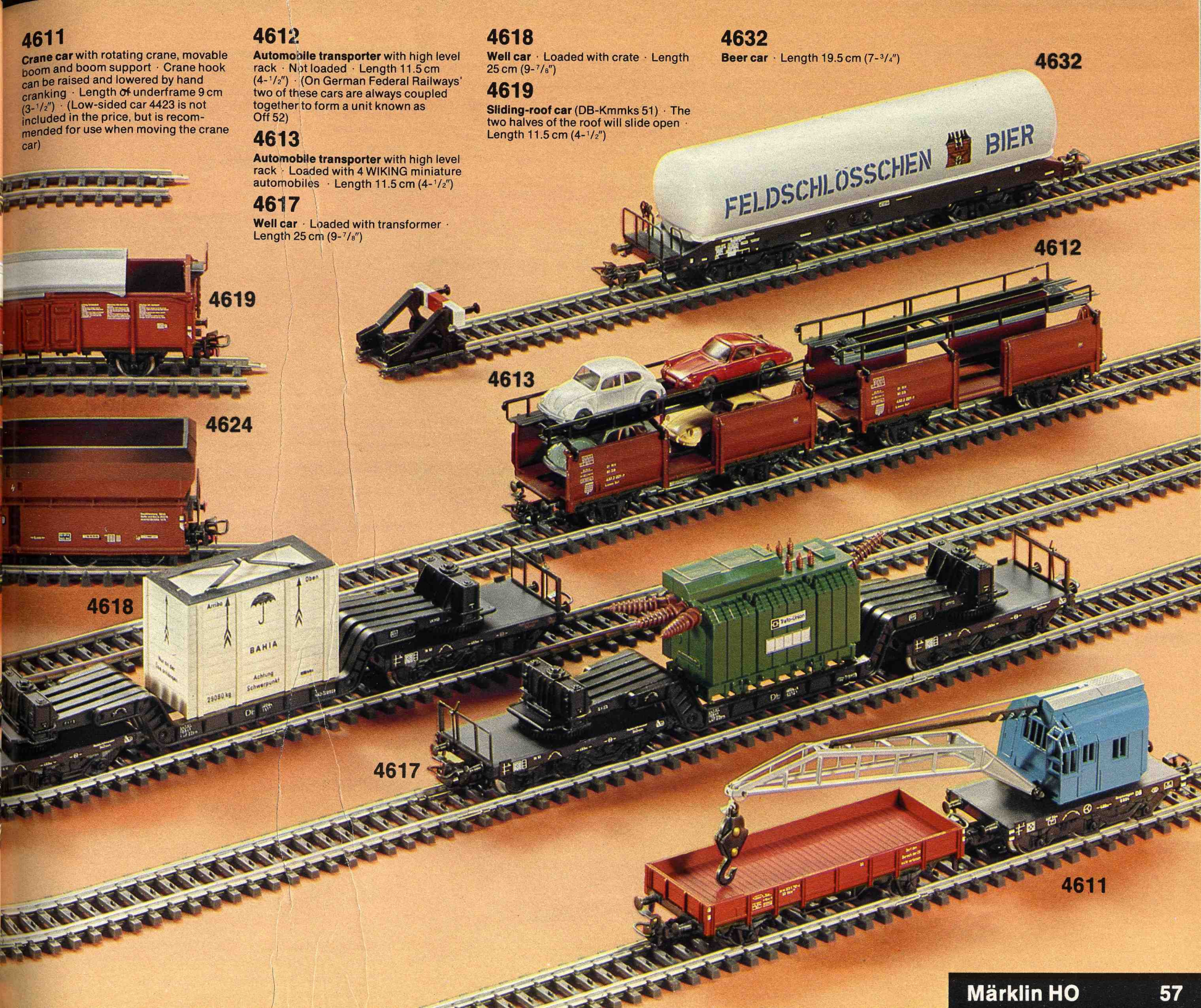
Well car · Loaded with crate · Length 25 cm (9-7/8")

4619

Sliding-roof car (DB-Kmmks 51) · The two halves of the roof will slide open · Length 11.5 cm (4-1/2")

4632

Beer car · Length 19.5 cm (7-3/4")



4633

Freight car with sliding sides and roof (DB-Klmmgks 66) · The roof halves and the sides will slide open · Length 15.7 cm (6-1/4")

4635

Tipping bucket car · Model of German Railways' type Ommi 51 · The buckets can be tipped when the center holding bar is unlatched · Length 10.5 cm (4-1/8")

4639 Netherlands

Open freight car · Model of Netherlands Railways' (NS) type · Length 11.5 cm (4-1/2")

4650

Tank car · ESSO · Length 16.4 cm (6-1/2")

4651

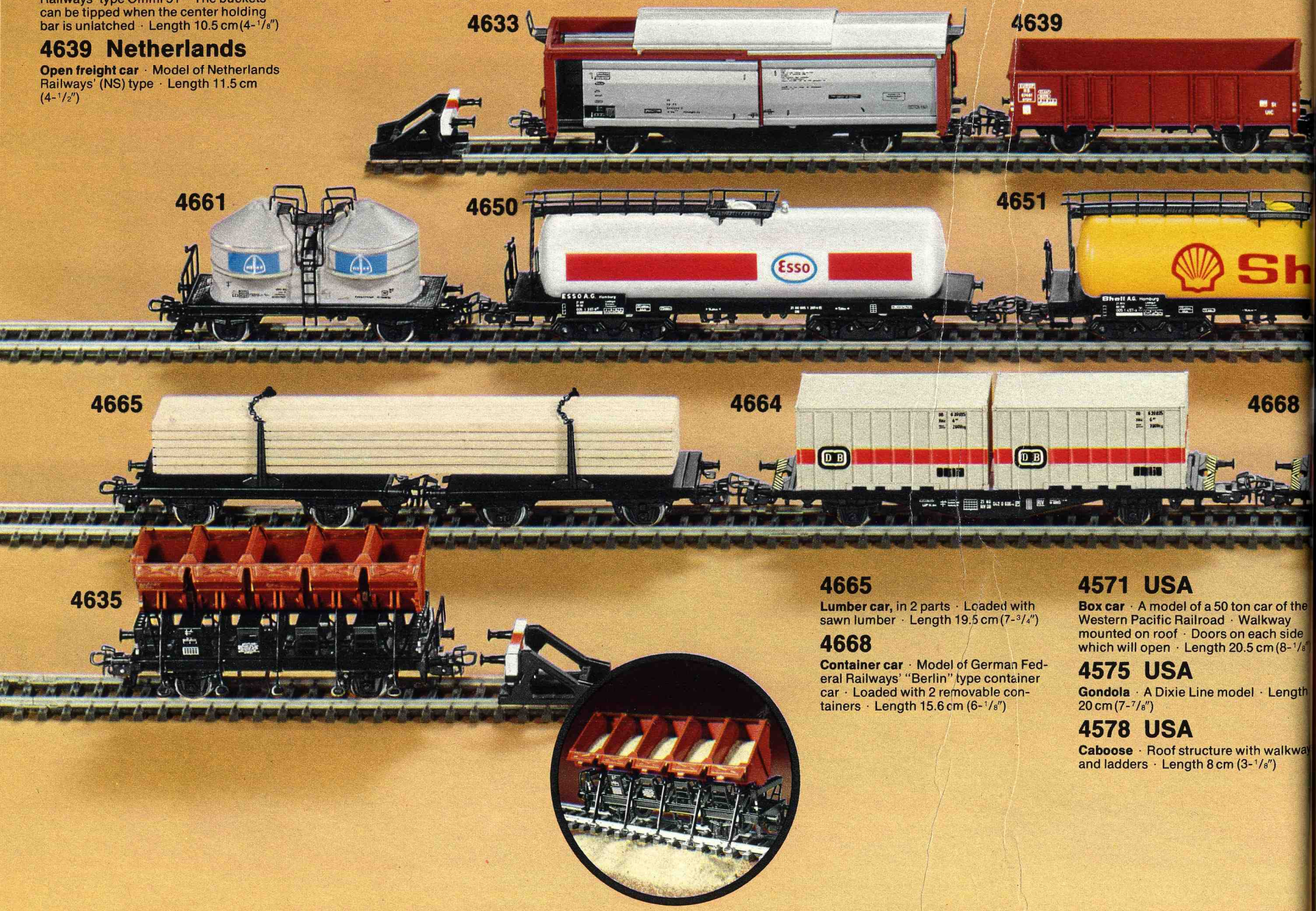
Tank car · SHELL · Length 16.4 cm (6-1/2")

4661

Tank car for fine bulk material · Model of German Federal Railways' type Ucs (Kds 54) with the marking "Quarz-Werke" · Length 10 cm (4")

4664

Container car · Model of German Federal Railways' "Berlin" type container car · Loaded with 2 removable containers · Length 15.6 cm (6-1/8")



4665

Lumber car, in 2 parts · Loaded with sawn lumber · Length 19.5 cm (7-3/4")

4668

Container car · Model of German Federal Railways' "Berlin" type container car · Loaded with 2 removable containers · Length 15.6 cm (6-1/8")

4571 USA

Box car · A model of a 50 ton car of the Western Pacific Railroad · Walkway mounted on roof · Doors on each side which will open · Length 20.5 cm (8-1/8")

4575 USA

Gondola · A Dixie Line model · Length 20 cm (7-7/8")

4578 USA

Caboose · Roof structure with walkway and ladders · Length 8 cm (3-1/8")

4644
Tank car · Model of a standard tank car, with BP markings · Length 10 cm (4″)

4646
Tank car · Model of a standard tank car, with ARAL markings · Length 10 cm (4″)

4652
Tank car · TEXACO · Length 16.4 cm (6-1/2″)

4653 new
Tank car · BP · Length 16.4 cm (6-1/2″)

4663
Flat car · Model of German Federal Railways' type SSImas 53 · Car floor made of die cast zinc · Uprights can fold down · Length 22.7 cm (9″)

4698 Switzerland new
Box car with brakeman's cab · Model of Swiss Federal Railways' (SBB) type J 3 d · Doors on each side which will open · Length 14 cm (5-1/2″)

4699 new
Freight train baggage car · Model of German Federal Railways' type Pwg Pr014 · Doors on each side which will open · Inset windows · Length 9.8 cm (3-7/8″)

Notes on the geometry of metal tracks (M-tracks)

The first diagram shows the three Märklin M-track circles, with their radii, distances apart from each other and curvatures, and also the number of track sections comprising a semicircle (Fig. 1).

Circle 5200 = 12 track sections
Circle 5100 = 12 track sections
Circle 5120 = 8 track sections

Concentric circles

Concentric circles can be constructed by using 5100 and 5200 series track sections. This gives a distance between track centers of 77.4 mm (3-1/16") (measured from contact stud to contact stud) and a clearance between tracks of 39 mm (1-1/2"). Turnouts 5202, 5221 or 5140 can be used to connect the inner to the outer loop.

The use of M-turnouts

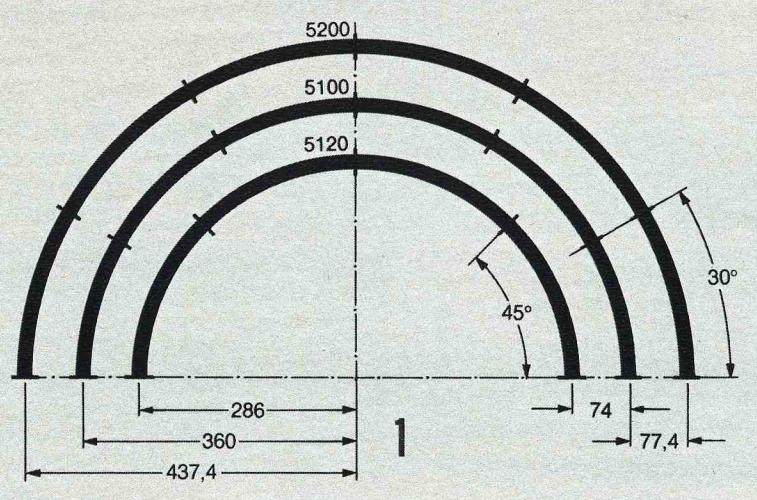
Electromagnetic turnouts 5137, 5140 and 5202 and the double slip switches 5128 and 5207 are operated by double solenoids. If a vehicle approaches the turnout from the wrong direction, its wheels open up the closure rail, so that derailment is avoided. The turnouts return automatically to their initial setting. Further turnouts can be joined directly onto either end of a turnout section.

Branches using 5100 series turnouts

When track section 5100 is fitted as a reverse curve onto the branch track of turnout 5137, the resulting distance between track centers is 96.4 mm (3-3/4"). With the through track extended by track section 5106, the two branches have exactly the same length. Length of this assembly is 2 × 180 mm (7-1/16") = 360 mm (1 ft 2-1/8"), i.e. the same as 2 track sections 5106 (Fig. 2).

Branching into parallel tracks using turnouts 5137 (Fig. 3).

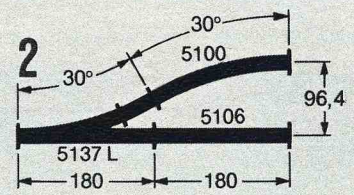
When the track sections supplied are used as reverse curves the distance between track centers is reduced from 96.4 mm (3-3/4") to 54.8 mm (2-1/8") (Fig. 4).

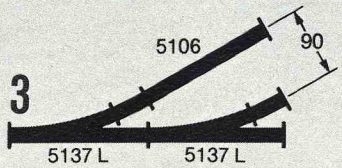


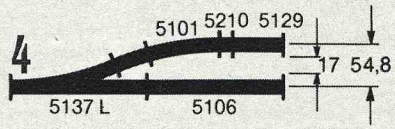
If the tracks of a 3- or more track layout are to be interconnected, retaining the 96.4 mm (3-3/4") distance between track centers, it is necessary to use crossing 5114 or double slip switch 5128. The double slip switch has the advantage that a train diverted by a turnout from one of the outer tracks can, if desired, be switched onto the center track. The simple crossing only interconnects the outer tracks and does not enable transfer to the inner track (Fig. 5).

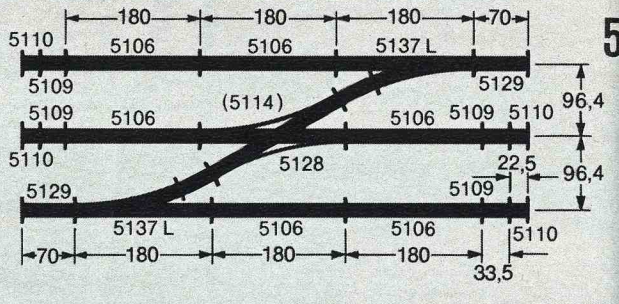
Märklin curved turnouts 5140
The purpose of these turnouts is to enable track interconnections to be made on the curve, hence saving space. The diagram shows how a standard circle track section (5100) is fitted to the single end of each curved turnout, although these are on the large concentric circle. The longer track section 5200 of the large circle type is not used here, as with this the track center separation of 77.4 mm (3-1/16") and the coincidence of the track joints would be lost. Curved turnouts can be used to connect the standard circle only with the larger circle (Fig. 6).

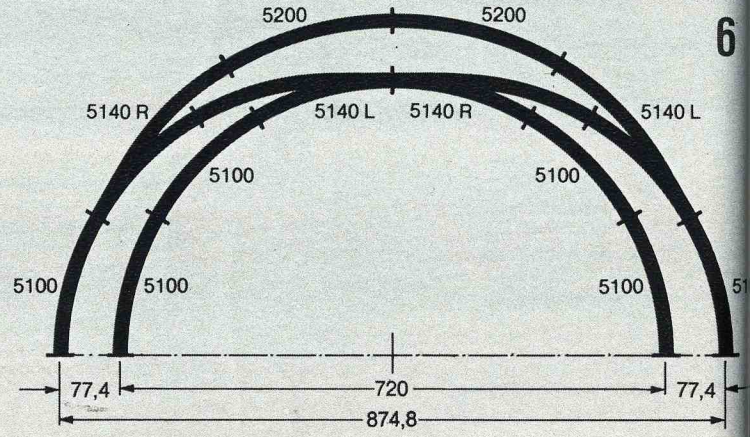
Branch using a curved turnout 5140 (Fig. 7).

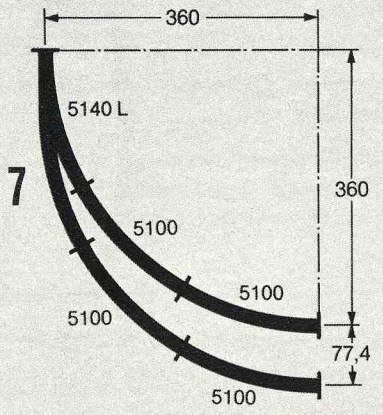












Branches using turnouts 5200

Track section 5206 is used as the reverse curve for turnouts 5202. The distance between track centers is 77.4 mm (3-1/16"), the same as the distance between the standard and the large concentric circles. If the through track is extended by track section 5106, it terminates in line with the end of track section 5206 (Fig. 8).

Branching of a parallel track section using turnouts 5202 (Fig. 9).

Parallel track sections with turnouts 5202 (Fig. 10).

If the tracks of a 3- or more track layout are to be interconnected, retaining the 77.4 mm (3-1/16") distance between the track centers of the standard and the larger circles, crossing 5215 or double slip switch 5207 is required. The advantage of these is that they are the same length as straight track section 5106. But note that the diagonally running track must be made up to length with track sections 5208, length 8 mm (5/16"), which are supplied with crossing 5215 and double slip switch 5207 (Fig. 11).

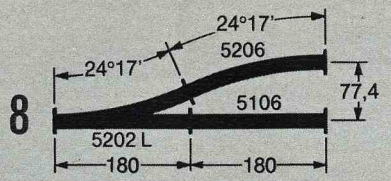
Interconnection of parallel tracks (Fig. 12).

Märklin three-way turnout 5214
The Märklin three-way turnout 5214 is a combination of two simple turnouts 5202 occupying the same length as a turnout 5202 or a straight track section 5106 (180 mm) (7-1/8"). Using a three-way turnout is a good way to save space in station tracks and turnout groups (Fig. 13).

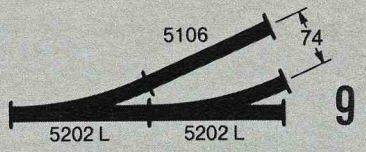
This figure shows how the Märklin three-way turnout enables a main track with 4 branch tracks to be formed in the shortest distance (Fig. 14).

Track branching using three-way turnouts (Fig. 15).

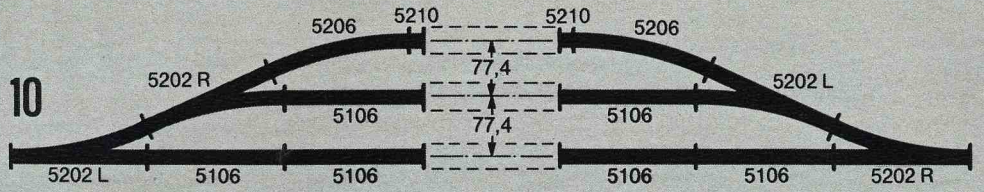
Figure 16 is a summary of the various ways of using Märklin M-turnouts.



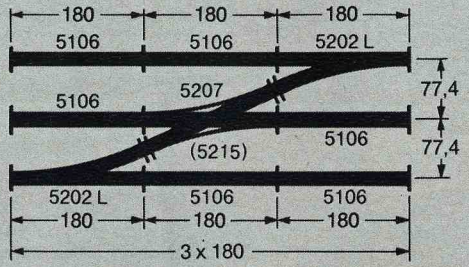
8



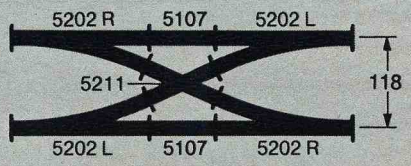
9



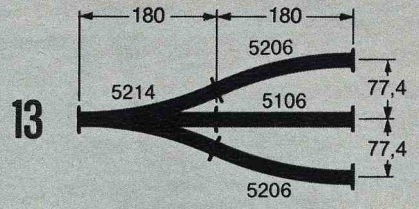
10



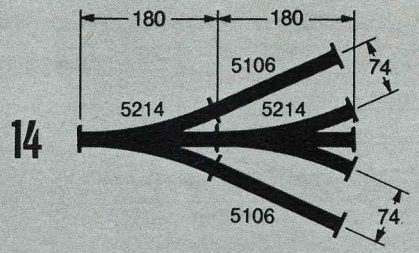
11



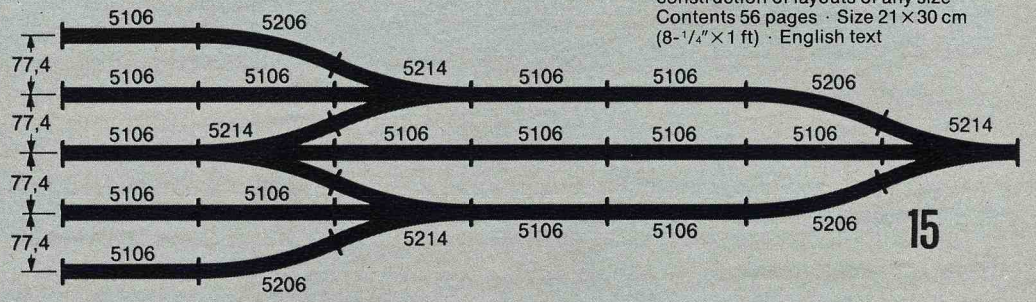
12



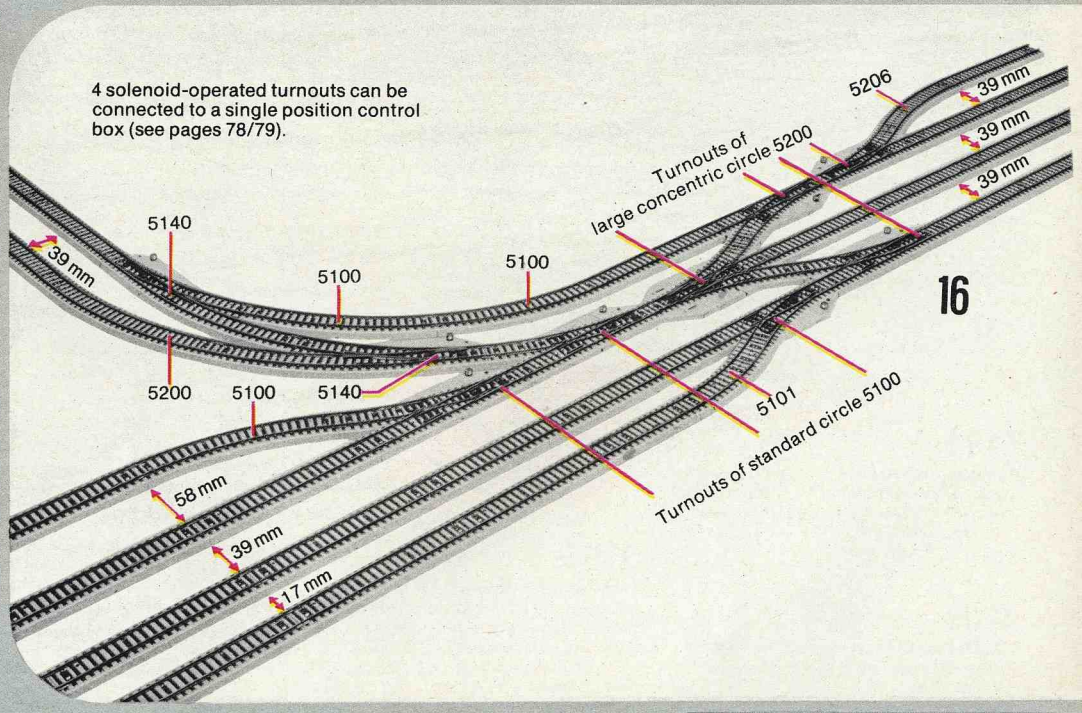
13



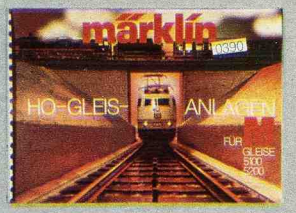
14



15



16



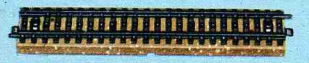
0392 M

Booklet entitled "Märklin track layouts, HO gauge, for M-tracks 5100 and 5200" · With full color illustrations and detailed track plans for 16 fully developed layouts with catenary systems · The individual electrical circuits are marked in distinguishing colors · The accompanying text includes many examples of track and turnout combinations · An outstanding guide for the construction of layouts of any size · Contents 56 pages · Size 21×30 cm (8-1/4"×1 ft) · English text

Märklin M-tracks

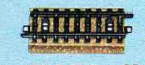
(M = metal body) The particular feature of M-tracks is their rugged profile with its simulated roadbed and its sturdy cross-ties. Additional roadbed under M-tracks is not necessary. It is best to use M-tracks in layouts which are altered frequently.

Straight track sections, 5100 series

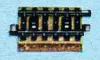


5106 Full length = 180 mm (7-1/8")

5107 Half length = 90 mm (3-9/16")



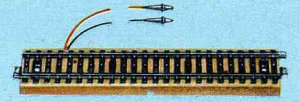
5129 **Make-up section** · Length 70 mm (2-3/4")



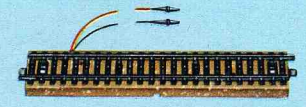
5108 Quarter length = 45 mm (1-3/4")

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

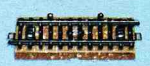
5110 1/8 length = 22.5 mm (7/8")



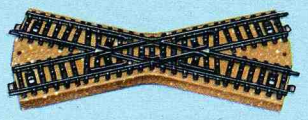
5111 **Feeder track section** · Full length = 180 mm (7-1/8") 2 connecting leads



5131 **Feeder track section** · Full length = 180 mm (7-1/8") Built-in capacitor for radio interference suppression · 2 connecting leads · One 5131 should be used for each traction current circuit



5146 **Switching track section** · Half length = 90 mm (3-9/16")



5114 **Crossing** · Length 193 mm (7-5/8") = 30° The center conductors of the crossing are electrically isolated from each other

7190 **Bumper,** riveted steel type · Clipped onto 70 mm (2-3/4") long track section

7191 **Bumper,** riveted steel type, with working track closure signal light · Clipped onto 70 mm (2-3/4") long track section

= 60000

7299 **Countersunk wood screws** 2 × 15 mm (1/16" × 9/16") for fixing metal tracks · Pack of 200

0206 **Track planning stencil** for Märklin HO gauge metal track sections of 5100/5200 series · Track sections, turnouts, crossings etc. are marked out on the stencil in 1 : 10 scale, and with a sharp pencil they can easily be reproduced on paper

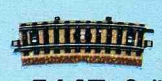
Curved track sections for standard circle, 5100 series

5100 Full length = 30°

5101 Half length = 15°

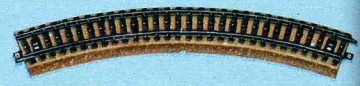
5102 Quarter length = 7° 30'

5103 **Feeder track section** · Full length = 30° · 2 connecting leads



5147 **Switching track section** · Half length = 15°

Switching track sections
Switching track sections (5146, 5147, 5213) can be used to control one operation in each direction of travel – i.e. two altogether. Each operation may apply to one solenoid-operated item or to several simultaneously. The switching track sections are triggered by the current pick-up shoes on locomotives or cars.



5120
Small radius track for branch lines an industrial railroads (for short vehicles only)

Curved track section · Full length = 4

Curved track sections for large concentric circle, 5200 series

5200 Full length = 30°

5201 Half length = 15°

5205 Length = 5° 43' · Together with 5206 equates to track section 5200

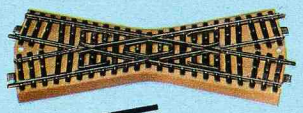
5206 Length = 24° 17' · Matches curve of turnouts 5202 and 5221

5213 **Curved switching track section** · Half length = 15°

5208 **Straight make-up section** · Length 8 mm (5/16")

5210 **Straight make-up section** · Length 16 mm (5/8")

5211
Crossing · Crossing angle 48 1/2° · Length 98 mm (3-7/8") · The center conductors of the crossing are electrically isolated from each other



5215 new
Crossing · Crossing angle 24° 17' · Length 180 mm (7-1/8") · The center conductors of the crossing are electrically isolated from each other · Same size a shape as 5207 · With 2 make-up length

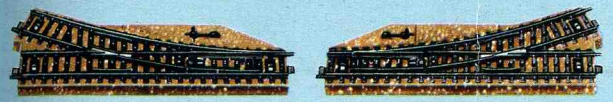
Märklin M-turnouts with sprung points, 5100/5200 series

with double solenoid operation for remote control

5202

Pair of solenoid-operated turnouts · Consisting of one right-hand and one left-hand turnout, both double-solenoid operated · Working signal lights · Track lengths corresponding to 5206 and 5106

= 60000



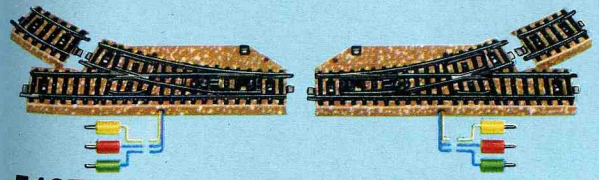
5221

Pair of manually-operated turnouts · Track dimensions as for 5202

5140

Pair of solenoid-operated curved turnouts · Consisting of one right-hand and one left-hand inside curve turnout, both operated by double solenoid · Working signal lights · Length and curvature of tracks as for track section 5100 · Length of through track 265.4 mm (10-1/2")

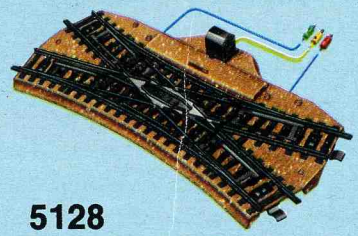
= 60000



5137

Pair of solenoid-operated turnouts · Consisting of one right-hand and one left-hand turnout, both operated by double solenoid · Working signal lights · Length of straight section 180 mm (7-1/8") · Radius of branch track 360 mm (1 ft 2-1/4") · Can be supplemented by the track section 5102 supplied to equate to 5100

= 60000



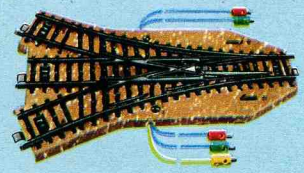
5128

Double slip switch · Crossing angle 30° · Double solenoid operation · Working electric signal lights which change to indicate the setting of the points (i.e. crossing or curve) · Hand lever to permit manual setting · Length of straight section 193 mm (7-5/8") · The curve is the same as for track section 5100

= 60000

5207

Double slip switch · Enables track spacing of 77.4 mm (3-1/16") to be maintained · Operated by double solenoid · Hand operating lever on actuator case · Length of straight section 180 mm (7-1/8") · The curve is the same as for 5202, 5221 and 5206 · 2 make-up lengths 5208, each 8 mm (5/16") long, are included



5214

Symmetrical three-way turnout operated by 2 double solenoids · 2 hand levers for manual setting of the 2 pairs of points · 5 connecting leads · Length of straight section 180 mm (7-1/8") · Radius of branch tracks 437.4 mm (1 ft 5-1/8"), the same as for the concentric circle · When used in conjunction with track section 5206, the 77.4 mm (3-1/16") track center spacing can be maintained on both sides

5112

Uncoupling track section for releasing automatic couplings · When the button on the position control box is pressed, the solenoid-operated ramps on either side of the stud contacts are raised, releasing the couplings · 2 connecting leads · Length of track 90 mm (3-1/2")

5113

Light standard to go with the uncoupling track section · Die cast zinc · The light shows while uncoupling is in process · Height 85 mm (3-3/8")

= 60010

Märklin-RELEX-Coupling

The coupling is opened by raising the ramp.

The RELEX coupling is designed to stay open after uncoupling, enabling cars to be pushed or dropped off at any desired point without the coupling closing again.

Railroading can only become really true to life when cars no longer have to be uncoupled manually from one another or from locomotives. This can be achieved by the use of uncoupling track sections, with their light standards which indicate when the uncoupler is being operated.

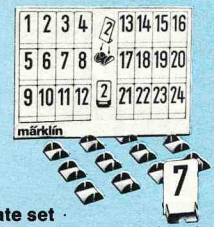
This not only looks right, it makes uncoupling easier too. When the coupling concerned, whether locomotive/car or car/car, is next to the signal standard, press the appropriate button on the control box once and the coupling will open, leaving the disconnected car or section of the train standing. Cars with the RELEX pre-uncoupler can then be pushed back again by the locomotive, under remote control, without the coupling closing.

2191

Adapter track section Full length = 180 mm (7-1/8") · Enables 5100 and 5200 series track sections to be joined to 2100 series track sections

7171

Sound-absorbent strips in packs of 50 with 50 countersunk wood screws, for quiet train operation · If the track is laid out on a plywood board, the wheels of a moving train naturally make a certain amount of noise, though not excessive · If it is desired to damp this noise down to about half, it is recommended that the tracks, turnouts and crossings shoud be laid on sound-absorbent strips · This will not affect the mounting of the catenary system



7195

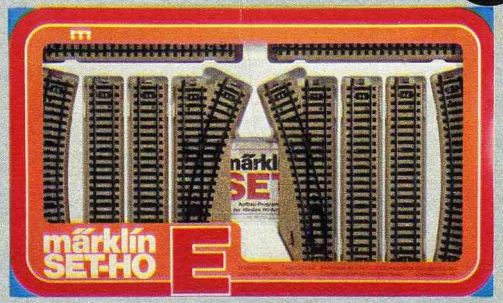
Number plate set · For identifying turnouts and signals on the track layout · Contents: 12 slotted bases, and number plates 1–24 which can fit in the slots

Märklin SET-HO Program

All Märklin HO basic sets (see pages 10–13) can be extended. The SET gift program is a particularly easy and logical way to do it.

The first stage is an extension pack E 5190 (with manually-operated turnouts) or E 5191 (with electrically operated turnouts). Further extension is by means of sets T1 5192, T2 5193 and T3 5194, which may be used in any order.

These track plans show how, for example, sets 2920 and 2930 can be extended. The same principles apply to gift packs 2940 and 2950, and the grade crossing from 2940 or the parking track from 2950 can equally easily be built in to the layout, adding even more scope and variety. Large gift pack 2875 includes the contents of E and many items from T 3, but it can be extended with the SET program just the same.



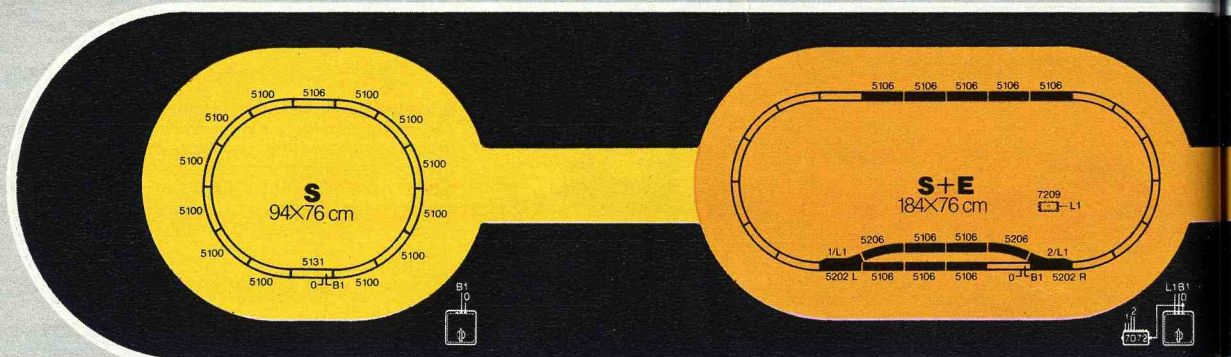
5190

Extension set E · Contents: 10 straight track sections 5106, 2 curved track sections 5206 · 1 pair manually-operated turnouts 5221 and instructions for extending the layout

5191

Extension set E · Contents: 10 straight track sections 5106, 1 pair solenoid-operated turnouts 5202, 2 curved track sections 5206, 1 position control box 7072, 1 distribution strip 7209, and connector material such as leads, sleeves and plugs · Instructions for extending the layout

Plan your own model layouts or make use of track layout booklet 0392 M. Tracks and turnouts from SET provide a good basis for further extension.

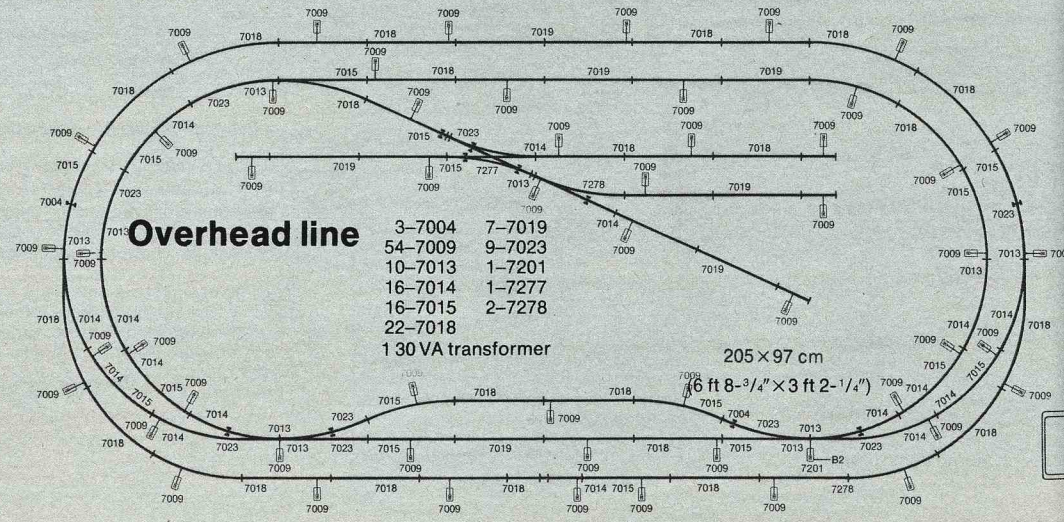


SET makes a good continuation gift

Examples 2 and 3 show how SET can be used to make different layouts. **Any** pack is thus an excellent way of enhancing **any** layout.

A catenary system is a good way of taking extension even further (Example 1).

1



5192

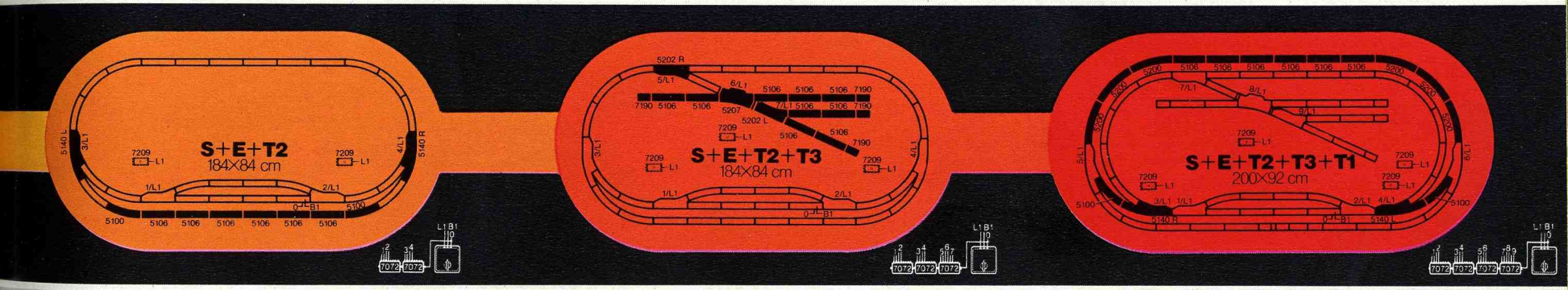
Double track set T 1 · Contents: 2 curved track sections 5100, 6 straight track sections 5106, 1 pair solenoid-operated curved turnouts 5140, 6 curved track sections 5200, 1 position control box 7072, 1 distribution strip 7209, and connector materials such as leads, sleeves and plugs · Instructions for extending the layout

5193

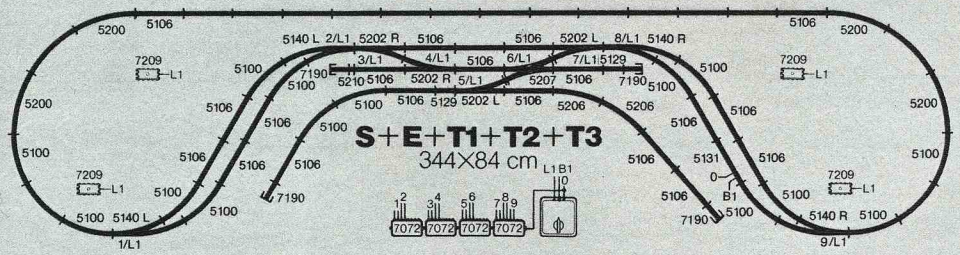
Station track set T 2 · Contents: 2 curved track sections 5100, 6 straight track sections 5106, 2 straight track sections 5129, 1 pair solenoid-operated curved turnouts 5140 · 1 straight track section 5210, 1 position control box 7072, 1 distribution strip 7209, and connector materials such as leads, sleeves and plugs · Instructions for extending the layout

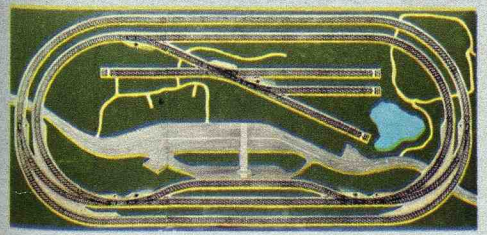
5194

Switching track set T 3 · Contents: 9 straight track sections 5106, 1 pair solenoid-operated turnouts 5202, 1 double slip switch 5207, 1 position control box 7072, 4 bumpers 7190, 1 distribution strip 7209, and connector materials such as leads, sleeves and plugs · Instructions for extending the layout



2

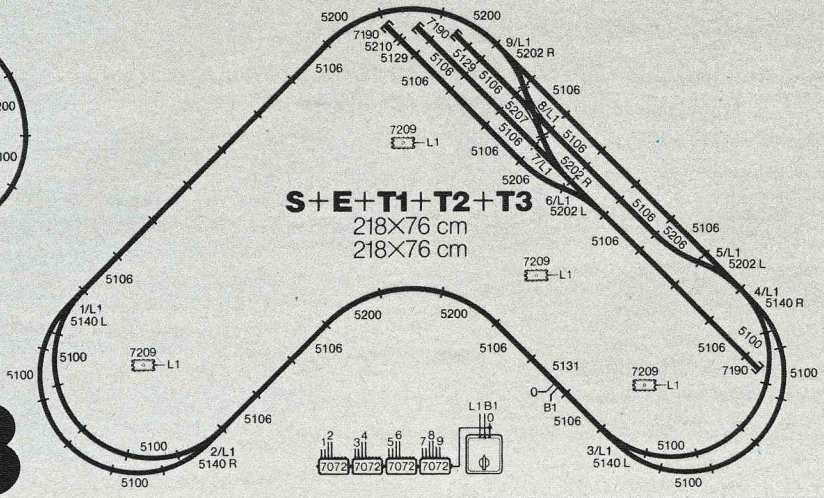




7298

Märklin-Toporama for the Märklin SET-HO extension program with basic sets 2920–2927 and 2930–2937 · Realistic model railroad landscape printed on cloth · Multi-colored design · Track layout up to SET 123 is printed on · Tufted grass areas give three-dimensional effect · Size 205×97 cm (6 ft 8-3/4″×3 ft 2-1/4″)

3



Märklin K-tracks (K = plastic ties)

The 2100 series K-tracks are designed to look completely true to life. They work on the same stud-contact system as M-tracks.

With this track the rails are laid on plastic cross-ties. The six-fold connection between one track section and the next comprises rail jointing clips, sprung connectors for the center conductor and an additional claw coupling.

The track geometry provides wide scope for designing different layouts, with the aid of 5 different radii of curvature and a flexible meter-length section. Whether it is for close parallel tracks, gentle curves or wide-ranging straight runs, K-tracks are the right components for the railroader who wants perfection.

The five Märklin K-track circles are:

Industrial circle	2110 =	8 track sections
Standard circle I	2121 =	12 track sections
Standard circle II	2131 =	12 track sections
Large circle I	2141 =	12 track sections
Large circle II	2151 =	12 track sections

With the aid of flexible track section 2105, any desired radius can be formed.

0372 K

Booklet "Märklin HO gauge track layouts for 2100 series K-tracks" · With full-color illustrations and detailed track plans of 16 fully developed layouts with catenary systems · Individual electrical circuits are shown in separate colors · Booklet also includes plans of many track and turnout combinations · An excellent guide for the construction of layouts of any size · 52 pages · Size 21×30 cm (8-1/4"×11-3/4") · English text

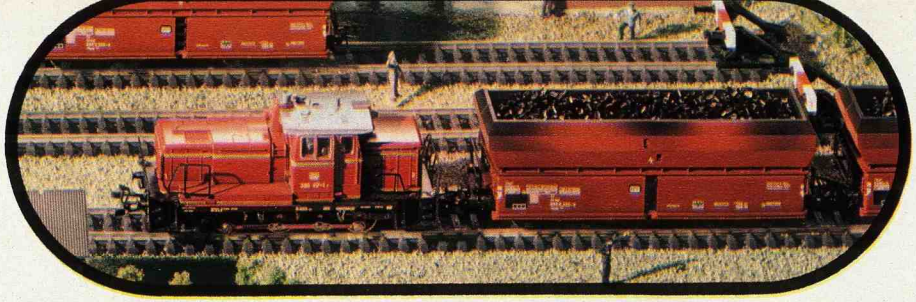
0207

Track planning stencil for Märklin HO gauge K-tracks of 2100 series · Track sections, turnouts, crossings, etc. are marked out on the stencil in 1 : 10 scale, and with a sharp pencil they can easily be reproduced on paper

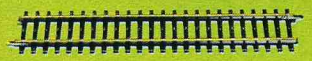

P

Märklin K-tracks

true to life



Straight track sections

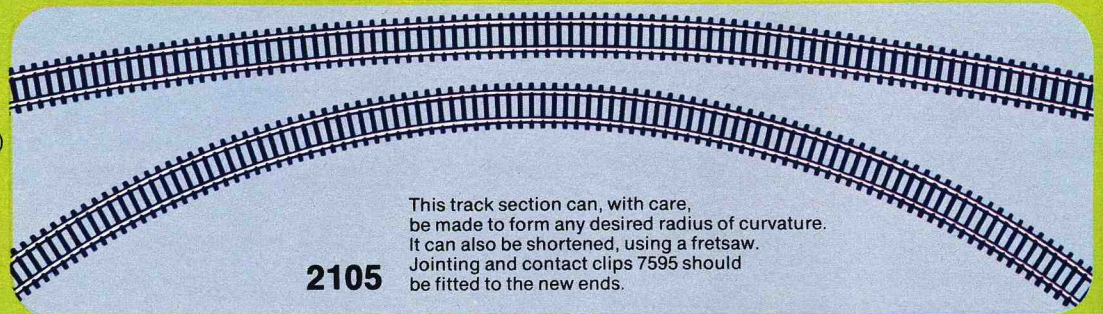


2100 Full length = 180 mm (7-1/8")

2101 Half length = 90 mm (3-9/16")

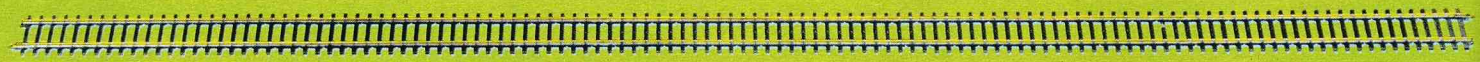
2102
Quarter length = 45 mm (1-3/4")

2104
1/8 length = 22.5 mm (7/8")



This track section can, with care, be made to form any desired radius of curvature. It can also be shortened, using a fretsaw. Jointing and contact clips 7595 should be fitted to the new ends.

2105



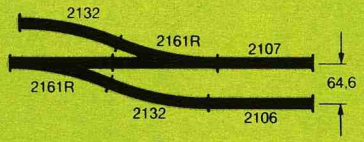
2105 new

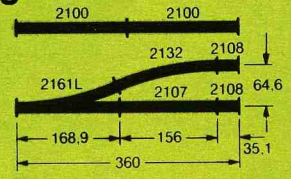
Flexible straight track section ·
5 × full length = 900 mm (2 ft 11-1/2") ·
Solid, corrosion-resistant stainless rails

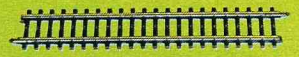
7595 new

Jointing and contact clips · For track section 2105 · Are required to enable 2105 to be re-connected to other track sections after it has been shortened

Straight make-up lengths



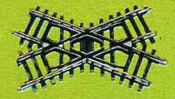




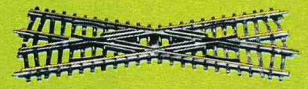
2106 Length 168.9 mm (6-5/8")

2108
Length 35.1 mm (1-3/8")

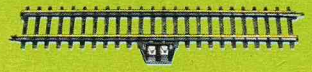
2107 Length 156 mm (6-1/8")



2158 **Crossing** ·
Crossing angle 45° ·
Length of straight sections
90 mm (3-9/16")



2159 **Crossing** ·
Crossing angle 22° 30' ·
Length of straight sections
168.9 mm (6-5/8")



2190 **Feeder track section** ·
Full length = 180 mm (7-1/8") ·
2 connector terminals marked "O" and "B" for connecting the traction power lead

2192 **Feeder track section** ·
Similar to 2190, but has in addition a built-in capacitor for radio interference suppression · One 2192 should be used for each traction current circuit

2191 **Adapter track section** ·
Full length = 180 mm (7-1/8") ·
Enables track sections of the 5100 and 5200 series to be connected to the 2100 series

2197 **Uncoupler track section** ·
Half length = 90 mm (3-9/16") ·
For releasing automatic couplings · Incorporates solenoids which permit the uncoupler ramp in the center of the track to be operated from a position control box

2199 **Switching track section** ·
Half length = 90 mm (3-9/16")

7391
Bumper, riveted steel type ·
For clipping onto the rails ·
Length 38 mm (1-1/2") ·
Oval-head countersunk wood screw included

7599
Countersunk wood screws
1,4 × 10 mm (1/16" × 3/8"), recommended for fixing plastic tracks to a base · Pack of 200

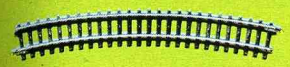
Curved track sections

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

Small radius track for branch lines and industrial railroads (for short vehicles only)

2110 Full length = 45°

Radius 360 mm (1 ft 2-3/16") · Standard circle I



2121 Full length = 30°

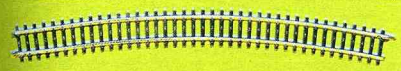
2123 Half length = 15°

2124 Quarter length = 7° 30'

2129 **Switching track section** · Half length = 15° · Radius 360 mm (1 ft 2-3/16")

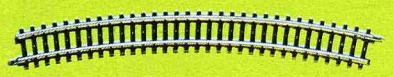
Switching track sections (2129, 2139, 2199) enable solenoid-operated items to be controlled automatically by a moving train. They are operated by the pick-up shoes of locomotives and cars and can trigger a separate and independent control function with each direction of motion of the train. The control pulses are fed out via two terminals, isolated from each other.

Radius 553.9 mm (1 ft 9-3/4") · Large circle I

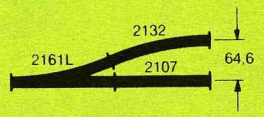


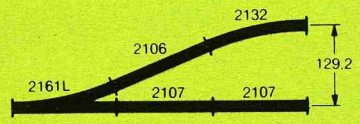
2141 Full length = 30°

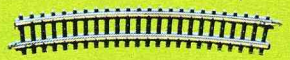
Radius 424.6 mm (1 ft 4-3/4") · Standard circle II



2131 Full length = 30°





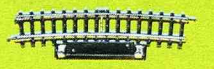


2132 3/4 length = 22° 30'

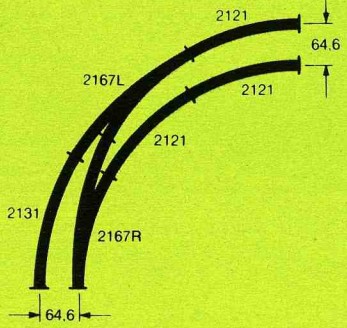
2133 Half length = 15°

2134 Quarter length = 7° 30'

2135 1/8 length = 3° 45'

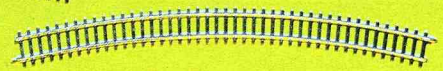


2139 **Switching track section** · Half length = 15° · Radius 424.6 mm (1 ft 4-3/4")



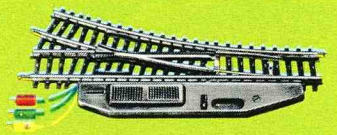
Example of use of 2167

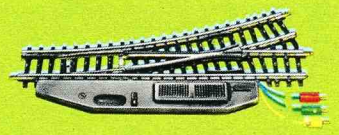
Radius 618.5 mm (2 ft 3/8") · Large circle II



2151 Full length = 30°

Märklin turnouts with sprung points, 2100 series

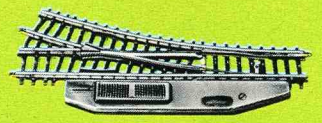




2161

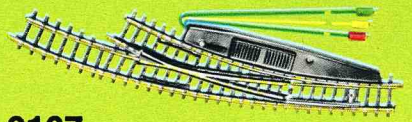
Pair of solenoid-operated turnouts · Consisting of one right-hand and one left-hand turnout, both operated by double solenoids · Working signal lights · Radius of branch track 424.6 mm (1 ft 4-3/4") · Length of straight track section 168.9 mm (6-5/8")

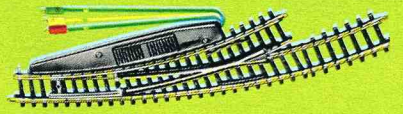
= 60000



2164

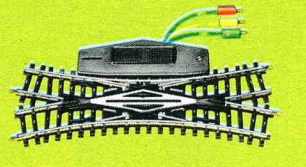
Pair of manually-operated turnouts · Consisting of one right-hand and one left-hand turnout · Radius of branch track 424.6 mm (1 ft 4-3/4") · Length of straight track section 168.9 mm (6-5/8") · Operated by hand lever





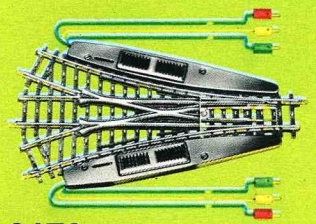
2167

Pair of solenoid-operated curved turnouts · Consisting of one right-hand and one left-hand inside curve turnout, both operated by double solenoids · Length and curvature of branch track are same as for track section 2121 · Length of through track 244.6 mm (9-5/8")



2160

Double slip switch · Radius 424.6 mm (1 ft 4-3/4") · Inside points operated by double solenoids by remote control · Hand lever in addition · Length of straight track sections 168.9 mm (6-5/8")



2170

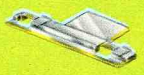
Symmetrical three-way turnout operated by 2 double solenoids · 2 hand levers for manual setting of the two pairs of points · Length of straight track section 168.9 mm (6-5/8") · Radius of branch tracks 424.6 mm (1 ft 4-3/4")

7500

Ground connector with terminal, for connecting the ground lead to 2100 series track sections

7504

Connector for center conductor with terminal · Is pushed onto the contact clips at the joint of 2100 series track sections



7522

Center conductor isolator · Is fitted between clips at the joint of 2100 series track sections to isolate the electrical circuits

Multi-train operation

The fascinating experience of operating a really true-to-life railroad starts when there are several trains on the track. That is when all the scope and variety of the Märklin HO system can be exploited fully, with turnouts being set and signals changing. Additional electrical circuits are required. Automatic block operation can be incorporated. With Märklin HO there are all sorts of ways in which multi-train operation can be made just like real life.

1.

Multi-train operation with signals

The use of signals for traffic control becomes essential when two or more locomotives are powered from a single electrical circuit. While one train waits at a "Halt" signal, the second can continue on its way round the track. Signals prevent collisions, and fast trains can be prevented from catching up with slower ones.

Signals can be controlled in two ways:

1. by manual control via position box 7072 (pages 78/79)
2. automatically, by locomotives traversing a switching track section (pages 62/63 for M-tracks and pages 68/69 for K-tracks)

Märklin signal manuals 0342 and 0361 (pages 72/73) describe these methods of operation.

2.

Multi-train operation using separate electrical circuits

If several trains are to be operated independently on one layout, each locomotive has to be powered by its own transformer. Each section of track fed by one transformer must be isolated electrically. There are various different kinds of separate circuit, from the simple parking track to the complete section of a layout.

For more details on separate circuits see pages 74/75.

3.

Multi-train operation with catenary system

On full scale railroads, electric locomotives are normally powered from overhead lines. The model railroader should keep this in mind, especially as all the major routes on German Federal Railways are now electrified. A further point is that with the fully functional Märklin HO catenary system it is possible to control two trains independently on a single track. Trains powered from overhead lines can still be controlled by signals. Märklin have developed special overhead line signal connectors for this purpose. The catenary system itself can be divided into separate electrical circuits, so this is another way of arranging for multi-train operation.

1+2+3

provides for model railroad operation with wide scope

0380

Booklet "Märklin HO railroads and their originals", a handbook for Märklin model railroad enthusiasts · With hints for adding details to model railroad layout, such as landscaping, plus information on Märklin locomotives and cars and their originals, on regulations for real-life railroads, on railroad operating, on circuits (for multi-train operation for example) and many other things · 228 pages · Size 15×24 cm (6″×9-1/2″) · German text

7036

Distant signal with movable disk · Signal lights change from amber/amber to green/green · Double solenoid · Width 28 mm (1-1/8″) · Length 65 mm (2-9/16″) · Height 73 mm (2-7/8″)

= 60000

7039

Home signal with one semaphore arm · Signal lights change from red to green · Double solenoid · Width 27 mm (1-1/16″) · Length 70 mm (2-3/4″) · Height 125 mm (5″)

= 60000

Home and distant signals are an indispensable part of a safe and reliable train control system – in real life as well as on Märklin HO gauge. Distant signals do not control trains directly, but they can be coupled to home signals and they add to the authentic appearance of the layout. Home signals can be used to control trains. When the signal shows "Halt", the locomotive stops, and it proceeds again when the signal shows "Proceed" or "Proceed slowly". There are installation instructions with each signal. You will find more ideas in signal manuals 0342 and 0361. The Märklin signal system, with its home and distant signals, semaphore-arm and color light signals, is the same as that used on German Federal Railways.

7038

Distant signal with movable disk and additional movable semaphore arm · Light sequence either as for 7036 or from amber/amber to amber/amber/green · 2 double solenoids · Width 28 mm (1-1/8″) · Length 65 mm (2-9/16″) · Height 73 mm (2-7/8″)

= 60000

7040

Home signal with 2 coupled semaphore arms · Signal lights change from red to green/amber · Double solenoid · Width 27 mm (1-1/16″) · Length 70 mm (2-3/4″) · Height 125 mm (5″)

= 60000

7041

Home signal with 2 independent semaphore arms · Signal lights change from red to green or red to green/amber · 3 solenoids · Width 27 mm (1-1/16″) · Length 97 mm (3-7/8″) · Height 125 mm (5″)

= 60000

7042

Track closure signal · Mast with removable front and rear disks · Double solenoid · Width 28 mm (1-1/8″) · Length 70 mm (2-3/4″) · Height 70 mm (2-3/4″)

= 60000

7245

Universal remote control switch with 2 single-pole switches and one changeover switch for various circuits · It can carry out up to 3 different functions simultaneously, such as causing station lighting to be controlled by the movement of a train, or overriding automatic control by signals for trains traveling in the opposite direction, or many other things · Lots of possible applications are shown in signal manual 0342 and in the installation instructions · Operated by double solenoid · Can be actuated by switching track section, position control box or hand lever · Width 30 mm (1-3/16″) · Length 70 mm (2-3/4″) · Height 8 mm (5/16″)

7187

Color light distant signal · Signal lights change from green/green to amber/amber using 4 bulbs · Width 16 mm (5/8″) · Length 11 mm (7/16″) · Height 60 mm (2-3/8″)

= 60202 green
60204 orange

7188

Color light home signal · Signal lights change from red to green · Double solenoid · Lighting by 2 bulbs · Additional hand control lever · Pair of sockets for connection of distant signal 7187 · Width 28 mm (1-1/8″) · Length 70 mm (2-3/4″) · Height 90 mm (3-1/2″)

= 60001 red
60002 green

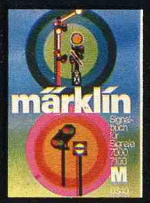
7339

Color light home signal · Signal lights change from red to green by manual operation, which at the same time controls the current to the section of metal track joined on to the signal · Additional track section 90 mm (3-1/2″) long with gap in center conductor · Width 55 mm (2-1/16″) · Length 90 mm (3-1/2″) · Height 90 mm (3-1/2″)

= 60001 red
60002 green

The Märklin signal range for M-tracks

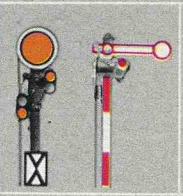
1. Signals



0342 M

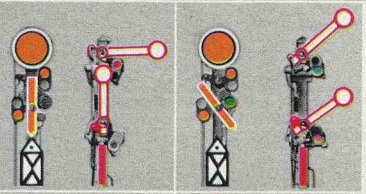
Märklin signal manual for signals of 7000 and 7100 series · A detailed explanation, with full color illustrations, of the installation and use of 7000 and 7100 series signals and the universal remote control switch with M-tracks · 28 pages · Size 18×25 cm (7-1/8″×4-7/8″) · English text

Usually used on open stretches of track, or in stations, when there is no diversion from the track ahead.

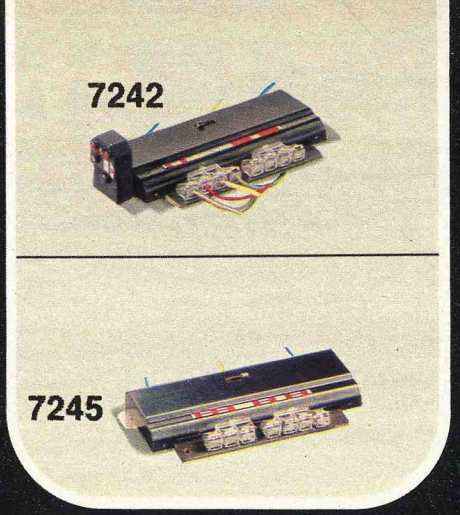


7036 7039	7036 7039	7236 7239	7236 7239
Distant signal: "Halt" signal ahead	Distant signal: "Proceed" signal ahead	Distant signal: "Halt" signal ahead	Distant signal: "Proceed" signal ahead
Home signal: "Halt"	Home signal: "Proceed"	Home signal: "Halt"	Home signal: "Proceed"

Usually used ahead of or at entry to stations, when the train is going to be diverted from the main track.



7038 7040	7038 7040	7237 7240	7237 7
Distant signal: "Halt" signal ahead	Distant signal: "Proceed slowly" signal ahead	Distant signal: "Halt" signal ahead	Distant signal: "Proceed slow" signal ahead
Home signal: "Halt"	Home signal: "Proceed slowly"	Home signal: "Halt"	Home signal: "Proceed slow



7236

Color light distant signal · Signal lights change from amber/amber to green/green using 4 bulbs · Includes fixing bracket 7230 and base plate · Width 16 mm (5/8") · Length 28 mm (1-1/8") · Height 67 mm (2-5/8")

= 60202 green
60204 orange

7237

Color light distant signal · Signal lights change from amber/amber to amber/green, using 4 bulbs · Includes fixing bracket 7230 and base plate · Width 16 mm (5/8") · Length 28 mm (1-1/8") · Height 67 mm (2-5/8")

= 60202 green
60204 orange

7238

Color light distant signal · Signal lights change from amber/amber to green/green or amber/green, using 4 bulbs · Double solenoid operation for the amber/green setting · Includes base plate · Width 30 mm (1-3/16") · Length 70 mm (2-3/4") · Height 67 mm (2-5/8")

= 60202 green
60204 orange

7242

Track closure signal, dwarf version · Signal lights change from red/red to white/white, and traction current controlled by double solenoid operation · Signal display provided by 2 bulbs · Additional hand control lever · Width 30 mm (1-3/16") · Length 70 mm (2-3/4") · Height 18 mm (3/4")

= 60200

7239

Color light home signal · Signal lights change from red to green, and traction current controlled by double solenoid operation · 2 bulbs · Additional hand lever · Includes base plate · Width 30 mm (1-3/16") · Length 70 mm (2-3/4") · Height 90 mm (3-1/2")

= 60201 red
60202 green

7240

Color light home signal · Signal lights change from red to green/amber, and traction current controlled by double solenoid · 3 bulbs · Additional hand lever · Includes base plate · Width 30 mm (1-3/16") · Length 70 mm (2-3/4") · Height 90 mm (3-1/2")

= 60201 red
60202 green
60204 orange

7241

Color light home signal · Signal lights change from red to green or green/amber, and traction current controlled by double solenoid operation with an additional solenoid for the green/amber setting · 3 bulbs · 2 hand control levers in addition · Includes base plate · Width 30 mm (1-3/16") · Length 95 mm (3-3/4") · Height 90 mm (3-1/2")

= 60201 red
60202 green
60204 orange

7245

Universal remote control switch with 2 single-pole switches and one changeover switch for various circuits · It can carry out up to 3 different functions simultaneously, such as causing station lighting to be controlled by the movement of a train, or overriding automatic control by signals for trains traveling in the opposite direction, or many other things · Lots of possible applications are shown in signal manual 0362 and in the installation instructions · Operated by double solenoid · Can be actuated by switching track section, position control box or hand lever · Width 30 mm (1-3/16") · Length 70 mm (2-3/4") · Height 8 mm (5/16")

Märklin signals for K+M-tracks, 7200 series

The color light home signals and the track closure signals of the 7200 series have switches which enable them to control traction current in the catenary system and the track center conductor independently. **The signal masts, and the lighting unit of track closure signal 7242 can be separated from the traction current switch units and set up by themselves.** Bracket 7230 is then required for fixing the masts. Ground connection is by the base plates or leads supplied, when used with 2100 series track sections, and via the leads when used with 5100 and 5200 series track sections.

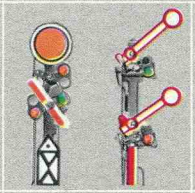
7230

Fixing bracket · Is required when the mast of color light signals 7238, 7239, 7240, 7241 and the track closure signal 7242 are set up separate from the traction current control units

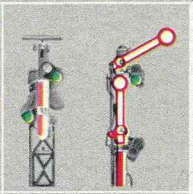
Center conductor isolators, center conductor connectors and users' instructions are included with signals 7239, 7240, 7241 and 7242.

Ahead of or at entry to stations, when either diversion or straight-ahead routing is possible.

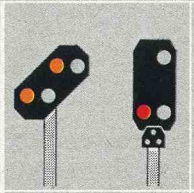
7038 7041
Distant signal: "Halt" signal ahead
Home signal: "Halt"



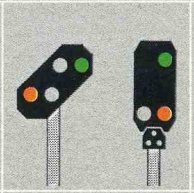
7038 7041
Distant signal: "Proceed slowly" signal ahead
Home signal: "Proceed slowly"



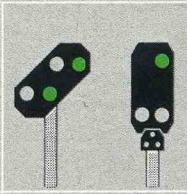
7038 7041
Distant signal: "Proceed" signal ahead
Home signal: "Proceed"



7238 7241
Distant signal: "Halt" signal ahead
Home signal: "Halt"

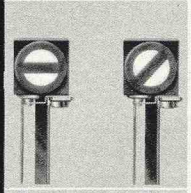


7238 7241
Distant signal: "Proceed slowly" signal ahead
Home signal: "Proceed slowly"

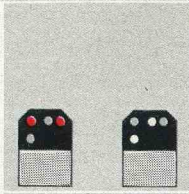


7238 7241
Distant signal: "Proceed" signal ahead
Home signal: "Proceed"

For controlling switching operations in a station or marshaling yard.



7042 7042
Track closure signal: "Halt! Do not enter"
"Entry permitted"



7242 7242
Track closure signal: "Halt! Do not enter"
"Entry permitted"

0361 K

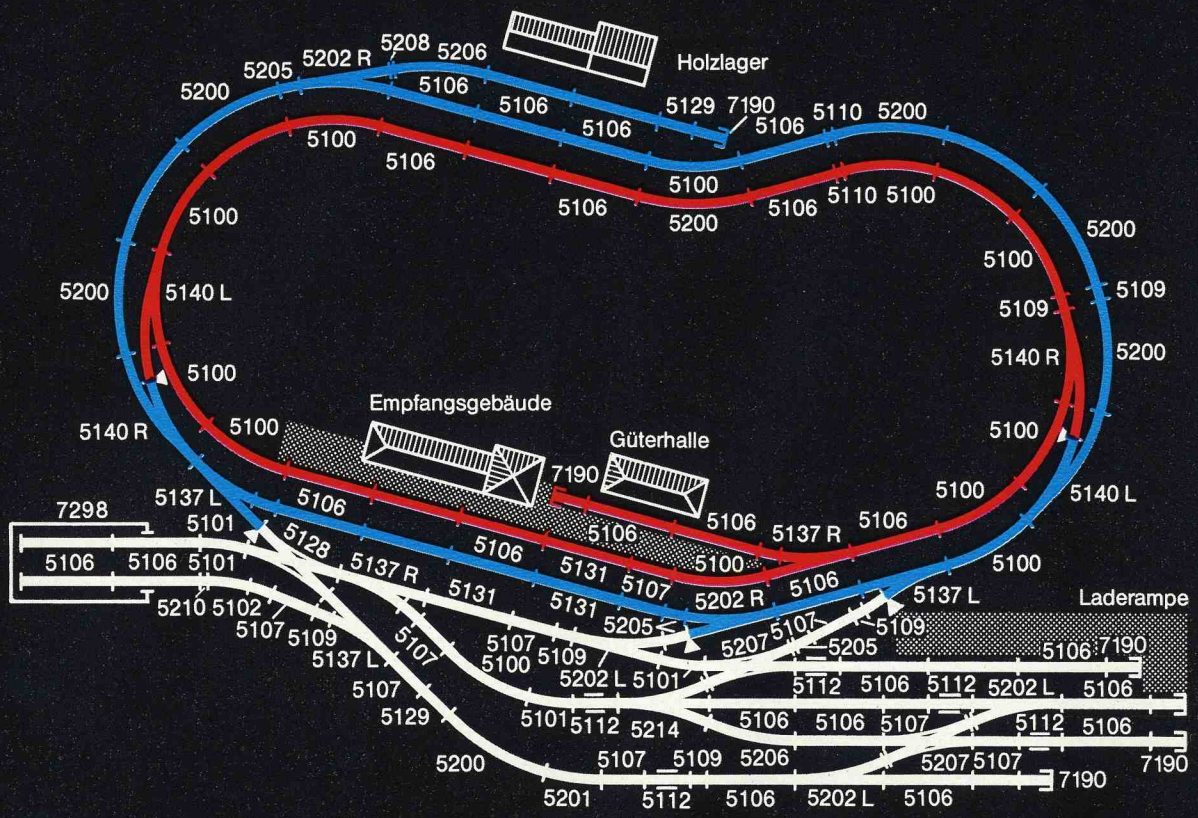
Märklin signal manual for 7200 series signals · A detailed explanation with six-color illustrations of the installation and use of signals and remote control switches of the 7200 series · 48 pages · Size 18×25 cm (7-1/8"×9-7/8") · English text

2. Electrical circuits

Every additional electrical circuit increases the number of ways in which trains can be controlled and operated.

Electrical circuits do not necessarily have to take the form of a circle. Parking tracks, branch tracks with two-way traffic and marshaling yards can all have their own circuits.

A stretch of incline within the layout can also be given its own circuit. The transformer supplying this circuit can be used to regulate the speed on the incline, in automatic train control, so that speed uphill equals speed downhill.



This example shows how train operation can continue to become ever more realistic and more varied:

One circuit

Two trains are powered by a single source of traction voltage. They both run faster or slower, or change their direction under the control of the transformer. Using signals, one train can be halted while the other continues to run. It is only possible to change the direction of one of the pair while the other one is halted at a signal.

Two circuits

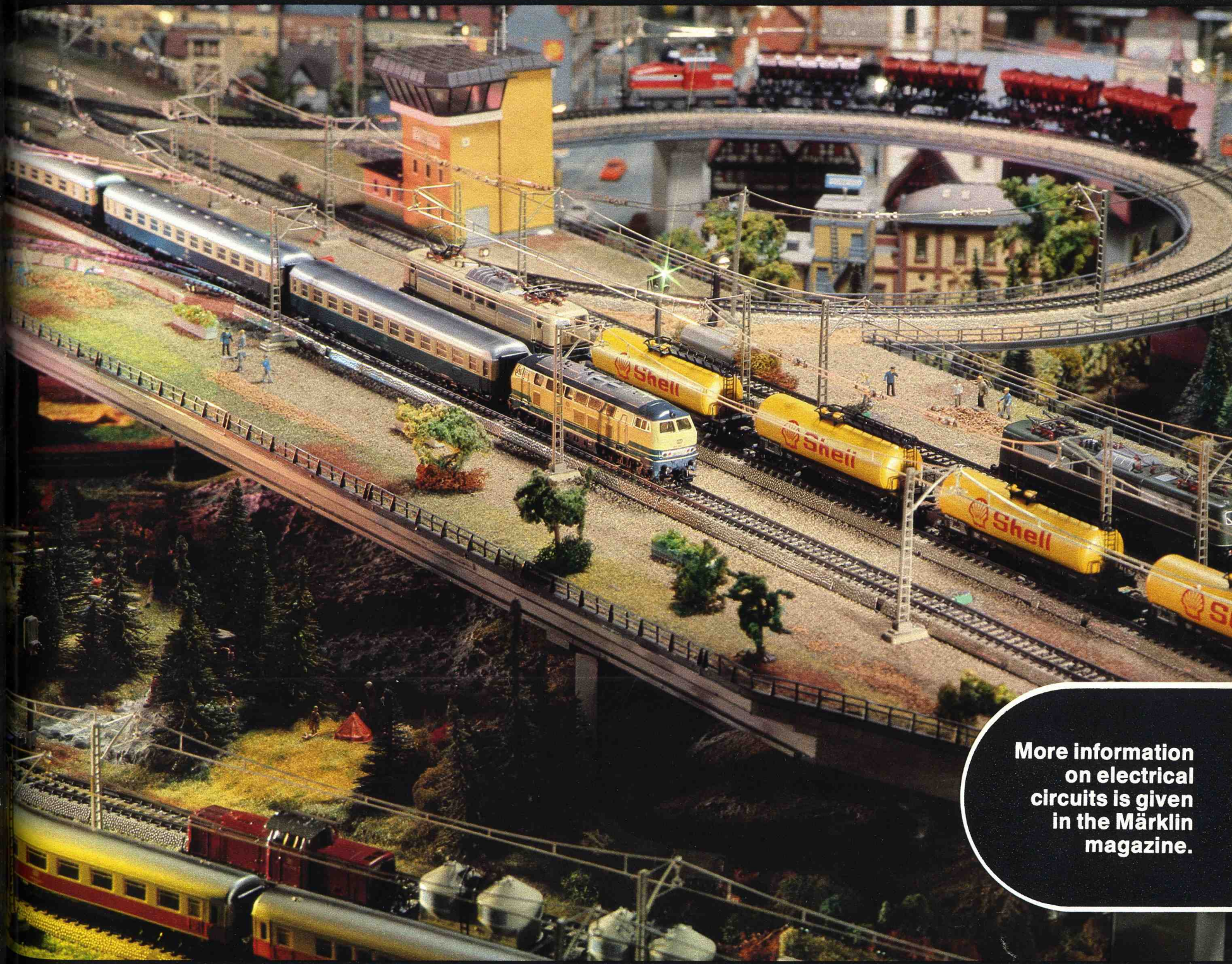
When parking and feeder tracks are supplied by a separate electrical circuit, cars can be uncoupled and distributed to individual tracks, trains can be assembled and locomotives can be changed round without affecting the main line traffic on the oval track with its double track section.

Three circuits

If the long parallel track section is connected to a third separate circuit the railroad operation can become quite amazingly realistic.

See the railbus operating at low voltage as a local passenger train on the inside track, while on the outer track an express approaches at high speed from the opposite direction.

Circuit separation is simplicity itself: the items required are center conductor isolator 5022 (pages 78/79) or 7522 (pages 68/69) and for each circuit one transformer (pages 78/79) and a feeder track section (pages 62/63 for M-tracks and pages 68/69 for K-tracks).



More information on electrical circuits is given in the Märklin magazine.

3. Catenary system

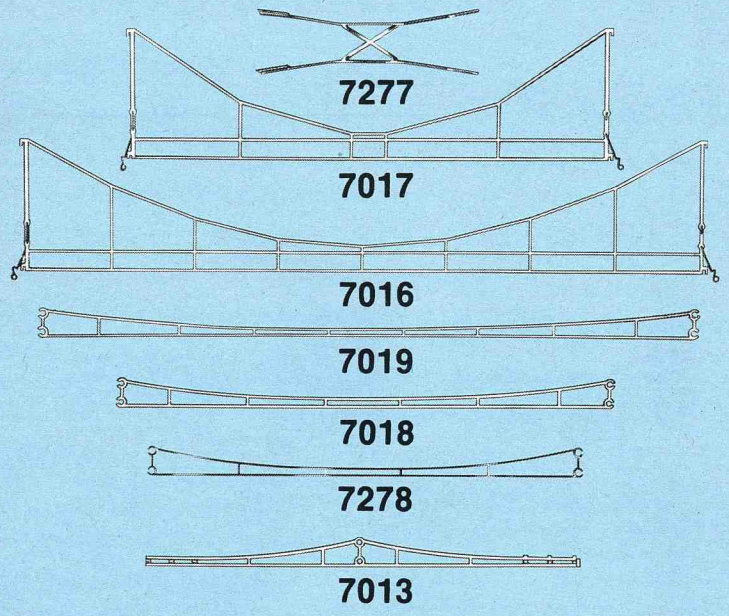
Catenary system for M-tracks 5100/5200

7009
Catenary mast · Basic element · Height 100 mm (4″)

7010
Feeder mast for supplying current, with 2 leads and including instructions for using the catenary system · Height 100 mm (4″)

7012
Feeder mast for signals, with 1 lead · Height 100 mm (4″)

7201
Feeder mast for supplying current, with 2 permanently connected leads, one red, one brown · Additional brown lead · Built-in capacitor for radio interference suppression · One mast required for each electrical circuit · Instructions for setting up the catenary system are included · Height 100 mm (4″)



7277 **Crossing section** for 2158, 2159, 2160, 5114, 5128, 5207, 5211 and 5215

7017 **Cross-span** · For hooking into tower masts · Spans about 3 tracks · Span 280 mm (11″)

7016 **Cross-span** · For hooking into tower masts · Spans about 4 tracks · Span 390 mm (1 ft 3-3/8″)

7019 **Contact line section** for straight track sections only · Length 360 mm (1 ft 2-3/16″)

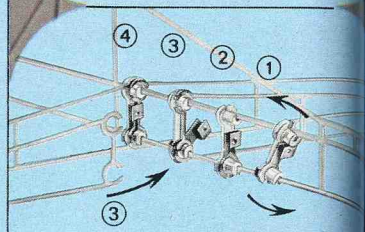
7018 **Contact line section** for straight and curved track sections · Length 270 mm (10-5/8″)

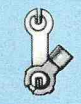
7278 **Contact line section** for use over the inner track on curved double track sections of the 2100 series · Length 235 mm (9-1/4″)

7013 **Contact line section** for push-fit connection, especially at turnouts · Length 240 mm (9-1/2″)

All contact line sections are nickel plated.

7004 **Fastening kit** · Consisting of 5 bolts, 5 nuts and 5 washers · Used only in exceptional cases where it is not possible to make reliable contact by the usual method of assembly

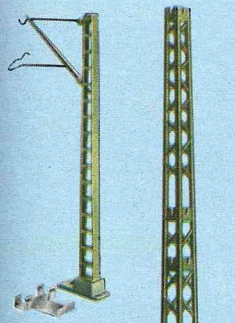




7006
Contact wire insulation · For insulation sections of contact wire from cross-spans · One required for each track and cross-span · 15×6 mm (5/8″×1/4″)

7005 **Catenary set** for train control for signals of the 7000 series which are not mounted on tower masts. Consisting of 2 feeder masts 7012, 2 insulator sections 7022 and 2 overhead contact line sections 7014

Märklin catenary system for K+M-tracks



7511

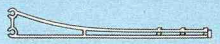
Bridge mast · For attaching to the side of plastic bridges and ramp sections · Height 97 mm (3-7/8″)

7021

Tower mast with recesses for hooking in cross-spans 7016 or 7017 and the cantilever support arm 7525 for the overhead line · For tower mast with arc light see pages 82/83 · Height with M-tracks 157 mm (6-3/16″) · Height with K-tracks 154 mm (6-1/16″)

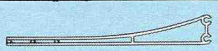
7003

Catenary system connector lead for connection to signals when tower masts are used, and for supplying current to any point · Length 600 mm (1 ft 11-5/8″)



7014

Contact line section · Female portion (for push-fit connection) · Length 115 mm (4-1/2″)



7015

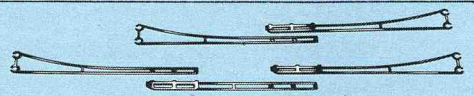
Contact line section · Male portion (for push-fit connection) · Length 115 mm (4-1/2″)

7022

Insulator section · Male portion (for push-fit connection) for interrupting the overhead line current path · Length 115 mm (4-1/2″)

7023

Make-up section for push-fit connection · Length 100 mm (4″)



Using contact line sections 7014, 7015 and 7023 it is possible to make up any length 177 to 360 mm (7″–1 ft 2-3/16″). The push-fit connections can be strengthened if necessary using fastening kit 7004 (see illustration).

The arrangement of the catenary system with its suspension and its cross-spans, is modeled on full scale railroads. The same contact lines can be used for M-tracks and K-tracks. The sprung contact line supports at the masts ensure a reliable current path to the contact lines.

The practical push-fit connections, on contact line sections 7013 and 7023 for example enable the contact lines to be set to the lengths required.

Contact lines are flexible and can be matched to any curve. This can be done by hand. The longest contact line section, 7019, is ideal for long straight track sections.

Using tower mast 7021 and cross-spans 7016 the widest station yard can be spanned.

For 4 tracks one cross-span and two tower masts are required, and for every 4 additional tracks another cross-span and another tower mast. For single tracks outside the mast the overhead line can be suspended on cantilever support arm 7525.

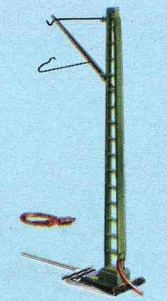
7505

Catenary set for train control for 7200 series color light home signals which are not mounted on tower masts · Consisting of 2 feeder masts 7512, 2 insulator sections 7022 and 2 contact line sections 7014 · For use with 2100 series track sections

Catenary system for 2100 series K-tracks

7509

Catenary mast · Basic unit for construction of a catenary system over track sections of the 2100 series · Height 97 mm (3-1/8″)



7510

Feeder mast with a red lead and plug attached to the mast · Brown lead with plug · Includes instructions for setting up the catenary system · Height 97 mm (3-7/8″)

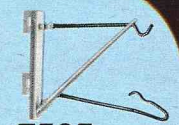
7512

Feeder mast with a red lead attached, for connecting the catenary system to home signals · Height 97 mm (3-7/8″)

7501

Feeder mast with 2 permanently attached leads, one red, one brown · Built-in capacitor for radio interference suppression · One mast required for each electrical circuit · Instructions for setting up the catenary system are included · Height 97 mm (3-1/8″)

Locomotives pick up current from the catenary system just as efficiently as from stud contacts. All that is required is to change the position of a small lever on the locomotive. If the catenary system is connected to a separate transformer, by using overhead line and the track contacts at the same time it is possible to operate two trains independently on the same track.



7525

Cantilever support arm for suspending single or double overhead contact wires, in conjunction with tower mast 7021

Simple electrical engineering

There are simple and clear rules for wiring up a Märklin HO layout. Märklin HO transformers 6631 and 6671 and the transformers provided with the basic sets provide variable voltage traction power for locomotives and constant voltage power for lighting and for solenoid-operated items (e.g. turnouts, lighting sets, signals, etc.). These two kinds of current paths are clearly identified by the colors of the leads.

Solenoid-operated items such as turnouts or signals are normally controlled by switching in the current return path. A selection at position control box 7072 determines the position of the solenoid armature and hence the position of the turnout, etc.

Electrical Leads

The copper conductor in these stranded leads consists of 24 separate strands each of 0.10 mm (0.004") diameter, giving an overall cross-sectional area of 0.19 mm² (0.03 sq"). That is more than enough to cope even with the current flowing through a short-circuited 40 VA transformer.

7100 **Lead** · Single core · Gray · 10 m (33 ft)

7101 **Lead** · Single core · Blue · 10 m (33 ft)

7102 **Lead** · Single core · Brown · 10 m (33 ft)

7103 **Lead** · Single core · Yellow · 10 m (33 ft)

7105 **Lead** · Single core · Red · 10 m (33 ft)

Usual colors of electrical leads in Märklin circuits:

Red = traction current connection (from transformer to track center conductor or overhead line)

Yellow = lighting and solenoid-operated items

Brown = ground lead from tracks, lighting sockets or control box to transformer

Blue = return lead from solenoid-operated items to control box or switching track (with green, red and orange plugs)

Sleeves

7111 = brown
7112 = yellow
7113 = green
7114 = orange
7115 = red
7117 = gray

Plugs with side sockets

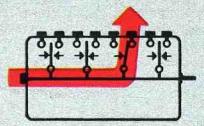
7131 = brown
7132 = yellow
7133 = green
7134 = orange
7135 = red
7137 = gray

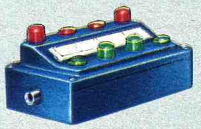
5004
Connector lead for center conductor · Length 750 mm (2 ft 5/2")

5022
Center conductor isolator for 5 isolation points

Accessories for remote operation

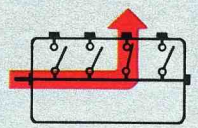
Circuit diagram of 7072 (with switch 3 closed)

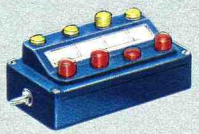




7072
Position control box with 8 sockets for connecting 4 double-solenoid-operated articles · The position of signals, turnouts, etc. can be seen from the position of the push-buttons · Length 80 mm (3-1/8") · Width 40 mm (1-9/16")

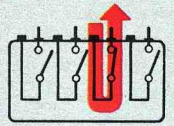
Circuit diagram of 7210 (with switch 3 closed)

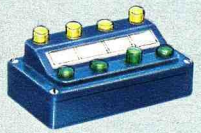




7210
Control box with indicator push buttons for distributing current to 4 traction current or lighting circuits · Length 80 mm (3-1/8") · Width 40 mm (1-9/16")

Circuit diagram of 7211 (with switch 3 closed)

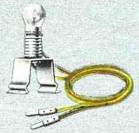




7211
Control box for switching 4 different traction or lighting circuits on and off b indicator push buttons · Length 80 mm (3-1/8") · Width 40 mm (1-9/16")

7000
Staples · Bag of 50 · For fixing leads to a wooden base

7209
Distribution strip · With 11 single sockets · Size 50 × 20 mm (2" × 3/4")



7073
Lighting fitting with bulb and lead, for use in stations, freight sheds, etc.

= 60020

Märklin heavy-duty transformers

Every Märklin transformer is completely safe, with insulation which has been tested to several thousand volts. Furthermore, a built-in cut-out switches off the current if a short-circuit occurs somewhere on the track or if the transformer is overloaded. The transformer has a lead and a plug which plugs into the a.c. mains in the same easy way that any standard lamp does.

Locomotive speed is proportional to the traction voltage, i.e. when the red control knob is turned to the right the locomotive goes faster, when to the left, slower. If the control knob is turned momentarily to the left of the zero position, a nominal 24 V pulse operates the reversing switch (the "driver") in the locomotive and changes the direction of motion.

We guarantee trouble-free operation of our railroads only when genuine Märklin transformers are used.

Märklin 16 VA and 30 VA transformers have connections for traction current supply and for lighting or solenoid-operated items.

To be connected to a.c. mains supply only

The transformers in the gift packs, mentioned on pages 10–13, have the same good features as the transformers described here, the only difference being that their power output is less.

Power consumption by locomotives and lights

Calculation examples:
This is how to calculate the number of items which can be connected to the transformer: the 3-axle tank locomotive 3000 takes about 9 VA, the express diesel locomotive 3021 and the heavy express steam locomotive 3085 each take about 12 VA. Any margin of power left over after accounting for the locomotives can be used for train or layout lighting, counting 1 VA for each bulb used.

6671 220 Volt
6660 100 Volt Japan
6667 110 Volt (60 Hz) USA
6669 240 Volt

Transformer · Output 16 VA · Traction voltage adjustable between approximately 4 V and 16 V · Lighting voltage 16 V · Plastic case · Weight 1.2 kg · Dimensions 125×135×75 mm (5″×5-3/8″×3″)

6631 220 Volt
6620 100 Volt Japan
6627 110 Volt (60 Hz) USA
6629 240 Volt

Transformer · Output 30 VA · Traction voltage adjustable between about 4 V and 16 V · Lighting voltage 16 V · Plastic case · Red pilot lamp · Weight 2.1 kg · Dimensions 158×135×75 mm (6-1/4″×5-3/8″×3″)

= 60015

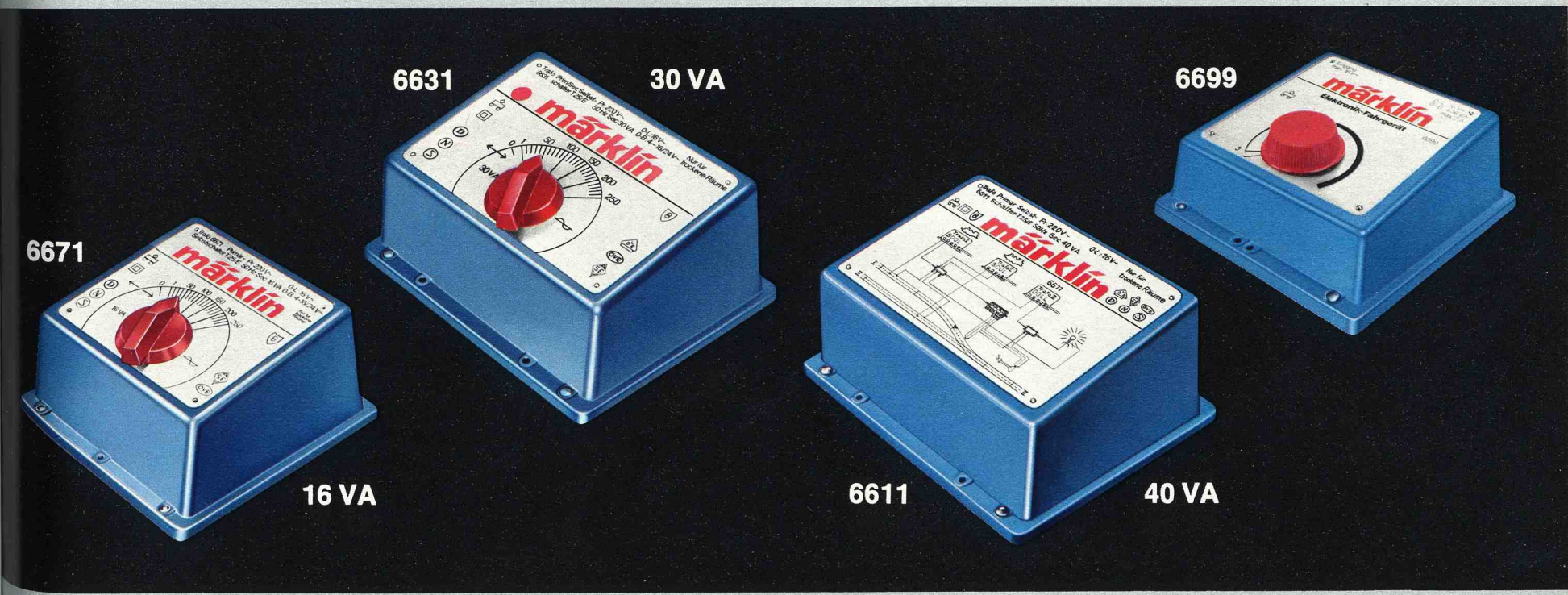
6611 220 Volt

Transformer for lighting and for solenoid-operated items · Output 40 VA · Output voltage approximately 16 V a.c. · Plastic case · Weight 2.0 kg · Dimensions 158×135×75 mm (6-1/4″×5-3/8″×3″)

6699

Electronic unit/power pack for very slow running · For connection to Märklin lighting transformer 6611 or to the lighting sockets of a Märklin transformer with 30 VA output power · Lighting voltage 16 V · Electronic control of locomotive speed and direction of motion · Maximum permitted load 1.8 Amperes · Plastic case · Weight 315 grammes · Dimensions 125×135×55 mm (5″×5-3/8″×2-1/8″) · Use Märklin leads and plugs to extend connector leads if required

Ideal for HO gauge:
Locomotives can be made to run exactly as they would in real life, with gradual starting, gentle braking and occasionally very slow running.



Fitting out a layout

The second part of the hobby

The locomotive servicing area is one of the most interesting aspects of railroad operation, both at full-scale and model scale.

The layout and functions of a servicing area depend on the type of locomotive being serviced.

Steam locomotive servicing area
On completion of a journey the locomotive drives to the coaling point. Then it is towed to the cinder dump. After dumping cinders it is replenished with feed water from the water hose crane and with sand. The locomotive is then ready for use again and is switched to the turntable to be faced in the right direction. This is because the maximum permitted speed of steam locomotives is normally higher for forward motion than for reverse.

7288

7288

Locomotive roundhouse building kit, made of plastic · With 3 automatically closing doors for 3 tracks · (Track sections not included) · Base 442×350 mm (1 ft 5-3/8″×1 ft 1-3/4″) · Height 128 mm (5″)

7186

Remote-controlled turntable kit · Consisting of turntable with 360 mm (2 ft 3/16″) outside diameter turning in either direction by remote control, with reversing switch and lead · Current is automatically cut off from all sidings not in contact with the turntable track

0327

Booklet "Märklin railroads and landscapes" by Bernd Schmid · An invaluable guide to help you design your railroad system: technical details, track layout, landscape planning and the fitting out of a layout are discussed in detail · Many illustrations including some in color · 192 pages · Size 16.4×20.3 cm (6-1/2″×8″) · Germany text

7186

Adapter track section 2191
(see pages 68/69) enables K-tracks of the 2100 series to be connected to turntable 7186.

This illustration shows the realistic effect obtained by combining 2 roundhouse sections and a turntable.

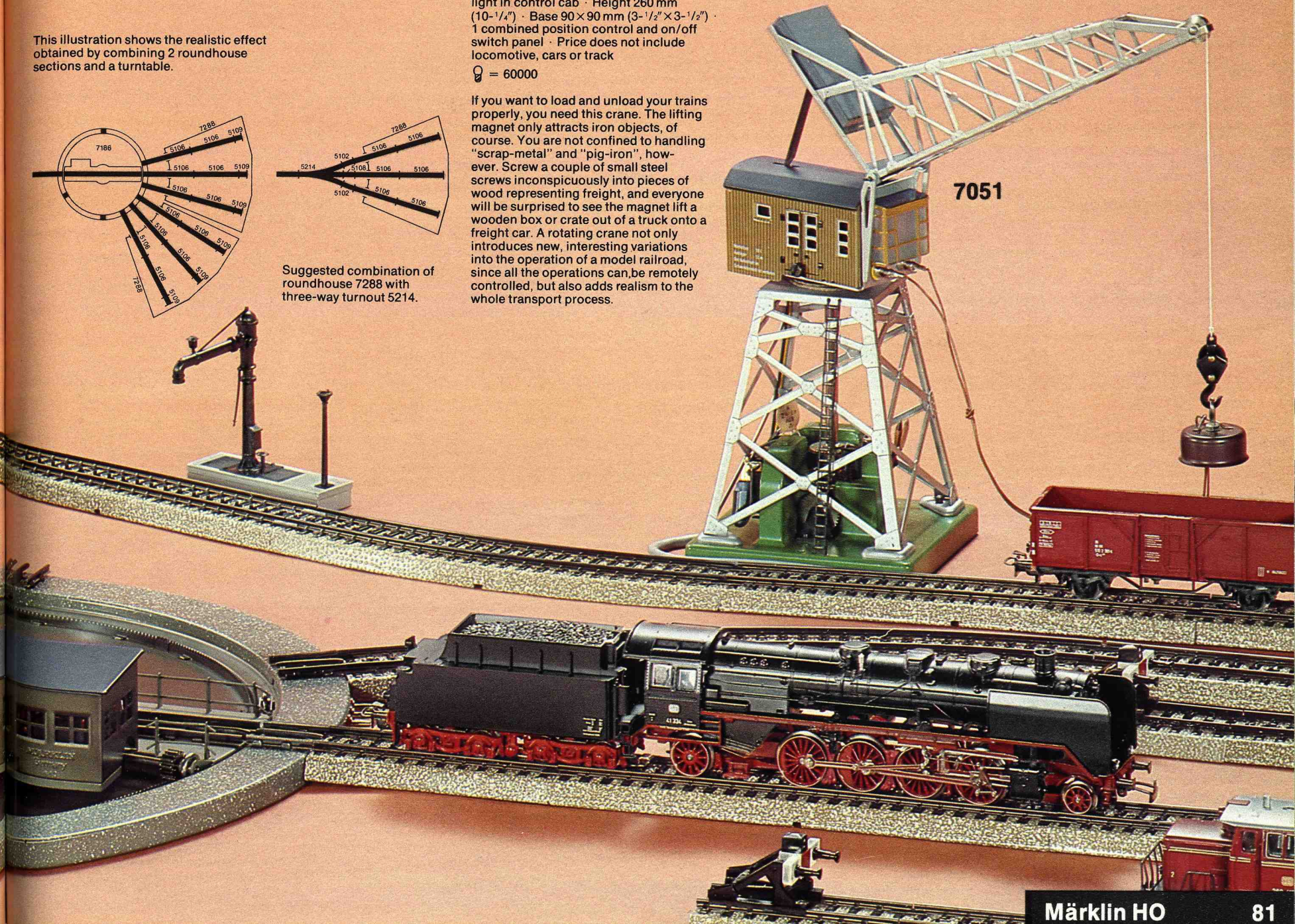
Suggested combination of roundhouse 7288 with three-way turnout 5214.

7051

Remote controlled rotating crane with lifting magnet · One motor rotates the boom, another raises and lowers the load · Load hook and lifting magnet enable iron or iron-containing objects to be transferred by remote control · Boom elevation adjustable by hand · Working light in control cab · Height 260 mm (10-1/4") · Base 90×90 mm (3-1/2"×3-1/2") · 1 combined position control and on/off switch panel · Price does not include locomotive, cars or track

= 60000

If you want to load and unload your trains properly, you need this crane. The lifting magnet only attracts iron objects, of course. You are not confined to handling "scrap-metal" and "pig-iron", however. Screw a couple of small steel screws inconspicuously into pieces of wood representing freight, and everyone will be surprised to see the magnet lift a wooden box or crate out of a truck onto a freight car. A rotating crane not only introduces new, interesting variations into the operation of a model railroad, since all the operations can,be remotely controlled, but also adds realism to the whole transport process.



The modern type of locomotive servicing area

Diesel and electric locomotives have different requirements for a servicing area from steam locomotives. Diesel locomotives need only a fueling point. The water used in motor cooling and pre-warming systems is replenished by hose. Electric locomotives need almost no servicing. These types of locomotives have another feature: their ahead and reverse maximum permitted speeds are the same. They do not therefore need turntables. Instead, the railroads have developed transfer tables, which enable locomotives to be directed onto parking tracks, or tracks in the maintenance shed, in the shortest possible distance. This great saving in space, of course, also applies to the Märklin HO gauge transfer table.

7294 new

Transfer table · 2 approach tracks and 4×2 parking tracks · Matches locomotive shed 7289 · Switch for remote control of the table · Electric motor drive · Current automatically cut off from all tracks not in contact with the table · At every track joint there are sockets for making connection to the catenary system · Base area 360×420 mm (1 ft 2-1/4″×1 ft 4-1/2″)

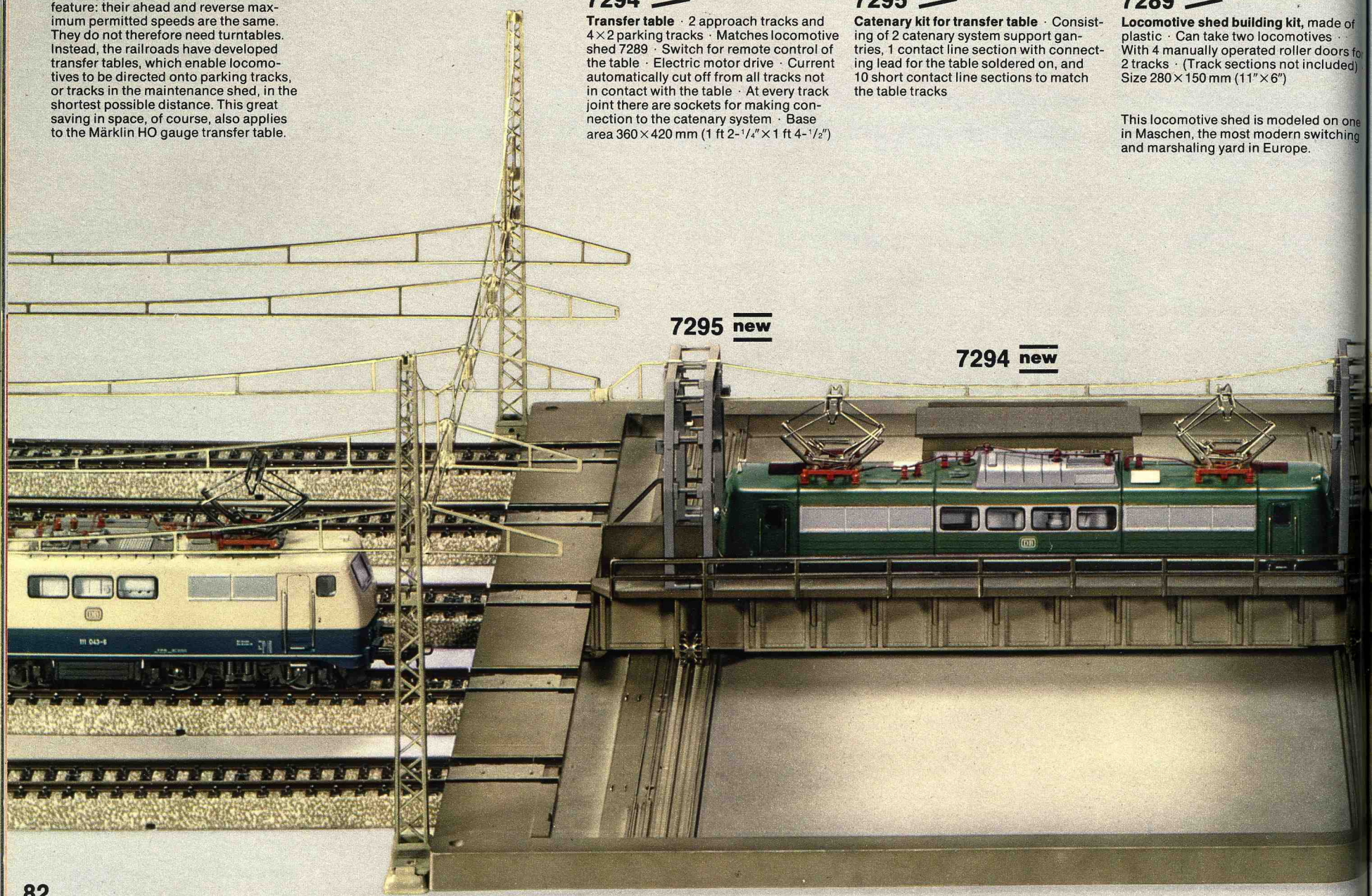
7295 new

Catenary kit for transfer table · Consisting of 2 catenary system support gantries, 1 contact line section with connecting lead for the table soldered on, and 10 short contact line sections to match the table tracks

7289 new

Locomotive shed building kit, made of plastic · Can take two locomotives · With 4 manually operated roller doors for 2 tracks · (Track sections not included) Size 280×150 mm (11″×6″)

This locomotive shed is modeled on one in Maschen, the most modern switching and marshaling yard in Europe.



Lighting

These lights can be switched on and off using circuit-breaker boxes 7210 or 7211 (pages 78/79). Alternatively they can be switched by a moving train. For further details see signals 0342 M or 0361 K (pages 72/73).

7046

Arc light with lattice mast · Can be used with M-track catenary system · Height 192 mm (7-9/16") · Base 14 × 28 mm (9/16" × 1-1/8")

= 60010

7047

Lamp standard · Height 127 mm (5") · Base diameter 27 mm (1-1/16")

= 60010

7048

Arc light · Height 156 mm (6-1/8") · Base diameter 29 mm (1-1/8")

= 60010

7280

Street lamp standard · Height 117 mm (4-5/8") · Base diameter 25 mm (1")

= 60000

7281

Station platform light · Twin armed · Height 97 mm (3-1/8") · Base diameter 25 mm (1")

= 60000

7282

Street lamp standard · Twin armed · Height 120 mm (4-3/4") · Base diameter 25 mm (1")

= 60000

7283

Lattice mast light · Mounted on a lattice mast · With base plates for mounting on tracks · Can be used with catenary system · Height 170 mm (6-3/4")

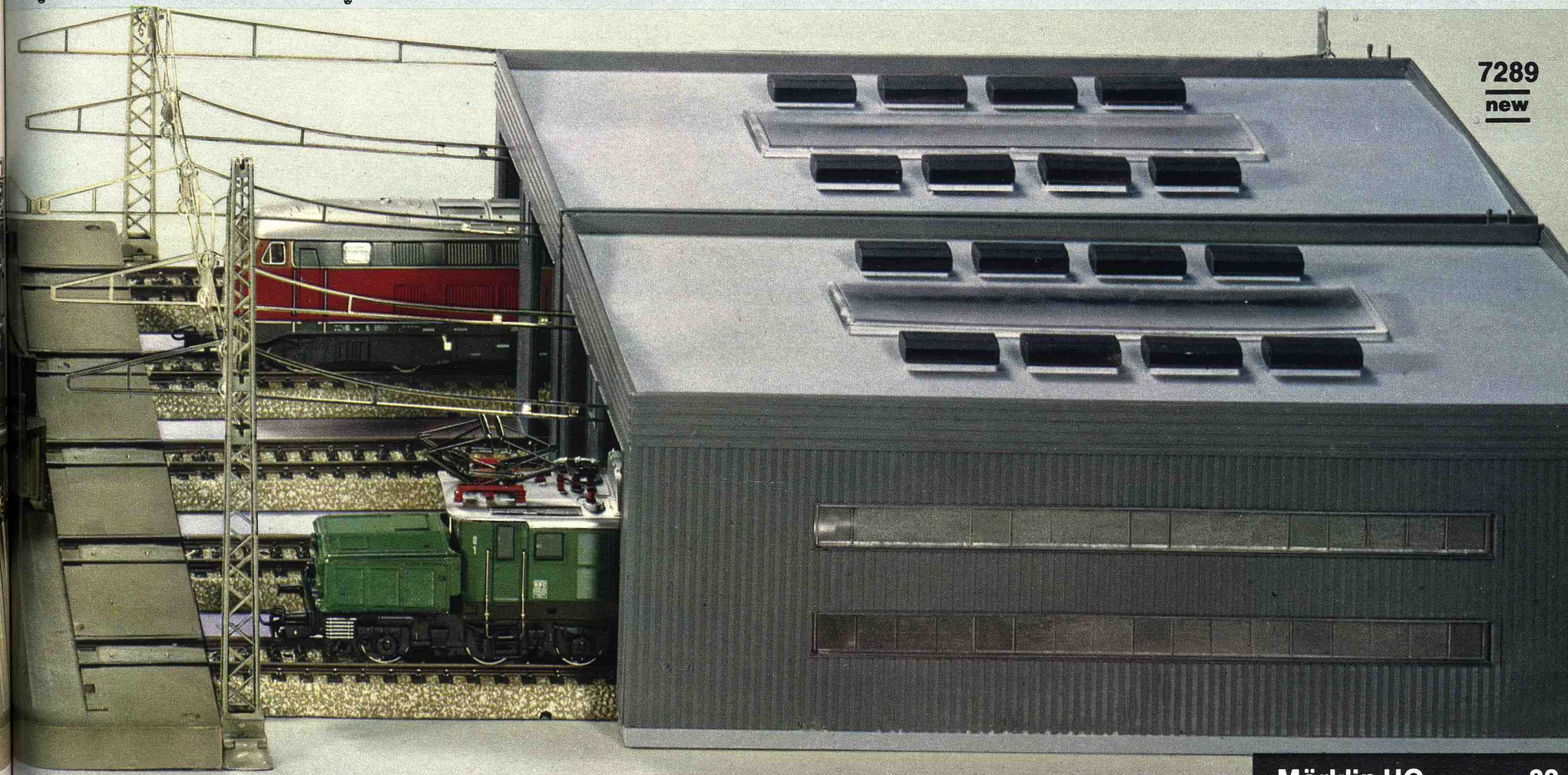
= 60000

7284

Sidewalk lamp standard · Height 63 mm (2-1/2") · Base diameter 15 mm (5/8")

= 60000

7046 7048 7283 7281 7280 7282 7047 7284



7289 new

7192 M

Fully automatic grade-crossing with M-track sections · This set consists of 2 solenoid-operated barriers with an attendant's box (capable of being fitted with lighting set 7073), warning crosses and a set of contact track sections (2 lengths of straight track) · Size of base: 180 × 90 mm (7-1/8" × 3-9/16") · (No other track sections included)

Grade-crossing 7192 can also be adapted for use with more than one track by the addition of extension set 7193. In this case it still operates automatically.

7193 M

Extension set for fully automatic grade-crossing 7192, one being required for each additional parallel track · Consists of a set of contact track sections and a separating piece which is placed between the tracks

5115

Straight · Length 180 mm (7-1/8")

5116

Curved · Radius 360 mm (1 ft 2-3/16")

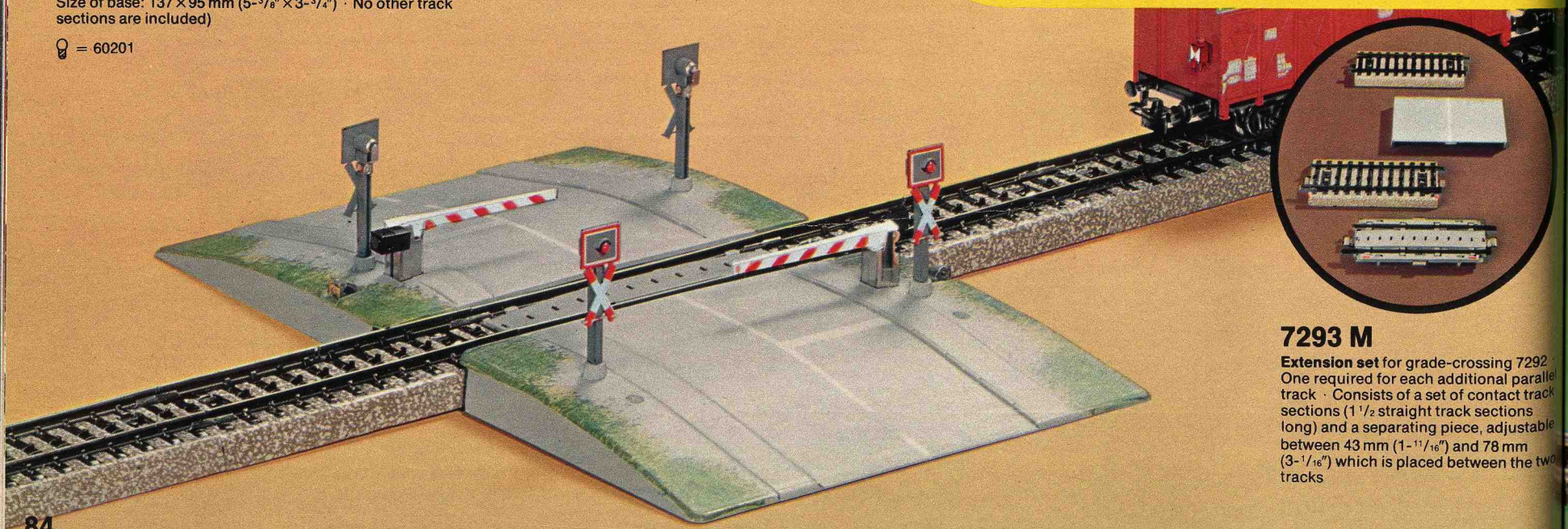
Contact track sections

M-track sections 5115 and 5116 are used to extend the contact track section of grade-crossings 7192 and 7292. The contact section can be extended **only** with track sections 5115 and 5116.

7292 M

Fully automatic grade-crossing with half-barriers for metal tracks · This set consists of 2 solenoid-operated barriers, each with 2 red warning lights which come on when the barriers close, and a set of contact track sections (1 1/2 straight track sections long) · Size of base: 137 × 95 mm (5-3/8" × 3-3/4") · No other track sections are included)

= 60201



7293 M

Extension set for grade-crossing 7292 · One required for each additional parallel track · Consists of a set of contact track sections (1 1/2 straight track sections long) and a separating piece, adjustable between 43 mm (1-11/16") and 78 mm (3-1/16") which is placed between the two tracks

Grade-crossings

Adapter track section 2191
(see pages 68/69) enables K-tracks of the 2100 series to be connected to grade-crossings 7192 and 7390.

7390 M

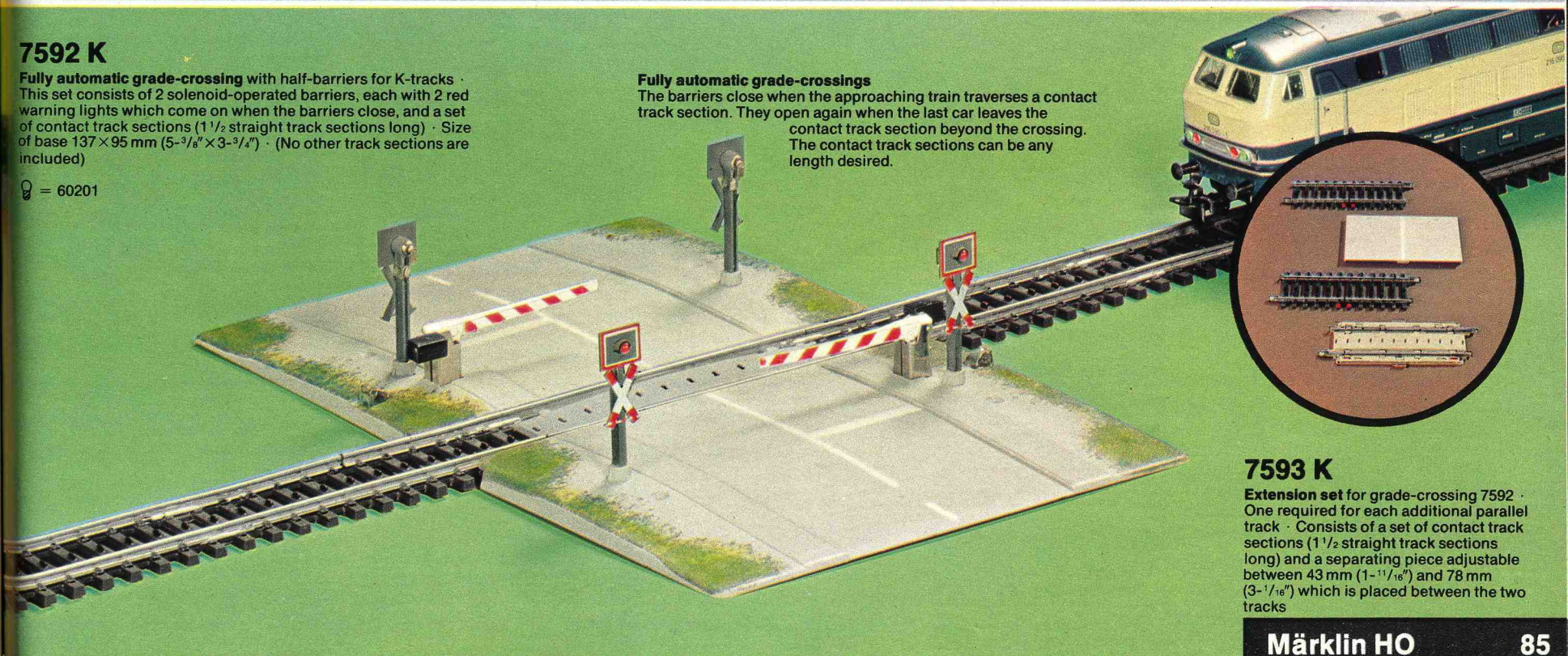
Mechanically operated grade-crossing for single track line, including a section of M-track · The barriers are operated by a lever arm which is pressed down by the wheels of a passing train · Length of grade-crossing track section is same as that of track section 5106 · Base 135×180 mm (5-3/8″×7-1/8″)

7592 K

Fully automatic grade-crossing with half-barriers for K-tracks · This set consists of 2 solenoid-operated barriers, each with 2 red warning lights which come on when the barriers close, and a set of contact track sections (1 1/2 straight track sections long) · Size of base 137×95 mm (5-3/8″×3-3/4″) · (No other track sections are included)

= 60201

Fully automatic grade-crossings
The barriers close when the approaching train traverses a contact track section. They open again when the last car leaves the contact track section beyond the crossing. The contact track sections can be any length desired.



7593 K

Extension set for grade-crossing 7592 · One required for each additional parallel track · Consists of a set of contact track sections (1 1/2 straight track sections long) and a separating piece adjustable between 43 mm (1-11/16″) and 78 mm (3-1/16″) which is placed between the two tracks

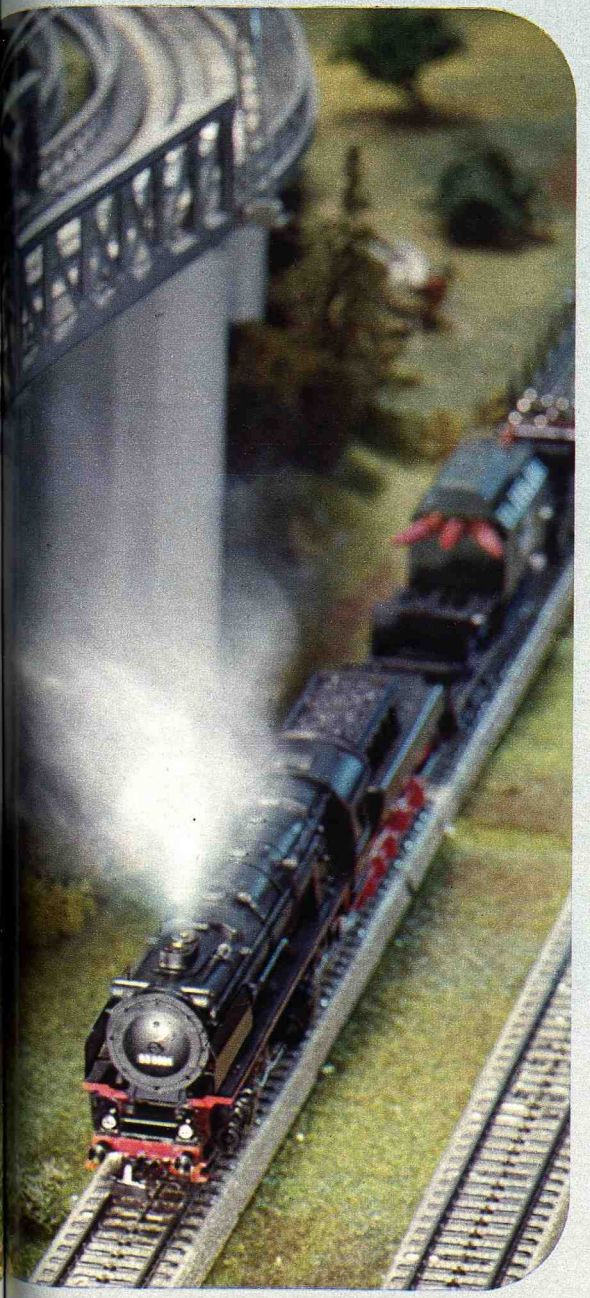
Bridge building creates room for more tracks

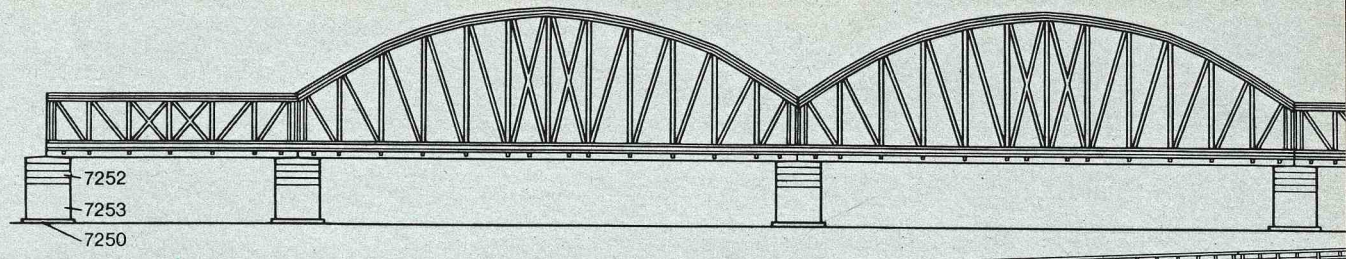
Bridges and ramps add to the appearance and the versatility of model railroad layouts. Gulleys, cuttings and built-up areas can be bridged. Ramps connect the different levels. Most importantly, room is made for extra tracks, as vertical construction builds on the same base area.

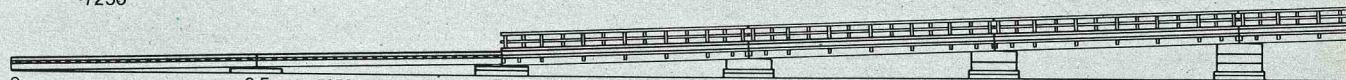
With Märklin bridge parts any size or combination of bridges or ramps can be built. The pier construction elements 7252 und 7253, which fit together like building blocks, enable piers of any height to be built up in steps of 6 mm (1/4"). By using base plate 7251 in conjunction with base plate 7250 it is even possible to raise the height in steps of 3 mm (1/8"). For fixing the pier sections to each other and to the plate the use of flat-head wood screws 7599 is recommended.

Complete instructions for the assembly of bridges are included with bridges 7262 and 7263.

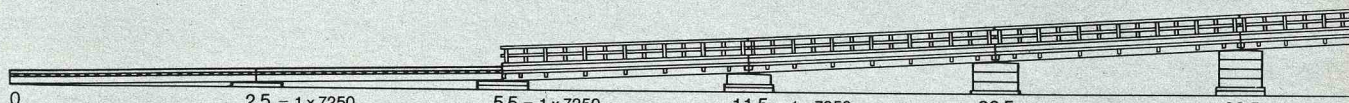
Examples of bridge and ramp construction







0	2,5 = 1 x 7250	5,5 = 1 x 7250 1 x 7251	11,5 = 1 x 7252 1 x 7250 1 x 7251	17,5 = 2 x 7252 1 x 7250 1 x 7251	23,5 = 3 x 7252 1 x 7250 1 x 7251
6 mm Steigung	Pfeilerhöhe bei M-Gleisen				
0	2,5 = 1 x 7250	2,5 = 1 x 7250	8,5 = 1 x 7252 1 x 7250	14,5 = 2 x 7252 1 x 7250	20,5 = 3 x 7252 1 x 7250
6 mm Steigung	Pfeilerhöhe bei K-Gleisen				



0	2,5 = 1 x 7250	5,5 = 1 x 7250 1 x 7251	11,5 = 1 x 7252 1 x 7250 1 x 7251	20,5 = 3 x 7252 1 x 7250	29,5 = 4 x 7252 1 x 7250 1 x 7251
9 mm Steigung	Pfeilerhöhe bei M-Gleisen				
0	2,5 = 1 x 7250	2,5 = 1 x 7250	8,5 = 1 x 7252 1 x 7250	17,5 = 2 x 7252 1 x 7250 1 x 7251	26,5 = 4 x 7252 1 x 7250
9 mm Steigung	Pfeilerhöhe bei K-Gleisen				

7267 K+M

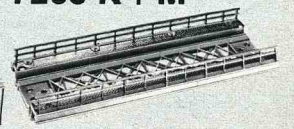
7250

7251

7252

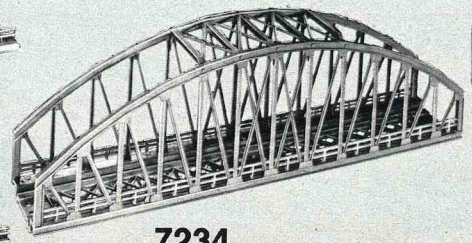
7253

7268 K+M

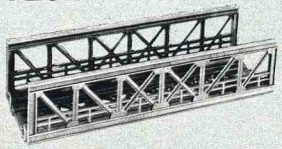


7269 for M only

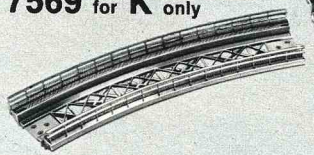
7263 K+M



7262 K+M



7569 for K only



7262 K+M

Truss bridge · Gray · Can be used on its own or with arched bridge 7263 · For use with plastic or metal tracks · 3 clips for fixing K-tracks, and instructions for building the bridge · Height 45 mm (1-3/4″) · Length 180 mm (7-1/8″)

7263 K+M

Arched bridge · Gray · For use with plastic or metal tracks · 6 clips for fixing K-tracks, and instructions for building the bridge · Maximum height 117 mm (4-5/8″) · Lenght 360 mm (1 ft 2-3/16″)

7234

Base plate · For fixing signal masts of the 7200 series to bridges

7250

Base plate · 2.5 mm (1/10″) thick · Light brown · Can be used as foundation

7251

Base plate · 3 mm (1/8″) thick · Light brown · Can only be used in conjunction with 7250

7252

Pier · 6 mm (1/4″) high · Gray · Suitable for building ramps with 6 mm (1/4″) rise from one pier to the next

7253

Pier · 30 mm (1-3/16″) high · Gray

7267 K+M

Curved ramp section · Gray · Radius of curvature 360 mm (1 ft 2-3/16″) · For use with plastic or metal tracks · 3 clips for fixing K-tracks · Length and radius same as track sections 2121 and 5100

7268 K+M

Straight ramp section · Gray · For use with plastic or metal tracks · 3 clips for fixing K-tracks · Length 180 mm (7-1/8″)

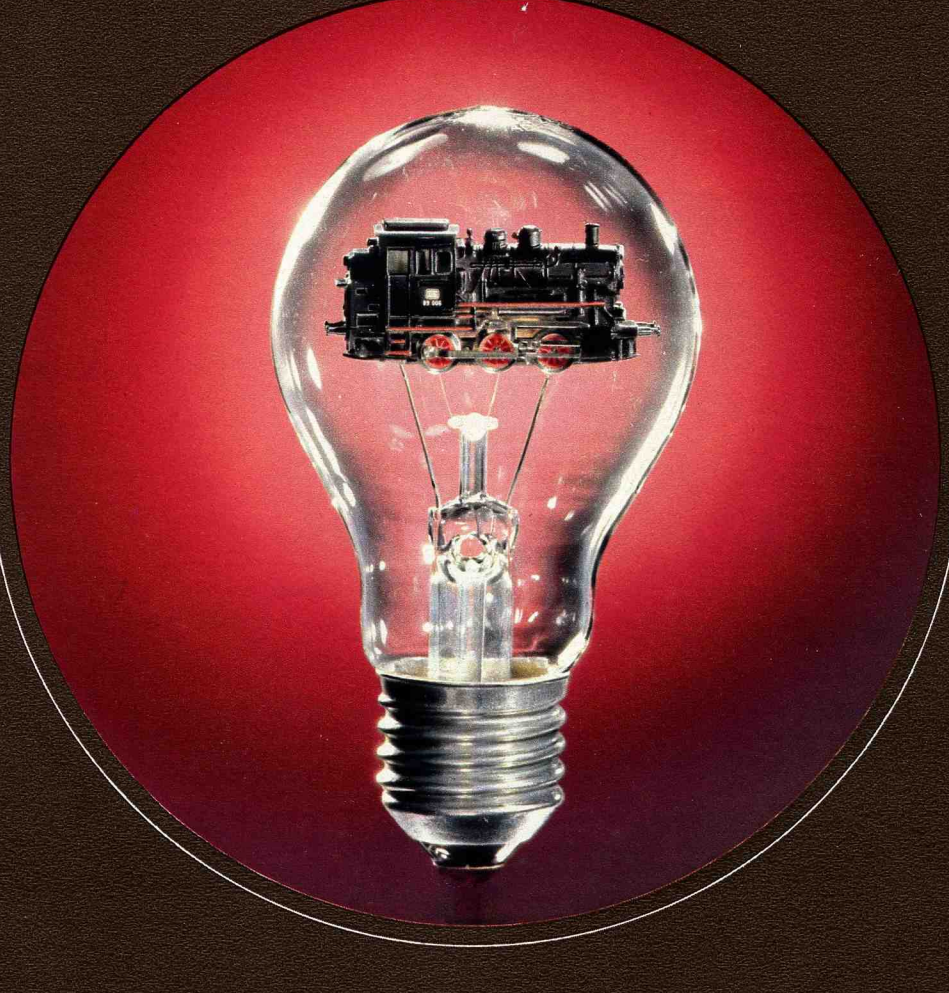
7269 for M only

Curved ramp section · Gray · Radius of curvature 437.4 mm (1 ft 5-1/4″) · For use with 5200 series metal tracks only · Track curves through 30°

7569 for K only

Curved ramp section · Gray · Radius of curvature 424.6 mm (1 ft 4-1/8″) · For use with plastic tracks only (standard circle II, see pages 68/69) · 3 clips for fixing track sections · Length and radius same as track section 2131

Märklin HO Index



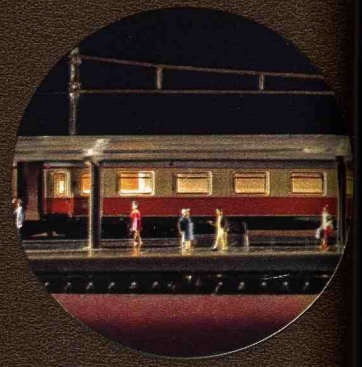
märklin mini-club

1979

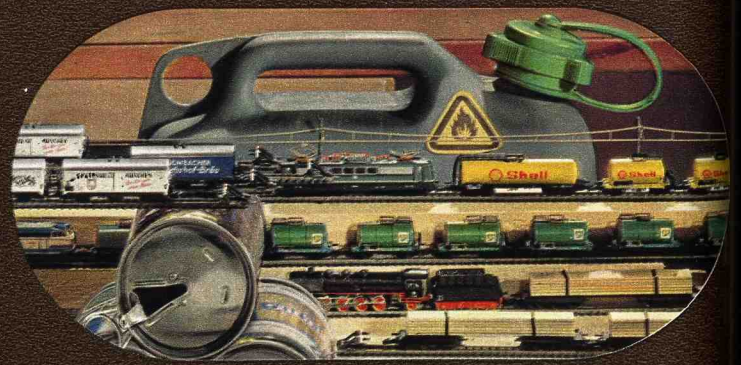
Märklin mini-club the smallest electric railway in the world

Although made on such a beautifully small scale, mini-club is a quality model railroad system incorporating Märklin's high standards of reliability. It is both trouble-free and space-saving. Unconventional layouts can be built – on the wall, for example, with stations and marshaling yards which can be seen, and tracks which can not as they are laid on shelves and in cupboards. A double track only occupies a width of 5 cm (2″). Complex layouts are still small – much smaller than was possible before the days of mini-club. A complicated mini-club layout can be packed into the space of a suitcase.

The ever increasing range of mini-club accessories is available to add to the authentic railroad atmosphere. Imagination can play its part, too. It is surprising what can be done to create true-to-life scenery with the aid of quite ordinary objects such as corks and matchboxes. Mini-club continues to prosper for two good reasons: it is unique – and it is made by Märklin.



Märklin mini-club
Size Z
with 6.5 mm (1/4″) gauge
Scale 1 : 220
8 volts Direct Current (DC)
Fully functional catenary system



mini-club coveted by every man

mini-club just what the model railroad individualist wants

mini-club is ready to go

Basic sets 8158–8161 and 8905–8909 S contain a freight train ready for use, as well as tracks and a power pack. Alternatively a start can be made with train sets 8100, 8101 or 8102 and a power pack and track as required.
You can find more information about mini-club in our booklet 0292 or from your Märklin dealer.

8158 220 Volt
8159 100 Volt Japan
8160 110 Volt (60 Hz) USA
8161 240 Volt

new

Freight train with power pack · With tank locomotive 8895, 1 beer car 8603, 1 box car 8605, 1 box car 8606, 1 freight train baggage car 8609, 19 straight track sections 8500, 4 curved track sections 8520, 6 curved track sections 8521, 1 double slip switch 8560, 1 pair solenoid-operated turnouts 8561, 1 right hand solenoid-operated turnout 8561, 1 feeder track section 8590, 2 curved track sections 8591, 3 bumpers 8991, 1 water hose crane, 1 position control box 7072, 1 distribution strip 7209, leads, plugs, sleeves and a power pack · Length of train 273 mm (10-3/4")

The power pack included with these two sets is not available separately.

8905 S 100 Volt Japan
8907 S 110 Volt (60 Hz) USA
8908 S 240 Volt
8909 S 220 Volt

Freight train with power pack · With tank locomotive 8800, 1 banana car 8606, 1 low-sided car 8610, 1 straight track section 8500, 4 curved track sections 8520, 6 curved track sections 8521, 1 feeder track section 8590 and a power pack · Length of train 160 mm (6-3/4")

You can extend these sets as much as you like, either with the SET program and Toporama (see pages 106/107) or in your own way and with catenary system kits 8198 and 8199 (see page 107 for more details).

Gift packs

8100

Express train · With express locomotive 8891, 2 express coaches 8731 and 1 express baggage car 8732 · Length of train 372 mm (1 ft 2-5/8")

8101

Multiple unit train · With electric locomotive (E 111), 1 local passenger service coach 8716, 1 local passenger service coach 8717 and 1 local passenger service coach with baggage compartment and control car 8718 · The locomotive and the control car are fitted with a lighting system which changes over automatically when the train changes direction, so that the train always displays 3 white headlights in front and 2 red taillights at the rear · Length of train 449 mm (1 ft 5-3/4")

Only the locomotive of this train set is fitted with the automatic red and white light changeover system. This locomotive is not available separately.

■ Multiple unit trains, which are usually used on local passenger services, consist of a locomotive, a number of intermediate cars depending on the traffic density, and the control car at the rear. At the end of the line all the driver has to do is to change driving positions, from the locomotive to the control car, for example, and drive back with the locomotive now pushing instead of pulling.

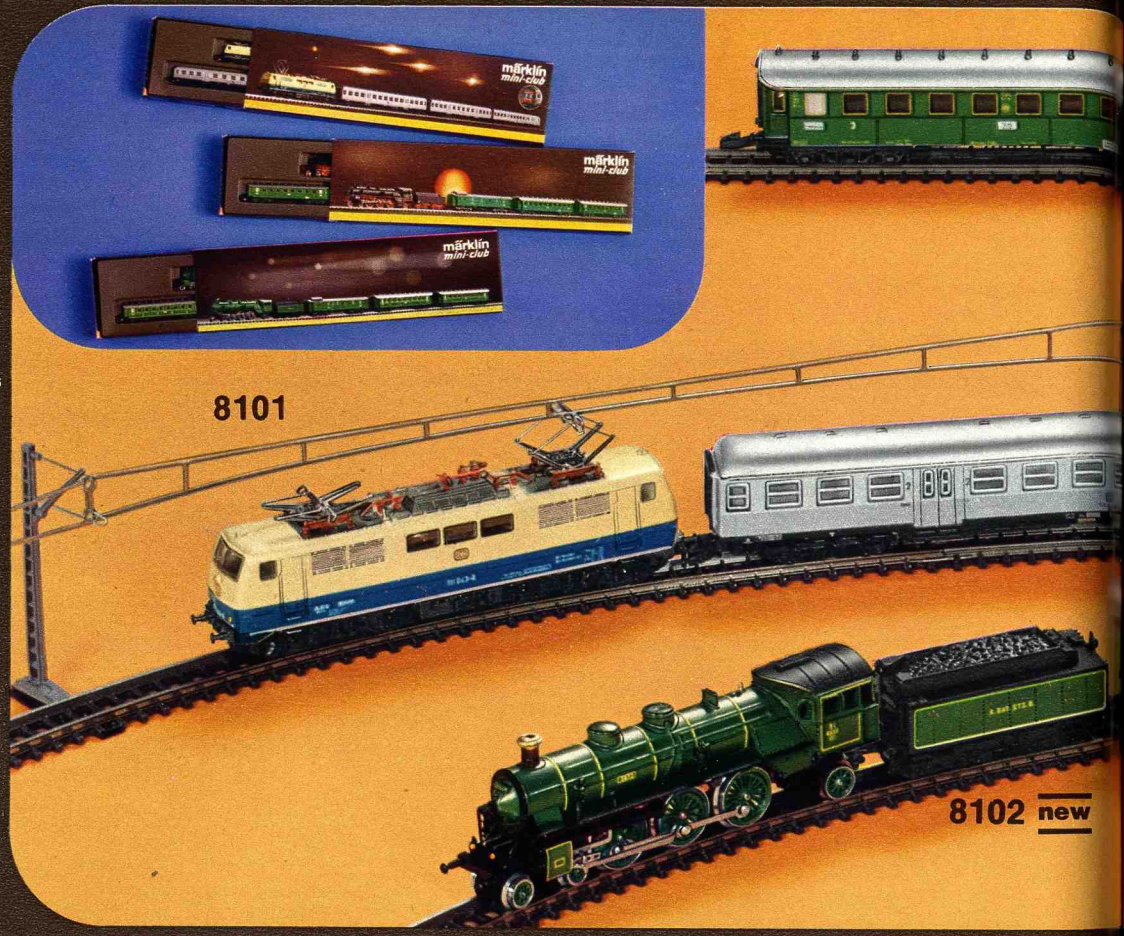
8102 new

Express train · With express locomotive 8892, 2 express coaches 8730 and 1 express baggage car · Length of train 372 mm (1 ft 2-5/8")
The express baggage car included in this set is not available separately.

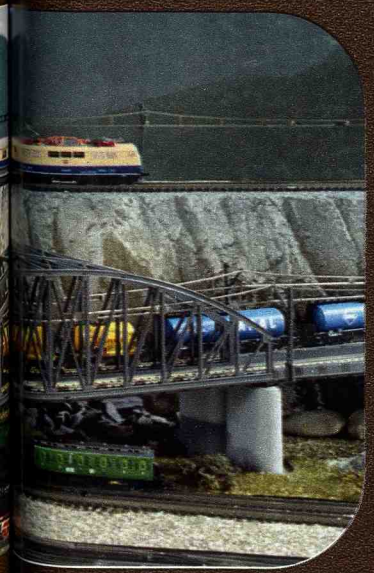
■ The first S 3/6 locomotives were based in Munich until 1941 and they played an important part in the Bavarian express services. From Munich they traveled out in all directions: to Lindau, Ulm, Würzburg, Nuremberg, Regensburg, Salzburg and Kufstein.

In the mid 1920's, S 3/6's were used on the Bavarian parts of the route to pull the luxury trains of the International Sleeping Car Co. These already consisted of first class sleeping cars only, with dining car and one or two baggage cars. Their names, the "Orient Express", the "Paris-Karlsbad-Prague Express" and the "Ostend-Vienna Express" are still famous today.

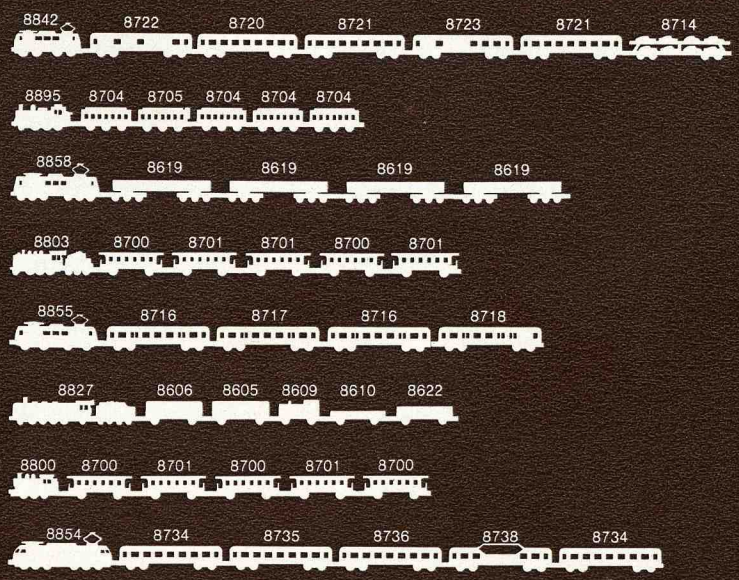
The extent of the S 3/6's influence in Europe, exceeded only by that of the Prussian P8, demonstrates the outstanding success of this design.



8100



Note on the composition of train sets: There are no hard and fast rules about the number of cars. This depends on factors such as the power of the locomotive, the difficulty of the route and the traffic density.



Steam locomotives

The illustrations are actual size 1 : 1

Mini-club locomotives must only be powered by Märklin power packs 6711, 6727 or 6731 (with maximum traction voltage of 8 V) or by the power packs included in the train sets.

The locomotives are fitted with radio interference suppressors. In conjunction with the suppressors fitted in the Märklin power packs 6711 and 6731 and in feeder track section 8590, these ensure a high standard of suppression.

Features of steam locomotives

Remote control for forward and reverse drive · Three working headlights (except 8800 which has no lights and 8803 which can take lighting set 8953) · All driving axles driven through spur gears · Automatic coupling at rear of locomotive or on the tender · Die cast zinc frame · Mat black metal body

= 8953

■ The mini-club range includes one of the most famous German steam locomotives in three different versions as it appeared in the three great periods of railway history: the S 3/6 of the Royal Bavarian Railways (8892) and the class 18 of the former German State Railways (8891) and German Federal Railways (8893).

8891

Express locomotive with tender · Model of the former German State Railways' BR 18^4 · Wheel arrangement 4-6-2 · Length over buffers 106 mm ($4\text{-}^3/_{16}$")

8892 new

Express locomotive with tender · Model of the former Royal Bavarian Railways' S 3/6 · Wheel arrangement 4-6-2 · Length over buffers 106 mm ($4\text{-}^3/_{16}$")

8893

Express locomotive with tender · Model of German Federal Railways' BR 18^4 · Wheel arrangement 4-6-2 · Length over buffers 106 mm ($4\text{-}^3/_{16}$")

■ In the spring of 1907, Bavarian Railways were obliged by the rapid development of express services to place an order with the firm of Maffei for locomotives for heavy express trains. The first S 3/6's were delivered barely 15 months later. The locomotive created in this record time set new standards for performance and appearance.

When the German provincial railroads were amalgamated to become the former German State Railways, the Bavarian S 3/6 was re-designated Class 18^4 and 18^{4-5}. Connoisseurs regard this machine, with its powerful cylinder group, clearly arranged underframe and characteristic rimmed smoke stack, as the finest steam locomotive of all time.

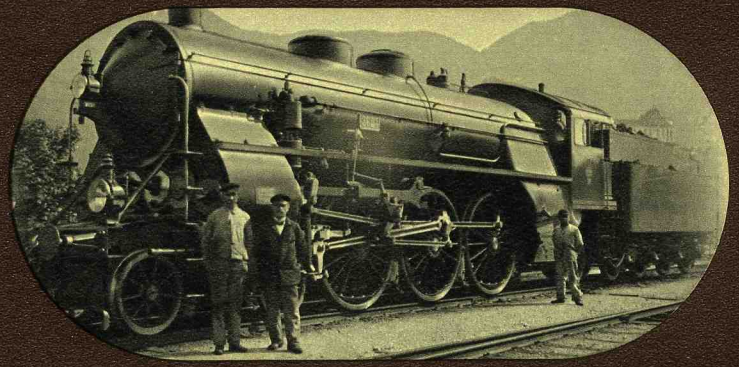
The first machine, No. S 3/6-3601, left the Maffei factory on 16th June 1908. On its first trial runs, in the summer of 1908, it achieved a top speed of 135 km/h (84 mph), pulling a 420 ton train.

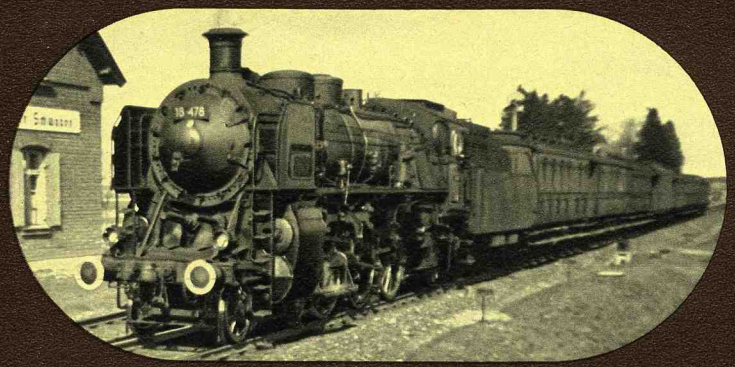
in the 1930's S 3/6's were covering approximately 160.000 km (100,000 miles) per year.

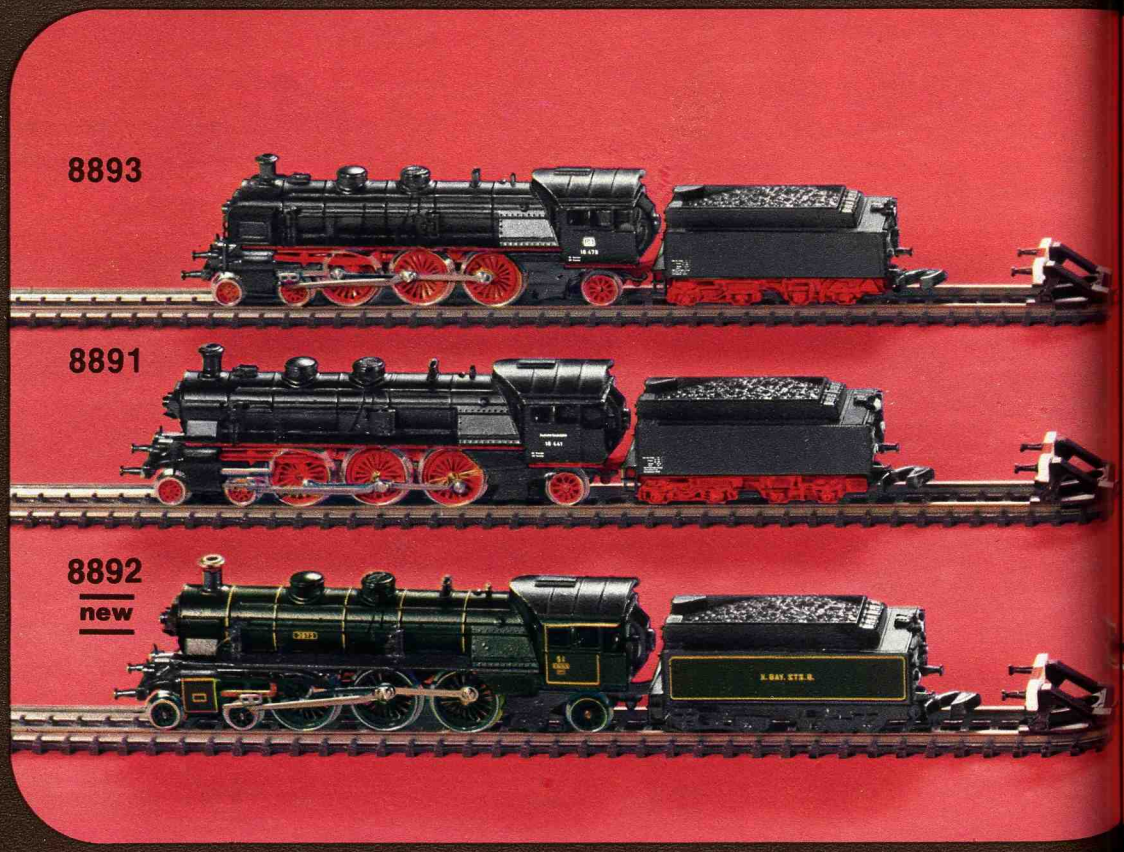
At the peak of its career the S 3/6 pulled the long-distance express trains "Rheingold", "Orient Express", "Paris-Karlsbad-Prague-Express" and "Ostend-Vienna Express".

After 1946 only five S 3/6's became uneconomical to recondition. The brilliance of earlier days was gone, however.

The last Class 18 machine, no. 18478 – our mini-club S 3/6 also has this number – was taken out of service in July 1960. The last journey by an S 3/6 took place on 17th May 1967.







8800

Tank locomotive · Model of the BR 89 · Wheel arrangement 0-6-0 · Automatic coupling at each end · Length over buffers 45 mm (1-3/4")

8803

Passenger train locomotive with tender · Model of German Federal Railways' BR 24 · Wheel arrangement 2-6-0 · Length over buffers 82 mm (3-1/4")

8827

Freight train locomotive with tender · Model of German Federal Railways' BR 41 · Wheel arrangement 2-8-2 · Length over buffers 112 mm (4-3/8")

8895

Tank locomotive · Model of German Federal Railways' BR 74 · Wheel arrangement 2-6-0 · Coupling hook in front · Length over buffers 55 mm (2-3/16")

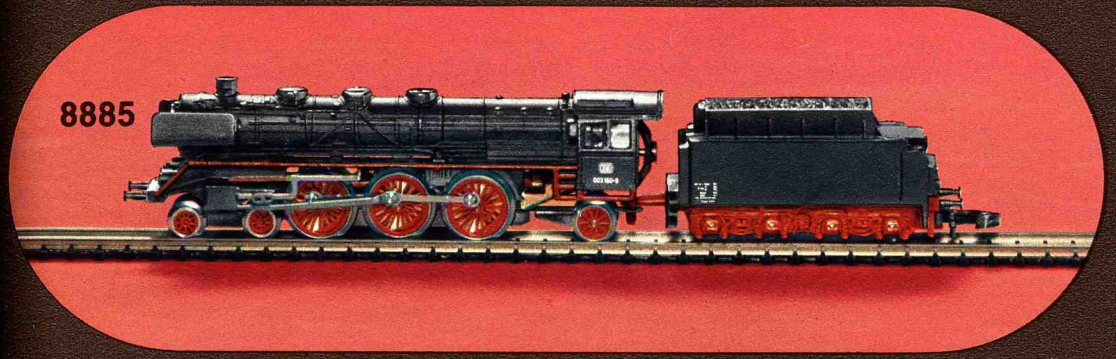
8885

Express locomotive with tender · Model of German Federal Railways' BR 003 · Wheel arrangement 4-6-2 · Length over buffers 112 mm (4-3/8")

According to the well-known "Guinness Book of Records" the world endurance record for model railroads was 440.7 km (273.8 miles), covered in about 300 hours. Our mini-club locomotive 8885, with 6 express coaches, covered no less than 720 km (447 miles), or the distance from Stuttgart to Hamburg, in 1219 hours, without stopping.

This record was set up in an impartial testing institution.


Welt-Rekord!
Mini-Lok fuhr
1219 Stunden
Deutsches Modell schlägt Briten



Electric locomotives

Features of electric locomotives

Remote control for forward and reverse drive · Both trucks driven · Three working headlights at each end, changing over with change of direction · Changeover switch for selecting catenary or track supply · 2 spring-loaded pantographs on roof · Automatic coupling at each end · Die cast zinc frame · Windows inset in plastic frames

= 8953

The "Crocodile" is one of the most interesting locomotives in the world. This mighty machine is 91 mm (3⁵/₈″) long even at mini-club scale. Its articulated construction enables it to negotiate any mini-club curve without trouble. The three body sections, i.e. the center and two end parts, are finely detailed. Insulators, electrical cables on the roof and handrails on the buffer beam have been fitted.

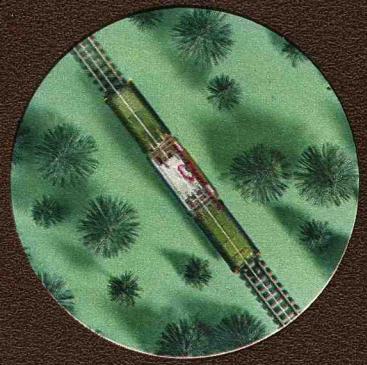
■ The rail network of Swiss Federal Railways (SBB) includes 3000 km (1875 miles) of track, 3600 bridges, 250 tunnels and maximum inclines of 27 ‰ (as high as 38 ‰ on some branch lines), all presenting certain difficulties.

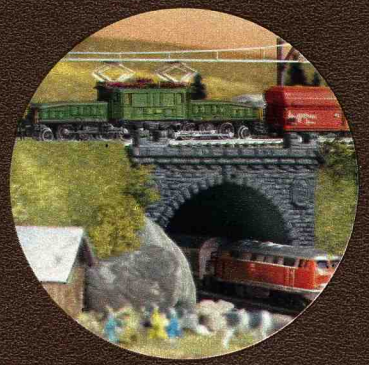
In Switzerland, the availability of hydroelectric power and the large numbers of tunnels and steep inclines led to the rapid development of railway electrification. After initial trials in 1904, scheduled electric services started on 1 December 1907 on the Seebach–Wettingen route.

Shortage of coal spurred further development. The Gotthard line was the first to be fully electrified, in 1916. By 1936, 73 % of the Swiss railroad system was equipped with overhead lines, and an overhead line system has covered the entire network since 1960.

40 % of all the rail traffic passing across the Alps uses the Gotthard line. In the early 1920's the growth in freight traffic led to the requirement for locomotives able to undertake two return journeys between Arth-Goldau and Chiasso within 28 hours. Thus the locomotive with the designation Ce 6/8^{II} was born. From this developed the famous heavy freight locomotive Be 6/8^{III}, the "Crocodile".

Its performance: on level track it could pull a 2000 ton load at 60 km/h (37 mph), and it could pull 520 tons (or 15 cars) up an incline of 26 ‰ at 40 km/h (25 mph).





8856 new

Electric freight train locomotive · Model of Swiss Federal Railways' (SBB) Be 6/8^{III} locomotive "Crocodile" · Wheel arrangement 1'C-C1 · Length over buffers 91 mm (3-⁵/₈″)

8842
Electric express locomotive · Model of German Federal Railways' BR 111 · Wheel arrangement B-B · Length over buffers 76,8 mm (3″)

8854
Electric high speed locomotive · Model of German Federal Railways' BR 103 · Wheel arrangement C-C · Length over buffers 88 mm (3-1/2″)

8857
Electric freight train locomotive · Model of German Federal Railways' BR 151 · Wheel arrangement C-C · Length over buffers 88 mm (3-1/2″)

8858
Electric freight train locomotive · Model of German Federal Railways' BR 151 · Wheel arrangement C-C · Length over buffers 88 mm (3-1/2″)

8855 new
Electric locomotive · Model of German Federal Railways BR 111 used on urban high-speed services in the Rhine and Ruhr districts · Wheel arrangement B-B · Length over buffers 76,8 mm (3″)

The mini-club catenary system is fully functional. It's a must if you want to add that extra touch of realism and versatility.

■ The class 111 locomotive made its first public appearance in its new light gray and orange color scheme on 12. 7. 78. Altogether 36 locomotives are in service on the S-Bahn (urban elevated railway system) of the Ruhr district. Initially these locomotives are operating with silver-colored cars. 5 trains have been configured as multiple unit trains.

You will find full details of the catenary system and how easy it is to start operating in this extra railroad dimension on pages 106/110.

Diesel locomotives · Railcars

Features of diesel locomotives and railcars

Remote control for forward and reverse drive · All axles driven · Three working headlights at each end (except for 8802 and 8864) · Automatic coupling at each end · Die cast zinc frame

💡 = 8953

■ The class 260 locomotive can be found in every marshaling yard on German Federal Railways, engaged in light and medium weight switching duties. Like the class 261, it is also used to pull freight trains.

The class 260 locomotives date from 1955. Their original designation was V 60. The 12 cylinder 478 kW diesel engine is situated under the long hood. Under the short hood there are air tanks and fuel tanks.

Steam enthusiasts will be glad to know that pre-warming of its machinery installation is still partly achieved with the aid of coke fires.

To aid safe and smooth switching operations, the 260 is fitted with the Federal Railways standard 2-way radio set, enabling communication between the driver, the switching controller and other points. The locomotive can also be operated by radio remote control.

8864

Diesel locomotive · Model of German Federal Railways' BR 260 · Wheel arrangement O-6-O · Metal body · Length over buffers 49 mm (1-15/16")

The following items are needed for locomotive maintenance:

8987
Pair of carbon brushes for locomotives 8800, 8803, 8864 and 8895

8988
Pair of carbon brushes for locomotives 8802, 8816, 8854, 8857, 8858, 8874 and 8875

8989
Pair of carbon brushes for locomotives 8827, 8842, 8855, 8856, 8885, 8891, 8892 and 8893

7199
Bottle of oil · Contains about 10 cc of oil for lubricating locomotives and cars

8953
Lamp insert · With 10 V · For use in locomotives which can take lighting

8816
Railbus · Model of German Federal Railways' type 798 · Length over buffers 62 mm (2-$^{1}/_{16}$")

8817
Trailer for Railbus · Model of German Federal Railways' type 998 · Length over buffers 62 mm (2-$^{1}/_{16}$")

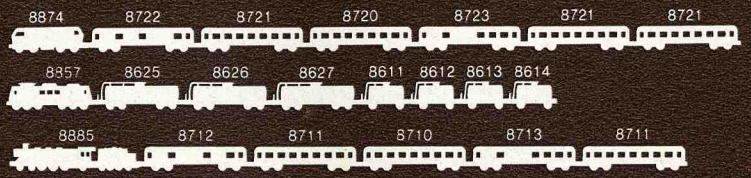
8874
Diesel locomotive · Model of German Federal Railways' BR 216 · Wheel arrangement B-B · Three working headlights at each end, depending on direction of motion · Length over buffers 75 mm (3")

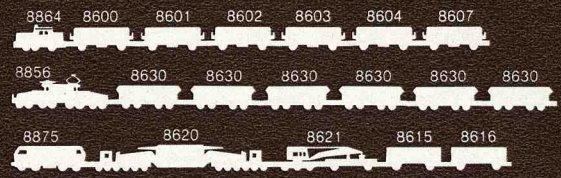
8875
Diesel locomotive · Model of German Federal Railways' BR 216 · Wheel arrangement B-B · Three working headlights at each end, depending on direction of motion · Length over buffers 75 mm (3")

■ After initial prototypes, the class 216 locomotive entered service in 1964. With its high all-up weight it replaced a host of famous steam locomotives on the main routes, including the P8 and the classes 38, 23, 50, 39, 56 and 57.

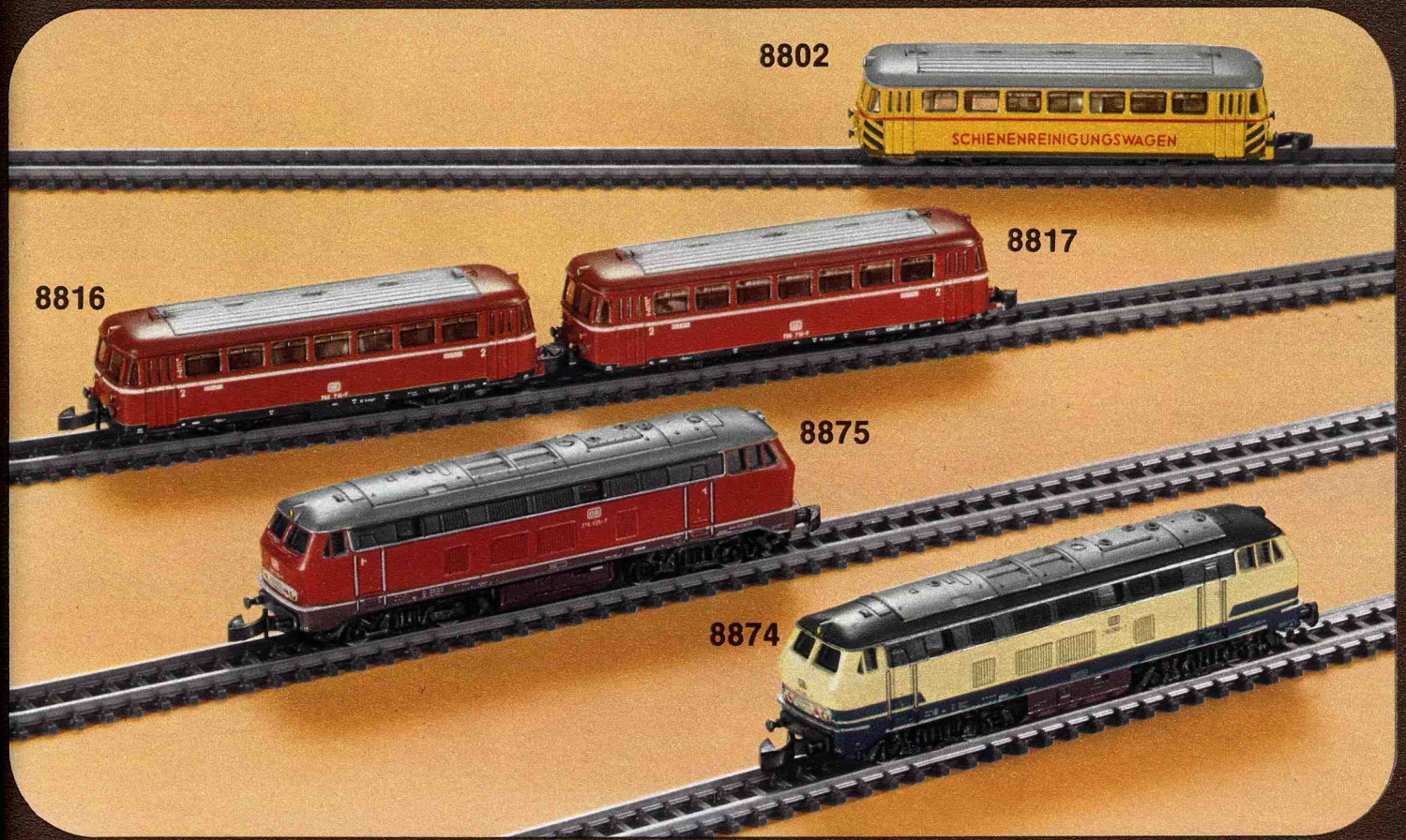
8802
Track-cleaning railcar · 2 driven axles · Automatic coupling at car end · Length over buffers 62 mm (2-$^{1}/_{16}$")

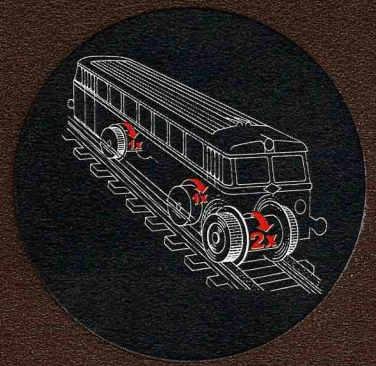
This vehicle has two driven axles. The rear wheels are ridged to provide extra friction. Two track-cleaning ridged wheels are located ahead of the front axle. These rotate faster than the driving wheels, causing the dirt on the track to be thrown off.





Examples of marshaling of trains:

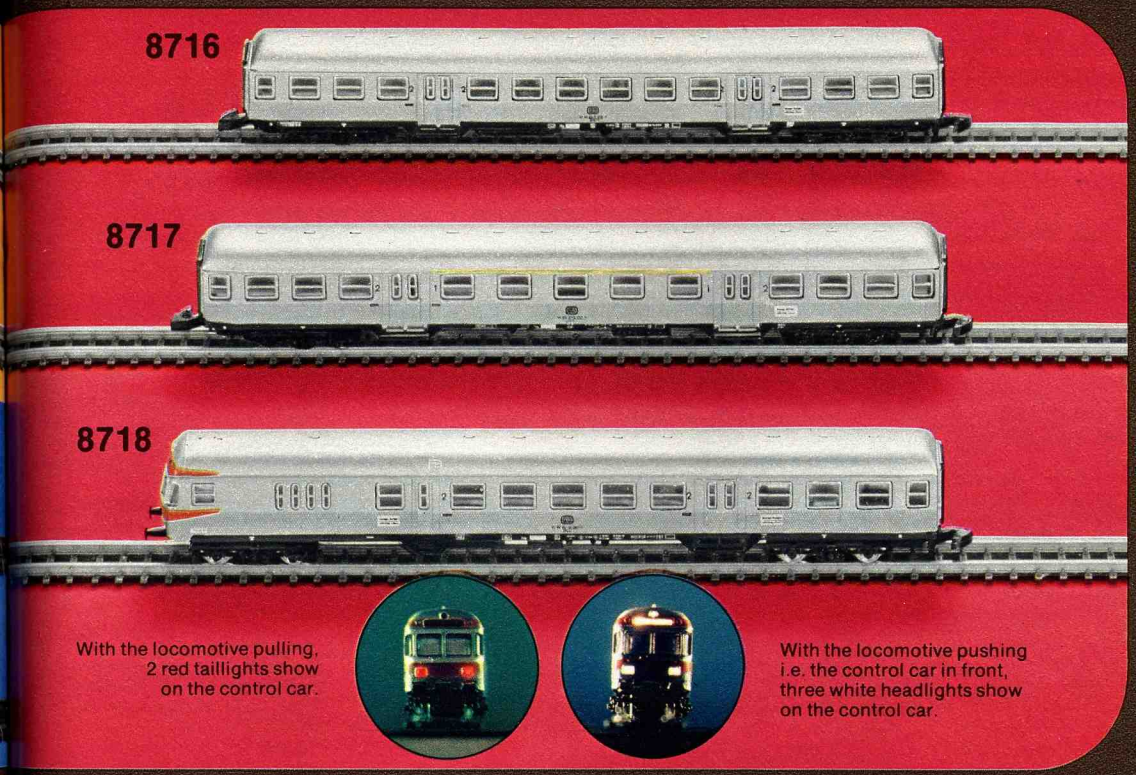




Schematic drawing showing how the track-cleaning railcar works

Passenger cars

All other German Federal Railways models have 4 axles · Windows inset in plastic frames · Length 120 mm (4-3/4")



With the locomotive pulling, 2 red taillights show on the control car.

With the locomotive pushing i.e. the control car in front, three white headlights show on the control car.

The local passenger service coaches of German Federal Railways with bodies in peacock's-eye patterned stainless steel are known colloquially in Germany as "Silberlinge" (silver cars).

8716
Local passenger service coach · Bnb · 2nd class

8717
Local passenger service coach · ABnb · 1st and 2nd class

8718
Local passenger service coach · BDnrzf · 2nd class · With baggage compartment and control car · Three headlights and red taillights, operating in accordance with the direction of motion

8710
Express coach · Aüm · 1st class

8711
Express coach · Büm · 2nd class

8712
Express baggage car · Düm

8713
Express dining car · WRüm

Passenger/automobile trains usually consist of a combination of automobile transporters and express coaches.

8714
Automobile transporter · DDm 915 · Loaded with 8 miniature automobiles

8720
Express coach · Aüm · 1st class

8721
Express coach · Büm · 2nd class

8722
Express baggage car · Düm

8723
Express dining car · WRüm

The TEE coaches are the pride of German Federal Railways. They have 1st class compartments only and are fully air-conditioned. There are mini-club versions with and without interior lighting.

8724
8734 with interior lighting
TEE compartment car · Avm

8725
8735 with interior lighting
TEE open-interior car · Apm

8726
8736 with interior lighting
TEE dining car · WRm

8728
8738 with interior lighting
TEE dome car · ADm · Transparent observation dome

Passenger cars of the former German provincial railways

Models of the Württemberg Railway · 2 axles · Platform and entrance at each end · Windows glazed with "cellon" panes · Length 60 mm (2-3/8")

8700 **Branch line passenger car**

8701 **Branch line passenger car**

Model of the Bavarian Railway · 4 axles · Windows inset in plastic frames · Length 87 mm (3-3/8")

8730 new
Express coach · Type CCü of the former Royal Bavarian Railways · 3rd class

Models of the former German State Railways · Windows inset in plastic frames

8731
Express coach · C4ü bay 11 · 3rd class · Length 87 mm (3-3/8")

8732
Express baggage car · Pw4ü bay 09 · Length 78 mm (3-1/8")

Models of German Federal Railways

The two compartment cars of German Federal Railways were originally Prussian Railways types, and some of them were equipped with a brakeman's cab.

The models have windows inset in plastic frames · 3 axles · Length 57 mm (2-1/4")

8704 new
Compartment car · Formerly type BC3-pr03

8705 new
Compartment car with brakeman's cab · Formerly type B3-pr03

Freight cars

■ Most of the 290.000 freight cars on German Federal Railways have 2 axles. The only vehicles having more than 4 axles are those such as flat cars intended to carry specially heavy loads.

Freight trains can be divided into 3 categories:

1. Mixed freight trains with any combination of cars.
2. Express freight trains, used for refrigerated goods etc.
3. Standard freight trains, consisting only of cars of a single type, like our new mini-club car 8630, in which goods such as coal or iron ore are carried.

On German Federal Railways, standard freight trains are used to simplify unloading. Bulk goods are discharged through the unloading hatches into bunkers or containers. A standard train can be made to unload automatically as each car passes a certain point.

About 50.000 of the freight cars used on German Federal Railways are privately owned – mostly 2 or 4 axled tank cars.

Locomotives pulling tank cars which contain highly inflammable liquids normally pick up current with their front pantograph, in order to avoid the risk of explosion from sparkling at the overhead line. Otherwise, the rear pantograph is usually used.

8600
Refrigerated car · German Federal Railways' type Ichqrs · Length 54 mm (2-1/8")

8601 · 8602
8603 · 8604

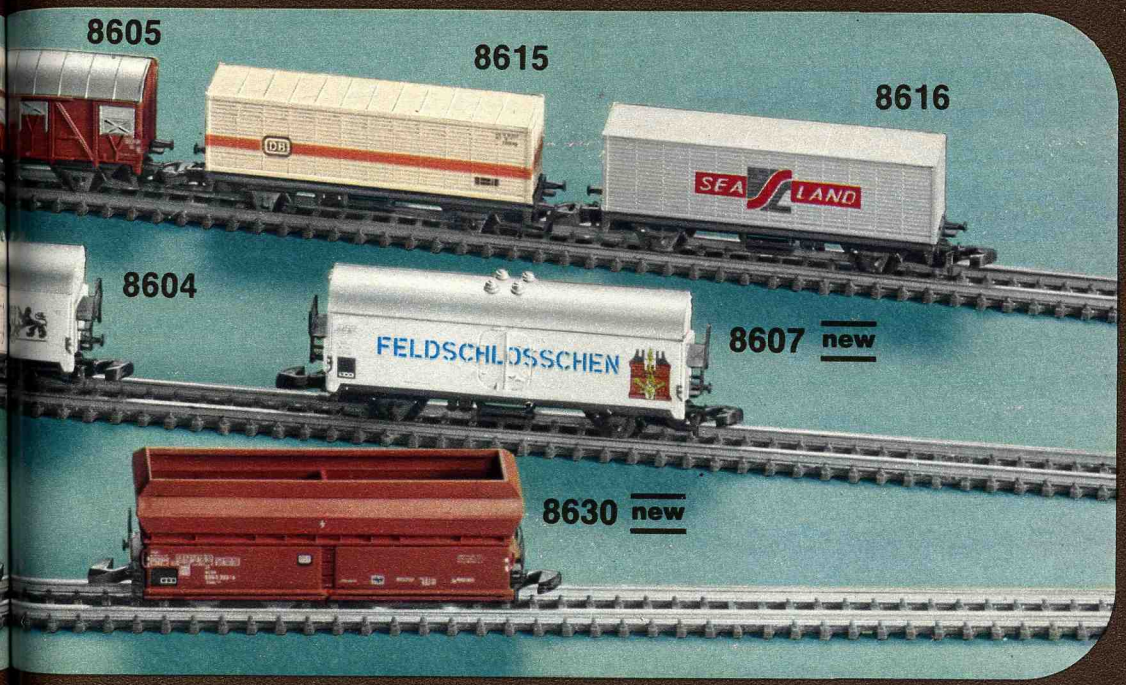
8607 new
Beer car · Length 54 mm (2-1/8")

8605
Box car · German Federal Railways' type Gbrs · Length 54 mm (2-1/8")

8606
Box car · German Federal Railways' type Ibbls · Length 54 mm (2-1/8")

8609
Freight train baggage car · DB-Dg · Doors on each side which will open · Length 40 mm (1-9/16")

8610
Low-sided car · Length 54 mm (2-1/8")



8611 · 8612
8613 · 8614
Tank car · Length 40 mm (1-9/16″)

8615
Container car · German Federal Railways · Length 54 mm (2-1/8″)

8616
Container car · Sealand · Length 54 mm (2-1/8″)

8619
Lumber car · In 2 parts · Loaded with sawn lumber · Length 93 mm (3-5/8″)

8620
Well car · Loaded with transformer · Length 154 mm (6-1/8″)

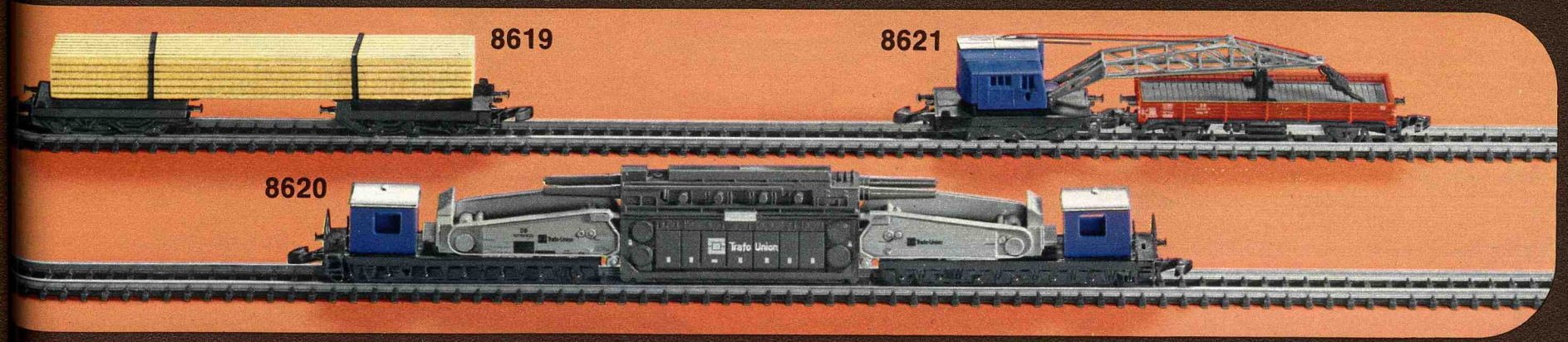
8621
Crane car with rotating crane, movable boom and boom support · Crane hook can be raised and lowered by hand crank · Length of underframe 35 mm (1-3/8″) · (Low-sided car 8610 is not included in the price but is recommended for use when moving the crane car)

8622
Open freight car · German Federal Railways' type Omm 52 · Length 54 mm (2-1/8″)

8625 · 8626

8627 new
Tank car · Length 75 mm (3″)

8630 new
Open self-unloading freight car with steering trucks · German Federal Railways' type Fads 176 · Length 53 mm (2-1/8″)



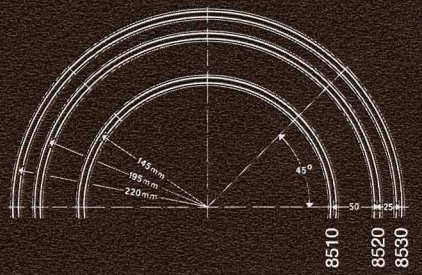
Track construction

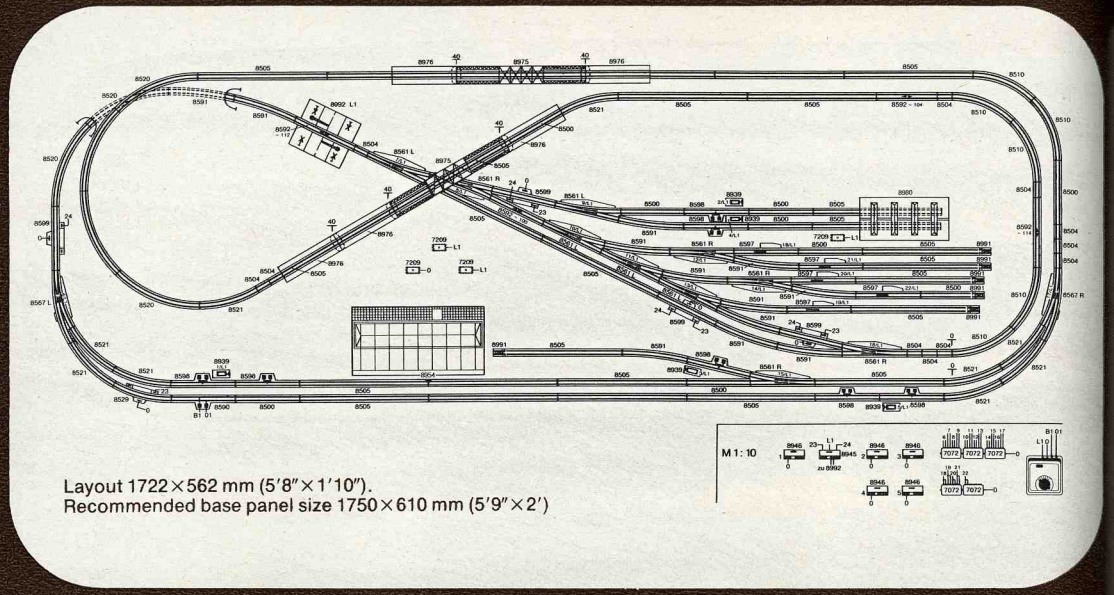
The track system

With a gauge of 6.5 mm (17/64"), the overall width of Märklin mini-club track sections is about 11.5 mm (7/16"). The height is about 2.5 mm (1/10"). The accurately dimensioned nickel silver rails are mounted on plastic cross-ties. The track sections are joined to each other by means of rail joint clips, as on larger scale railroads. The rigidity of the track joints is increased by means of an additional claw coupling on the cross-ties.

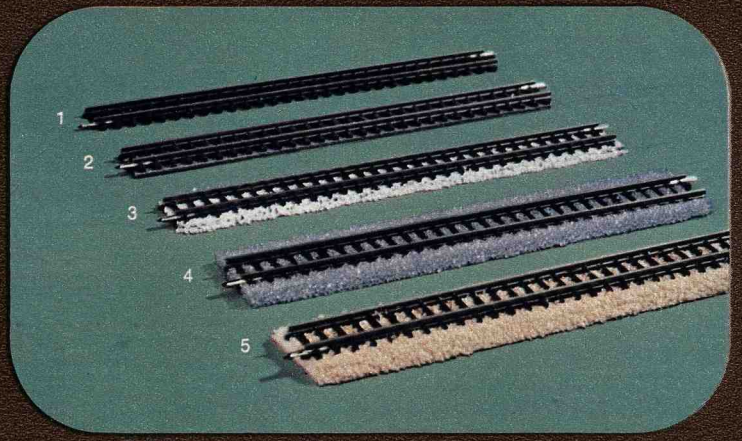
This diagram shows the 3 Märklin mini-club track circles, with their radii, the distances between them and the curvature of the sections.

Circle 8510 = 8 track sections
Circle 8520 = 8 track sections
Circle 8530 = 8 track sections





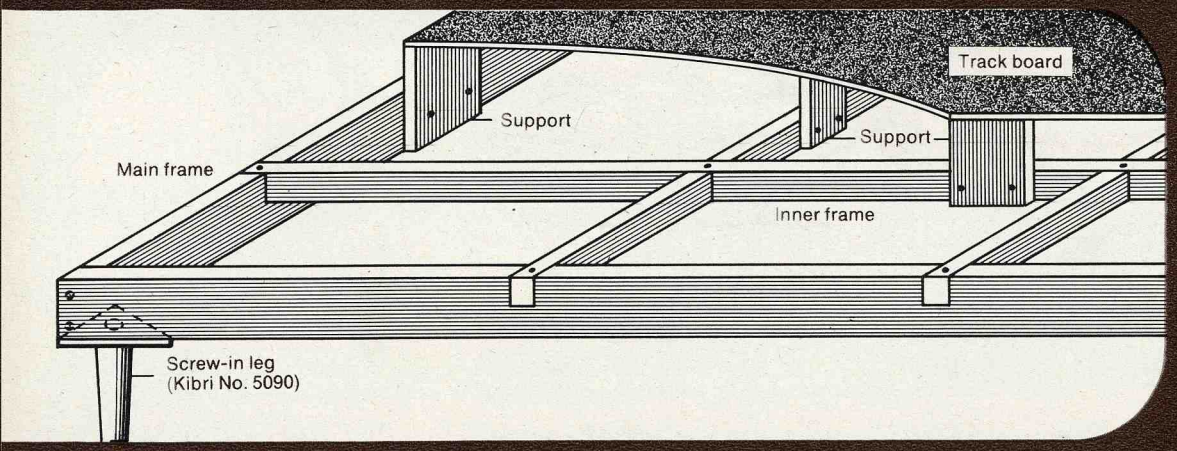
Layout 1722×562 mm (5'8"×1'10").
Recommended base panel size 1750×610 mm (5'9"×2')



Track laying

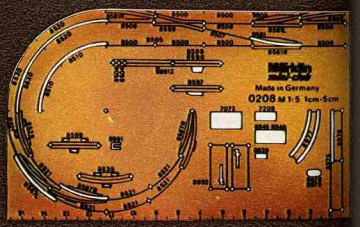
As with the larger gauge railroads, mini-club tracks may be laid in all sorts of ways, from the simple track on a flat surface with no embellishments to the highly realistic type complete with embankments and roadbed.

1. not fixed
2. on double surface adhesive tape
3. double surface adhesive tape with ballast
4. foam material base
5. heavy roadbed



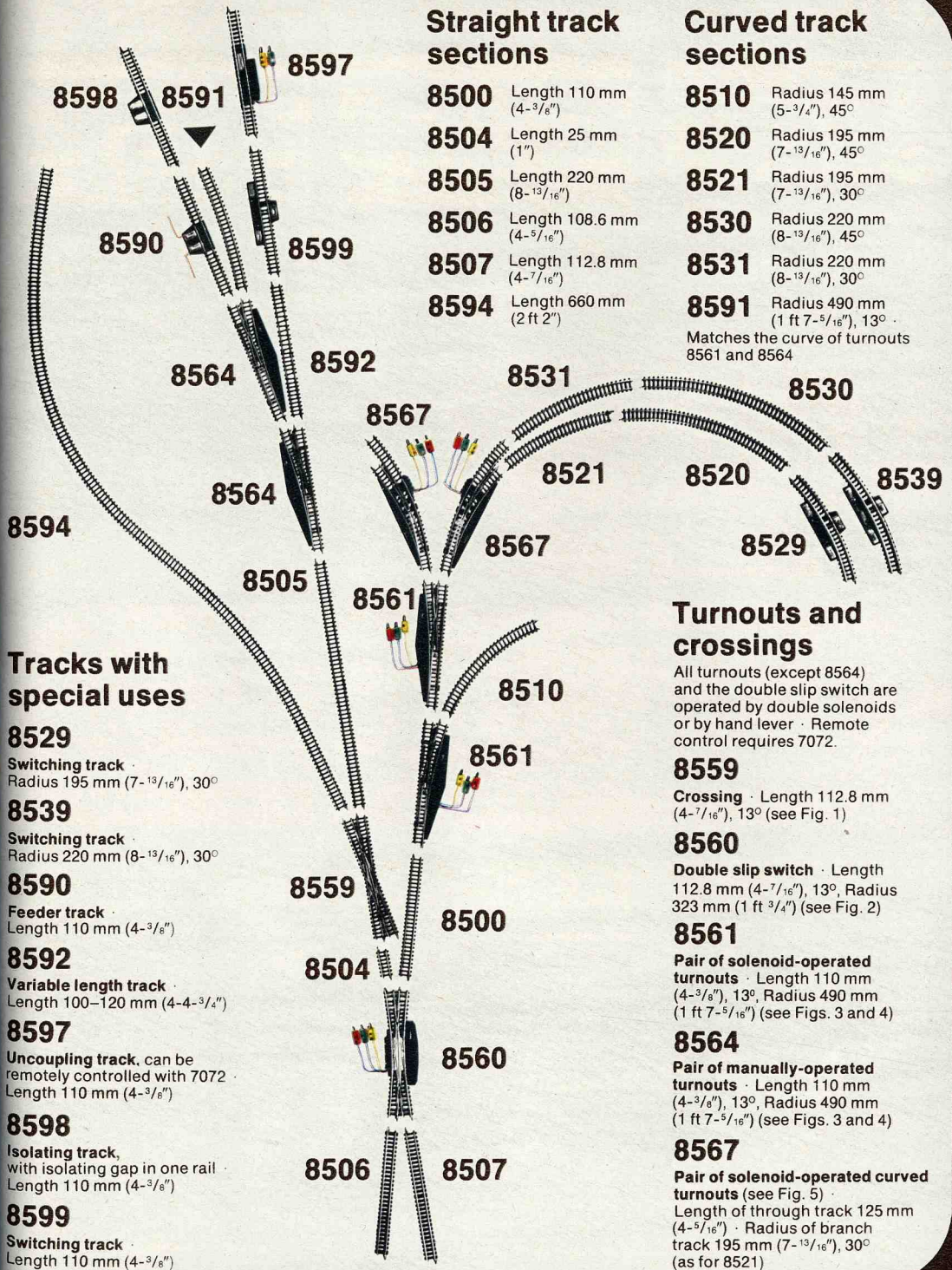
Mini-club can be assembled quickly and easily, either as a table-top layout or in a more realistic arrangement. This drawing shows the front view of a model railroad layout built on a framework, with the main track being laid about 10 cm (4") above the base of the frame. This method enables realistic landscapes to be created, with bridges, valleys, rivers etc. Further details can be found in the booklet "Märklin railroads & landscapes".

8974
Re-railing ramp · Makes it easier to set vehicles on the track



0208
Track plan stencil for mini-club tracks · Scale 1 : 5

0292
Booklet · 54 pages on track layouts, electrical wiring, building bridges and constructing overhead lines · English text



Straight track sections

8500 Length 110 mm (4-3/8″)

8504 Length 25 mm (1″)

8505 Length 220 mm (8-13/16″)

8506 Length 108.6 mm (4-5/16″)

8507 Length 112.8 mm (4-7/16″)

8594 Length 660 mm (2 ft 2″)

Curved track sections

8510 Radius 145 mm (5-3/4″), 45°

8520 Radius 195 mm (7-13/16″), 45°

8521 Radius 195 mm (7-13/16″), 30°

8530 Radius 220 mm (8-13/16″), 45°

8531 Radius 220 mm (8-13/16″), 30°

8591 Radius 490 mm (1 ft 7-5/16″), 13° · Matches the curve of turnouts 8561 and 8564

Tracks with special uses

8529
Switching track · Radius 195 mm (7-13/16″), 30°

8539
Switching track · Radius 220 mm (8-13/16″), 30°

8590
Feeder track · Length 110 mm (4-3/8″)

8592
Variable length track · Length 100–120 mm (4-4-3/4″)

8597
Uncoupling track, can be remotely controlled with 7072 · Length 110 mm (4-3/8″)

8598
Isolating track, with isolating gap in one rail · Length 110 mm (4-3/8″)

8599
Switching track · Length 110 mm (4-3/8″)

Turnouts and crossings

All turnouts (except 8564) and the double slip switch are operated by double solenoids or by hand lever · Remote control requires 7072.

8559
Crossing · Length 112.8 mm (4-7/16″), 13° (see Fig. 1)

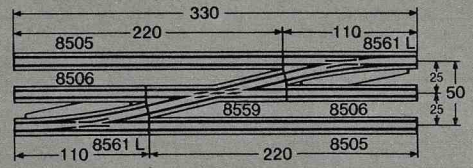
8560
Double slip switch · Length 112.8 mm (4-7/16″), 13°, Radius 323 mm (1 ft 3/4″) (see Fig. 2)

8561
Pair of solenoid-operated turnouts · Length 110 mm (4-3/8″), 13°, Radius 490 mm (1 ft 7-5/16″) (see Figs. 3 and 4)

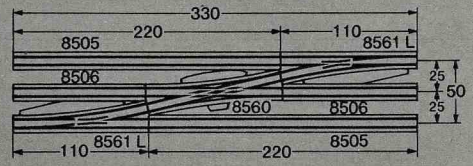
8564
Pair of manually-operated turnouts · Length 110 mm (4-3/8″), 13°, Radius 490 mm (1 ft 7-5/16″) (see Figs. 3 and 4)

8567
Pair of solenoid-operated curved turnouts (see Fig. 5) · Length of through track 125 mm (4-5/16″) · Radius of branch track 195 mm (7-13/16″), 30° (as for 8521)

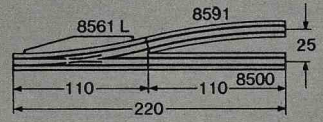
1



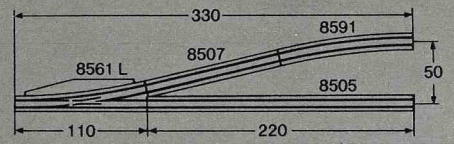
2



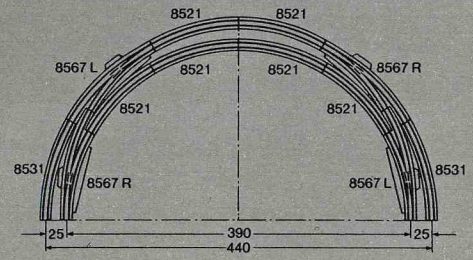
3

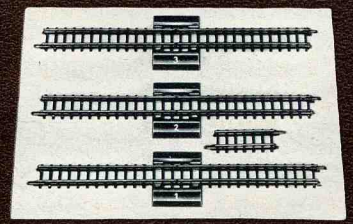


4



5





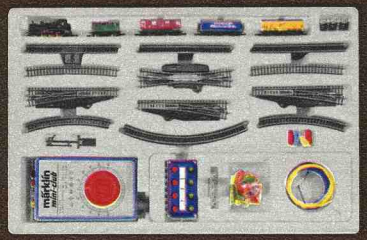
8993
Reversing loop kit, allowing one-way travel on reversing loops when tracks are arranged in the sequence of their identifying numbers

8999
100 track fixing nails · 0.5×6 mm (1/64″×1/4″)

8991
Bumper for clipping onto the rails Length 15 mm (5/8″)

8954
Pack with 10 isolating and 20 conducting jointing clips

SET extension program



8158–8161 new

Freight train with power pack

The simplest way to make a start with the mini-club system is with one of the basic sets 8158–8161 or 8905–8909 S.

Basic set 8158–8161 includes all the track material of S, E and T 3, apart from one parking track. Sets T 1 and T 2 can be used to supplement it. Both basic sets can of course also be extended in accordance with individual wishes.

Extending 8909 S

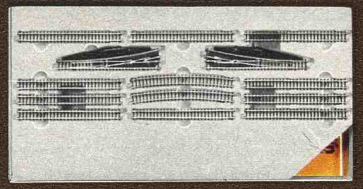
The first stage is an extension set E 8190 or E 8191. Then there are three further track sets with which to build up a mini-club layout:

Double track set	**T 1**	**8192**
Station track set	**T 2**	**8193**
Switching track set	**T 3**	**8194**

The three track sets T 1, T 2 and T 3 can be added in any order. One way of doing it is shown on this page.

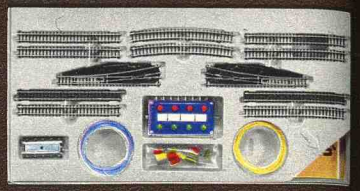
8905–8909

Freight train with power pack S



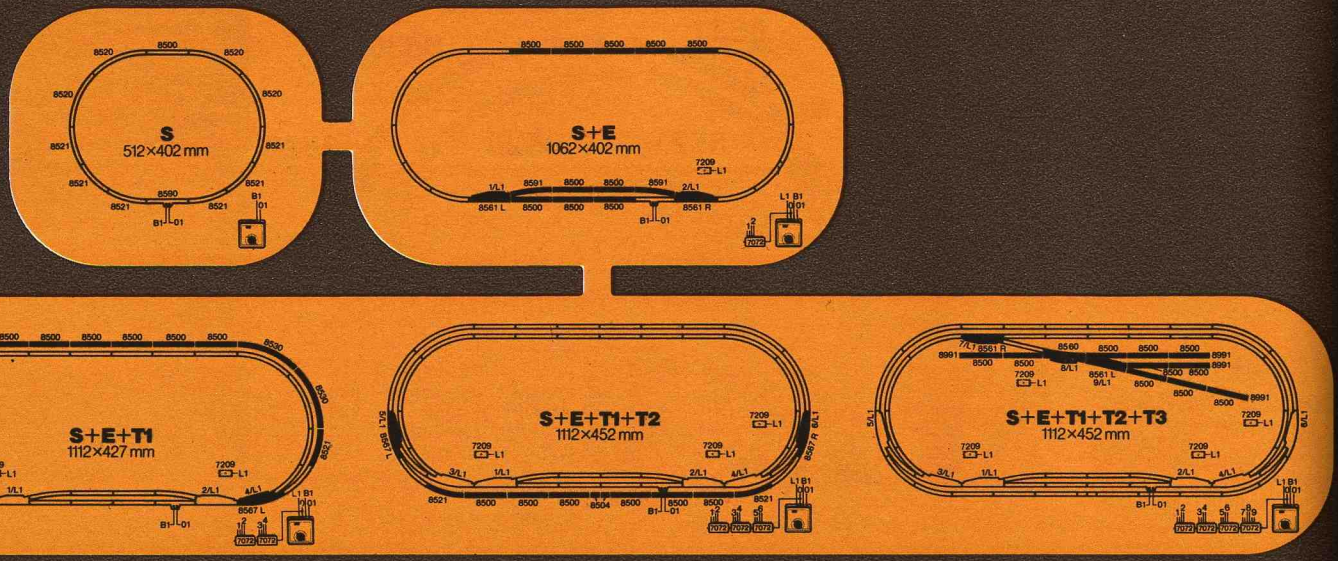
8190

Extension set E · Comprises: 1×8564 · 2×8591 · 10×8500 · Assembly instructions

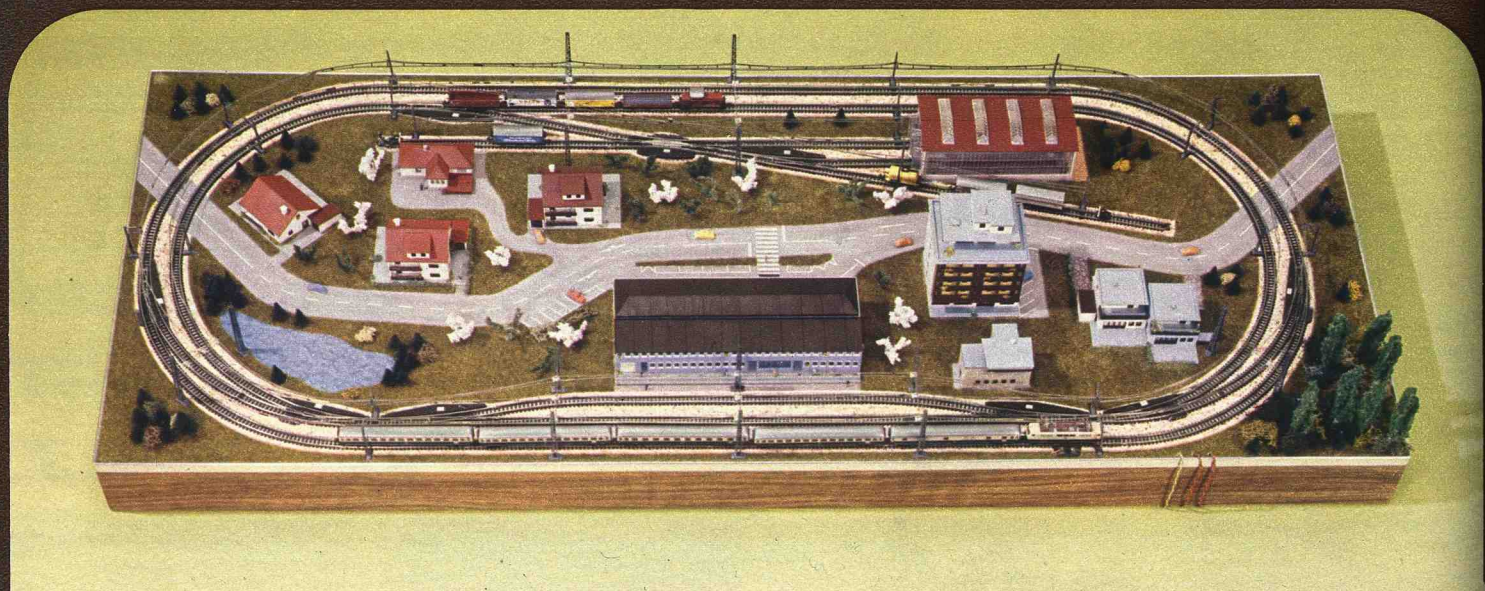


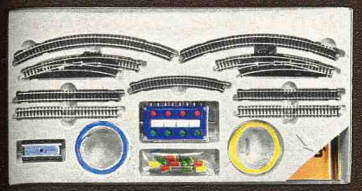
8191

Extension set E · Comprises: 1×8561 · 2×8591 · 10×8500 · 1×7072 · 1×7209 · Leads, sleeves, plugs · Assembly instructions



The finishing touch to any model railroad layout is a catenary system. This not only permits the operation of two mini-club locomotives independently, but also adds to the realistic appearance of the model railroad.





8192

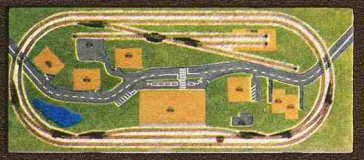
Double track set T 1 · Comprises: 1×8567 · 2×8521 · 4×8530 · 6×8500 · 1×7072 · 1×7209 · Leads, sleeves, plugs · Assembly instructions

8193

Station track set T 2 · Comprises: 1 8567 · 2 × 8521 · 2 × 8504 · 6 × 8500 · 1×7072 · 1 × 7209 · Leads, sleeves, plugs · Assembly instructions

8194

Switching track set T 3 · Comprises: 1 × 8560 · 1 × 8561 · 10 × 8500 · 1 × 7072 · 1 × 7209 · 4 × 8991 · Leads, sleeves, plugs · Assembly instructions



8930

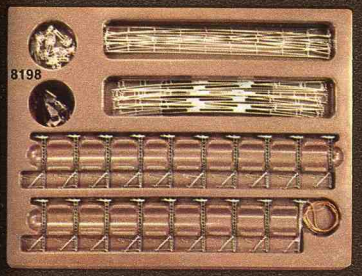
Toporama for the mini-club SET extension program · Model railroad landscape on cloth · Multi-color printing · The track layout up to stage T 3 (8194) is printed on · Can be used from stage E (8190, 8191) onwards · Size 50 × 120 cm (1 ft 7-3/4" × 3 ft 11-1/4")

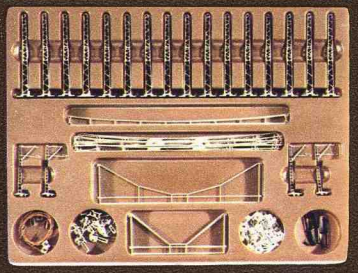
Catenary system kits

We have made things simple for anyone wanting to start out in catenary systems.

The contents of kit 8198 enable the track of sets S and E to be "electrified". 8199 completes the SET layout.

The catenary system kits are also of use to those who have developed their layouts in their own way rather than with the SET program. The kits provide the basic catenary system which any layout would need.





8198 new

Catenary system kit S+E · Contains all items required for the construction of overhead line above sets S+E · Comprises: 18 × 8911 · 1 × 8912 · 9 × 8922 · 11 × 8923 · 1 × 8926

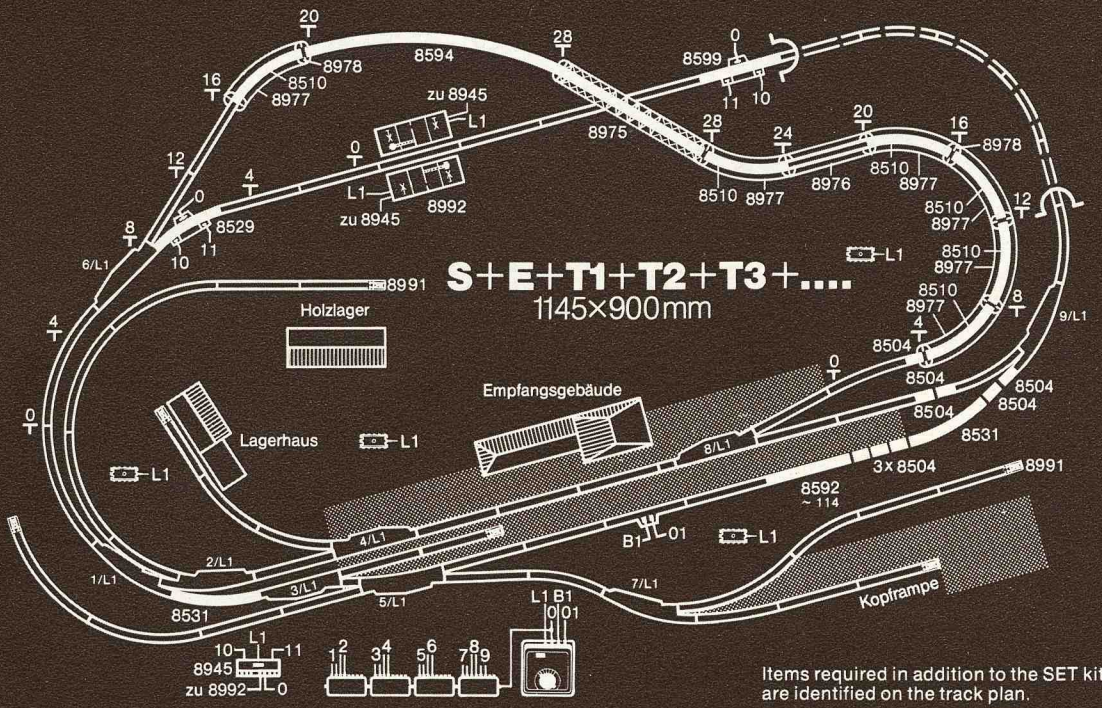
8199 new

Catenary system kit T 1 + T 2 + T 3 · Supplements 8198 to cover sets T 1–T 3 · Comprises: 4 × 8911 · 16 × 8914 · 3 × 8921 · 6 × 8922 · 24 × 8923 · 2 × 8924 · 6 × 8925 · 1 × 8926 · 1 × 8927

This new track layout has attractively curving features. For this a useful aid is track section 8594, which with care can be converted into flexible track.

The plastic cross-tie is cut with a sharp knife so that the track can be bent. Natural curves can then be copied.

Tracks and cross-ties should be shortened as necessary and new jointing clips (8954) fitted.



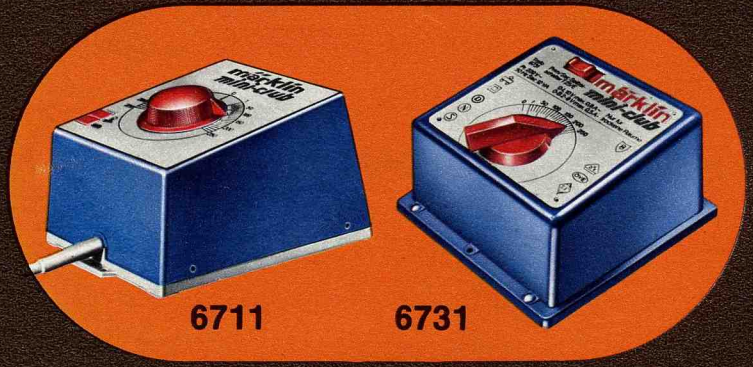
Items required in addition to the SET kits are identified on the track plan.

Planning a layout is a particular pleasure in itself. With mini-club, furthermore, the planning of a comprehensive layout can include fitting it into the most confined of spaces. The SET program provides a good basic outfit, which can be added to later to build even more interesting layouts.

Train control

After construction of the track layout, the electrical leads are laid out. This task is made easy by the Märklin color coding system for electrical leads.

The variable traction current (DC) is supplied by red leads and returns by way of brown leads (connected to ground).



6711 220 Volt

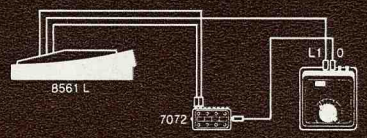
Märklin mini-club power pack for use with AC power supply · Single knob control for adjusting the **traction voltage (DC)** between 0 and 8 V and for determining the direction of travel by clockwise or counter-clockwise rotation from its center position · Power output in the traction circuit up to 8 VA, and in the **lighting circuit (AC)** about 12 VA at 10 V · Blue plastic case · Weight 1.65 kg · Dimensions 155×110×88 mm (6-1/8″ × 4-5/16″×3-1/2″)

6731 220 Volt
6720 100 Volt Japan
6727 110 Volt (60 Hz) USA
6729 240 Volt

Märklin mini-club power pack for use with AC power supply · Output 12 VA · **Traction voltage (DC)** adjustable between 2 V and 8 V · Polarity reversing switch for selecting the direction of travel · **Lighting voltage (AC)** 10 V · Blue plastic case · Weight 1.2 kg · Dimensions: 125×135×75 mm (4-15/16″×5-5/16″×3″)

The constant-voltage lighting circuit (AC) is supplied via the yellow lead to the load and returns via the gray (grounded) lead to the power pack.

There is an exception to this: Solenoid-operated items are connected to the switch by two blue leads, one having a red and on a blue plug, and the switch is connected to the power pack again by a gray lead.



For more about electrical circuits see track booklet 0292.

Multiple train control is necessary to make a model railroad truly versatile and realistic.

The control of several trains on a single layout is achieved by the use of separate electrical circuits. Every track circuit not electrically connected to another one is provided with traction voltage from its own power pack.

Electrical leads

The copper conductor in these stranded leads consists of 24 separate strands each of 0.10 mm (0.004″) diameter, giving an overall cross-sectional area of 0.19 mm² (0.03 sq.″). That is capable of withstanding even short-circuit currents.

7100 **Lead** · Single core · Gray · 10 m (33 ft)

7101 **Lead** · Single core · Blue · 10 m (33 ft)

7102 **Lead** · Single core · Brown · 10 m (33 ft)

7103 **Lead** · Single core · Yellow · 10 m (33 ft)

7105 **Lead** · Single core · Red · 10 m (33 ft)

Sleeves

7111 = brown
7112 = yellow
7113 = green
7114 = orange
7115 = red
7117 = gray

Plugs with side sockets

7131 = brown
7132 = yellow
7133 = green
7134 = orange
7135 = red
7137 = gray

7000

Staples · Bag of 50 · For fixing leads to a wooden base

7209

Distribution strip · With 11 single sockets · Size 50 × 20 mm (2″×3/4″)

8939

Color light home signal · Signal lights change from red to green · 2 bulbs · Operated by universal remote control switch 8945 or by manual signal switch 8946 · Height 34.5 mm (1-3/8″)

= 8953

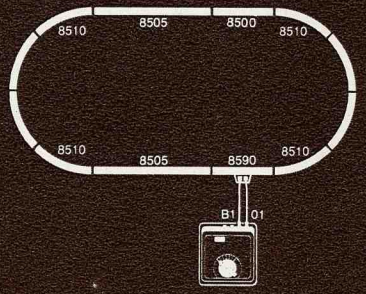
8940 new

Home signal with 1 semaphore arm · Signal lights change from red to green · Operated by double solenoid · Used for train control · Operated by position control box 7072 or a switching track section · Height 45 mm (1-3/4″)

= 8953

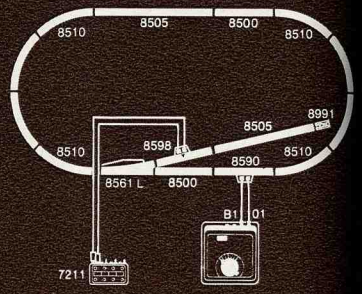
The first circuit

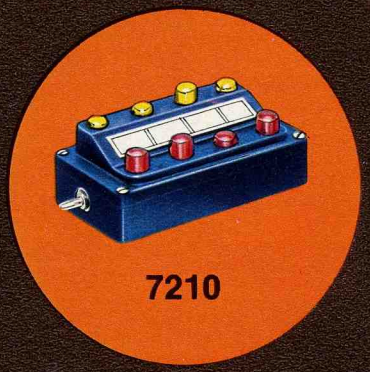
A single locomotive can be controlled by the power pack. A second locomotive on the same circuit, having different running properties from the first, would eventually collide with it.



1st variation on single circuit

An oval track is extended by the addition of a parking track, from which the current can be cut off with the aid of an isolating track section 8598 and circuit-breaker box 7210 or 7211.





7210

Control box with indicator push buttons for distributing current to 4 traction current or lighting circuits · Length 80 mm (3-1/8″) · Width 40 mm (1-1/2″)

7211

Control box for switching 4 different traction or lighting circuits on and off by indicator push buttons · Length 80 mm (3-1/8″) · Width 40 mm (1-1/2″)

8954

Pack with 10 isolating and 20 conducting jointing clips for electrical isolation of track sections and electrical connection of rails respectively

The same effect can be achieved using isolating clips 8954 and an extra feeder track section, together with a control box (see also 0292).

8945

Universal remote control switch with 2 single-pole switches and one changeover switch for various circuits · The universal remote control switch can automatically perform a variety of functions (up to 3 simultaneously) · Examples are given in booklet 0292 · Operating voltage 10 V · Double solenoid operation · Operated by a switching track section, a position control box or by the hand lever · Width 30 mm (1-3/16") · Length 70 mm (2-3/4") · Height 8 mm (5/16")

8946

Manual signal control panel with 2 single-pole switches and one changeover switch, used for controlling the change of signal lights in Signal 8939, for example, and for controlling traction current · Width 30 mm (1-3/16") · Length 70 mm (2-3/4") · Height 8 mm (5/16")

8947

Double-pole changeover switch (Polarity reversing switch) · Operating voltage 10 V · Double solenoid operation · Operated by a switching track section, a position control box or by the hand lever · Width 30 mm (1-3/16") · Length 70 mm (2-3/4") · Height 8 mm (5/16")

7072

Position control box with 8 sockets for connecting 4 double-solenoid operated articles · The position of signals, turnouts, etc., can be seen from the position of the push buttons · Length 80 mm (3-1/8") · Width 40 mm (1-1/2")

2nd variation

This circuit can be refined as follows:

1. The parking track can be joined to the main track again to make an overtaking or passing track.
2. The switching on and off of current to a particular section can be registered visually by being applied via a signal (color light signal 8939 or mechanical signal 8940).

To control a color light signal and interrupt the supply of traction current, manual signal switch 8946 and two isolating track sections 8598 are required.

For signals to be operated automatically by the trains themselves, instead of 8946 a universal remote control switch 8945 and two switching track sections 8529, 8539 or 8599 are required.

For automatic running of trains in opposite directions, a two-pole changeover switch 8947 is also required.

Manual signal control panel 8946 can not be used to operate mechanical signal 8940. To operate mechanical signals, position control box 7072 or switching track sections 8529, 8539 or 8599 will suffice.

3rd variation

The next stage of train control on a single circuit is block section switching. For two trains, three block sections (i.e. three signals which can control trains) are required.

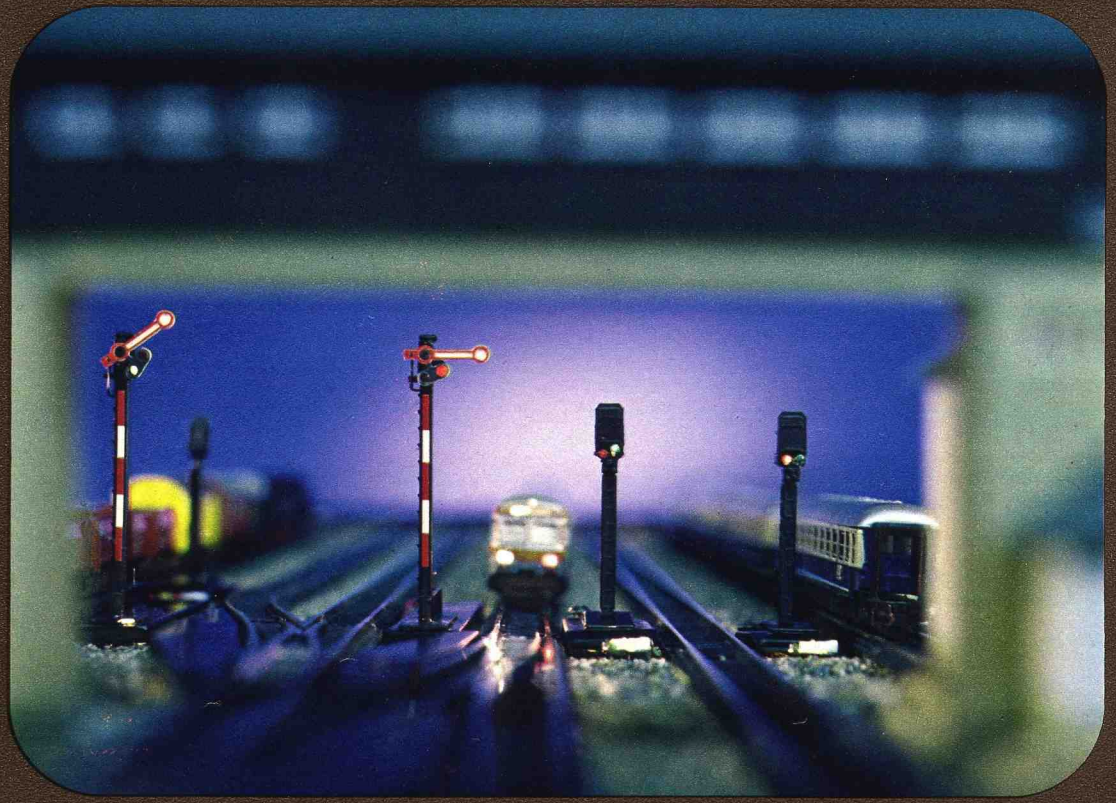
What this means is that one block section is always clear, so that the trains can not collide with each other. For each additional train another block section has to be provided. The circuit is shown in 0292.

Train operation with two electrical circuits

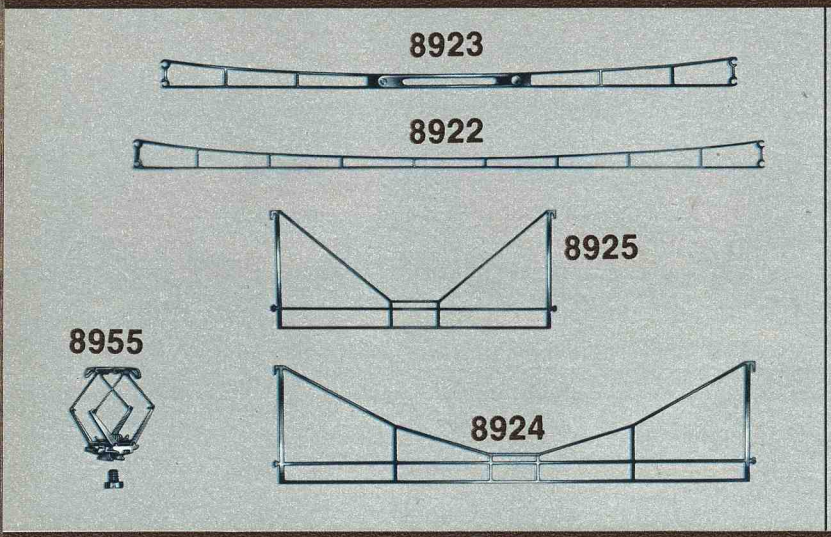
If a second track circuit is constructed round the original oval track, a second power pack is required. Then two locomotives can be controlled independently on the two separate circuits. If the two tracks are then joined together by turnouts, it is necessary to isolate the two tracks electrically (8954), so that the layout still consists of two separate electrical circuits.

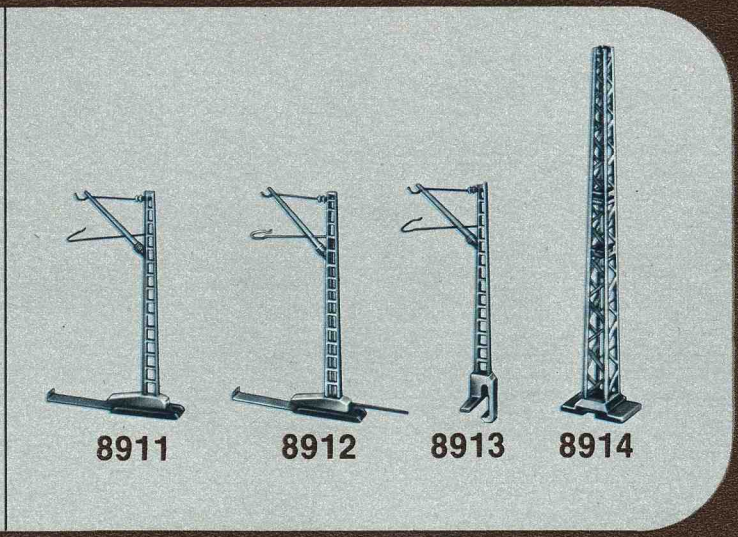
One way of providing a second electrical circuit, however, is by using a catenary system. There is no difficulty in separating the overhead line electrically from the track. At the same time, this method adds considerably to the authentic appearance of the model railroad layout. For further details see pages 107 and 110.

Detailed circuit examples are contained in the users' instructions and in the track layout booklet 0292.



Catenary system





8922
Contact line section for straight and curved tracks · Length 165 mm (6-1/2")

8923
Contact line section · Length adjustable between 150 and 180 mm (5-2/8"–7 1/8")

8924
Cross-span · For hooking into tower masts · Spans 5 tracks · Span approx. 123 mm (4-1/8")

8925
Cross-span · For hooking into tower masts · Spans 3 tracks · Span approx. 72 mm (2-7/8")

8955
Pantograph current collector with 1 fixing screw

8911
Mast for overhead line · Basic unit with supporting plate · Height 38 mm (1-1/2")

8912
Feeder mast for power supply · With supporting plate and connector lead · Height 38 mm (1-1/2")

8913
Bridge mast for clipping onto the side of bridges and ramp sections · Height 41 mm (1-5/8")

8914
Tower mast with recesses for hooking in cross-spans 8924 and 8925 · Base 7 × 13 mm (1/4" × 1/2") · Height 61 mm (2-3/8")

Fitting out a layout

Many model railroaders consider landscaping to be just as important a part of their layout as the track and the trains. Layouts can be fitted out with landscaping cloth, loose matter strewn about, paint, bushes, trees, etc., which can be obtained from any good hobby store.

Our building kits can be fitted with light fitting 8950.

8958
Station lamp standard · Height 46 mm (1-3/4") · Base 8 × 14 mm (5/16" × 9/16") = 60210

8960
Göppingen Station (center block) building kit · Modern design · Base area 228 × 114 mm (9" × 4-1/2") · Height 44 mm (1-3/4")

8961
Platform building kit · In 2 parts · Total length 440 mm (1 ft 5-5/16") · Width 38 mm (1-1/2") · Height 23 mm (7/8")

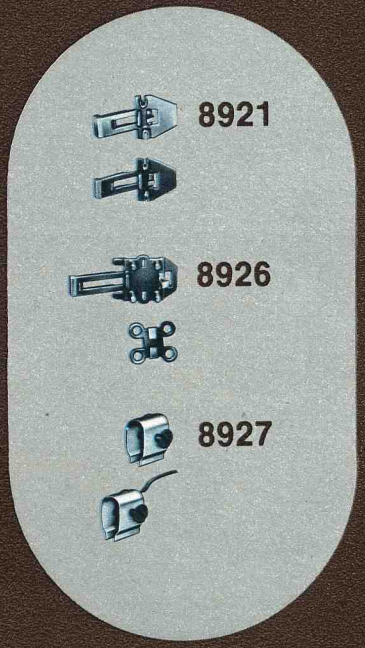
8965
Signal box building kit · Base area 69 × 39 mm (2-3/4" × 1-1/2") · Height 46 mm (1-3/4")

8975
Arch bridge · Gray · Length 220 mm (8 5/8")

8921
Pack of contact line insulators · For isolating contact line sections from cross-spans · Comprises 8 white and 2 gray insulators · The white insulators will hold 2 contact line sections, the gray ones 3

8926
Pack of 8 isolating sections and 6 connecting springs · These are required for making isolating points in the overhead line, and at branches above turnouts

8927
Pack of contact wire terminals · Contains 2 screw terminals with and 3 without leads · For feeding power into catenary sections, or for holding sections of contact line together, e.g. above crossings



The use of switches 8945 and 8947 in conjunction with circuit-breaker boxes, position control boxes and switching tracks

	Item Number	8945	8947	8945 8947	
Manual operation Position control box	7072	Grade crossing Color light signal		Two trains running in opposite directions (2 × 8590, 2 × 8598, 2 × 8939, 1 × 8945, 1 × 8954)	Turnouts Uncoupling track Locomotive shed Semaphore-arm signal
Circuit-breaker boxes	7210				Up to 4 grade crossings or 4 lighting sets in 1 electrical circuit
	7211				Either 1 grade crossing or 1 lighting set in each of up to 4 electrical circuits
Manual control panel	8946				Color light signal Grade crossing
Automatic operation Switching tracks	8529 8539 8599	Color light signal Grade crossing Lighting sets Semaphore-arm signal	Reversing loop (8590, 8954) Shuttle traffic	Two trains running in opposite directions (2 × 8590, 2 × 8598, 3 × 8599, 2 × 8939, 1 × 8945, 1 × 8954)	Turnouts Locomotive shed

Example: to control a grade crossing manually you require:
Position control box 7072 and universal remote control switch 8945

8976
Straight ramp section · Length 110 mm (4-3/8″)

8977
Curved ramp section · Radius 145 mm (5-3/4″) · Track curvature 45°

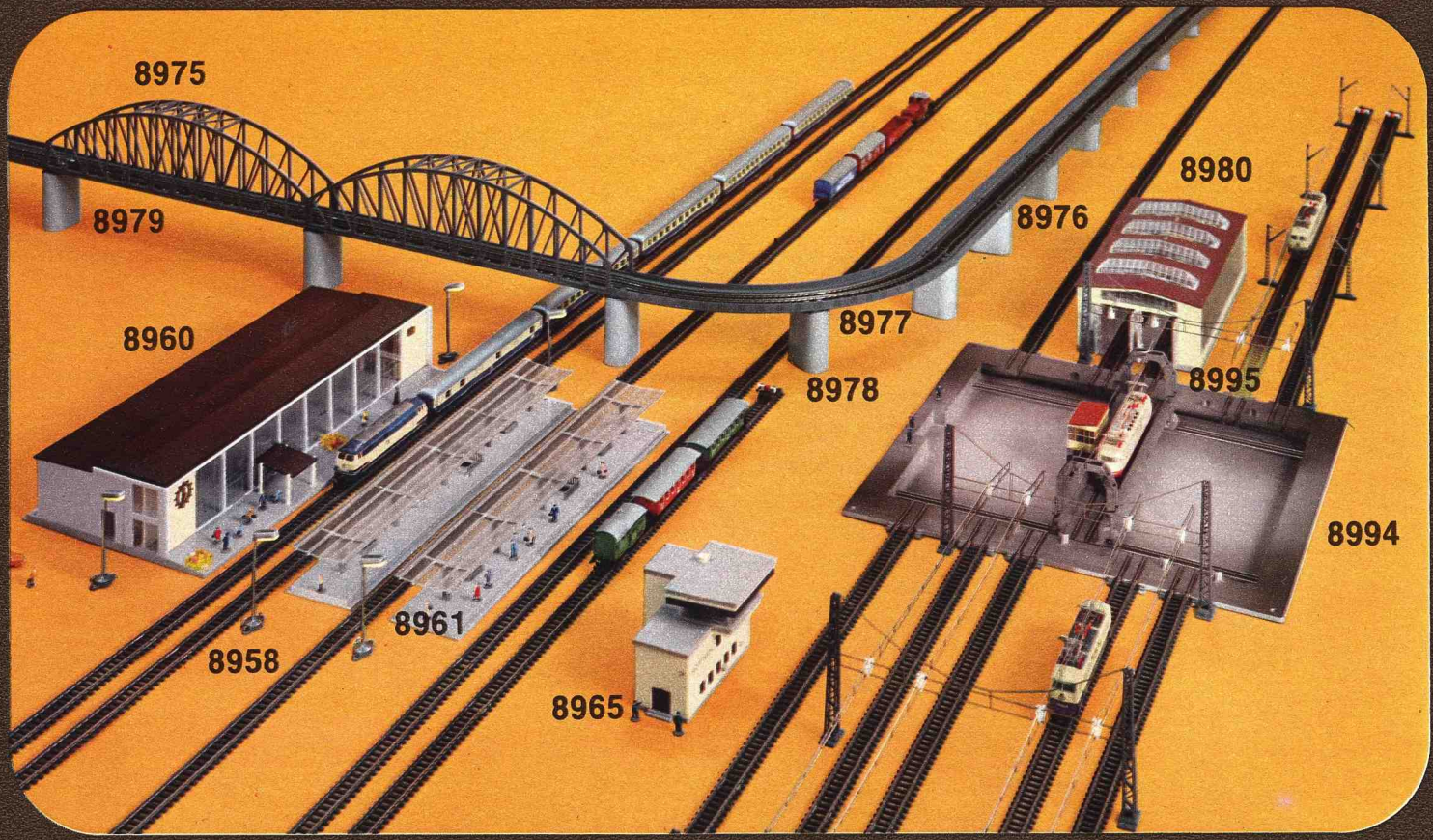
8978
Set of approach ramp columns · Contains one column each of following heights: 4, 8, 12, 16, 20, 24, 28, 32, 36 and 40 mm (0.157″ to 1-5/8″) · Assembly instructions are included

8979
Set of bridge piers · Comprising 5 piers 40 mm (1-9/16″) high

8980
Building kit for locomotive shed with solenoid-operated door mechanism · Can accommodate 2 locomotive parking tracks with overhead lines · Length 152 mm (6″) · Width 74 mm (2-7/8″) · Height 51 mm (2″) · The building kit includes 2 barrier track sections which will stop locomotives automatically as they enter the shed

8994
Transfer table with 2 approach tracks and 4×2 parking tracks · Matches locomotive shed 8980 · For flush mounting in the layout base plate · Power pack for remote control of the transfer table and locomotives · Electric motor drive · Power is automatically disconnected from all tracks not in contact with the transfer table · Width and length both 220 mm (8-5/8″)

8995
Catenary system kit for transfer table · Consists of 2 catenary system support gantries, 1 contact wire section 8922 with lead soldered on, and 10 short contact wire sections



7599
Countersunk wood screws · 1.4×10 mm (1/16″×13/32″) for fixing bridge sections onto bridge piers · Pack of 200

8950
Light fitting with lamp insert and lead · For stations, buildings etc.

= 8953

8953
Lamp insert · With 10 V bulb · For use in light fitting 8950, signals 8939 and 8940, grade crossing 8992 and in locomotives which can take lighting

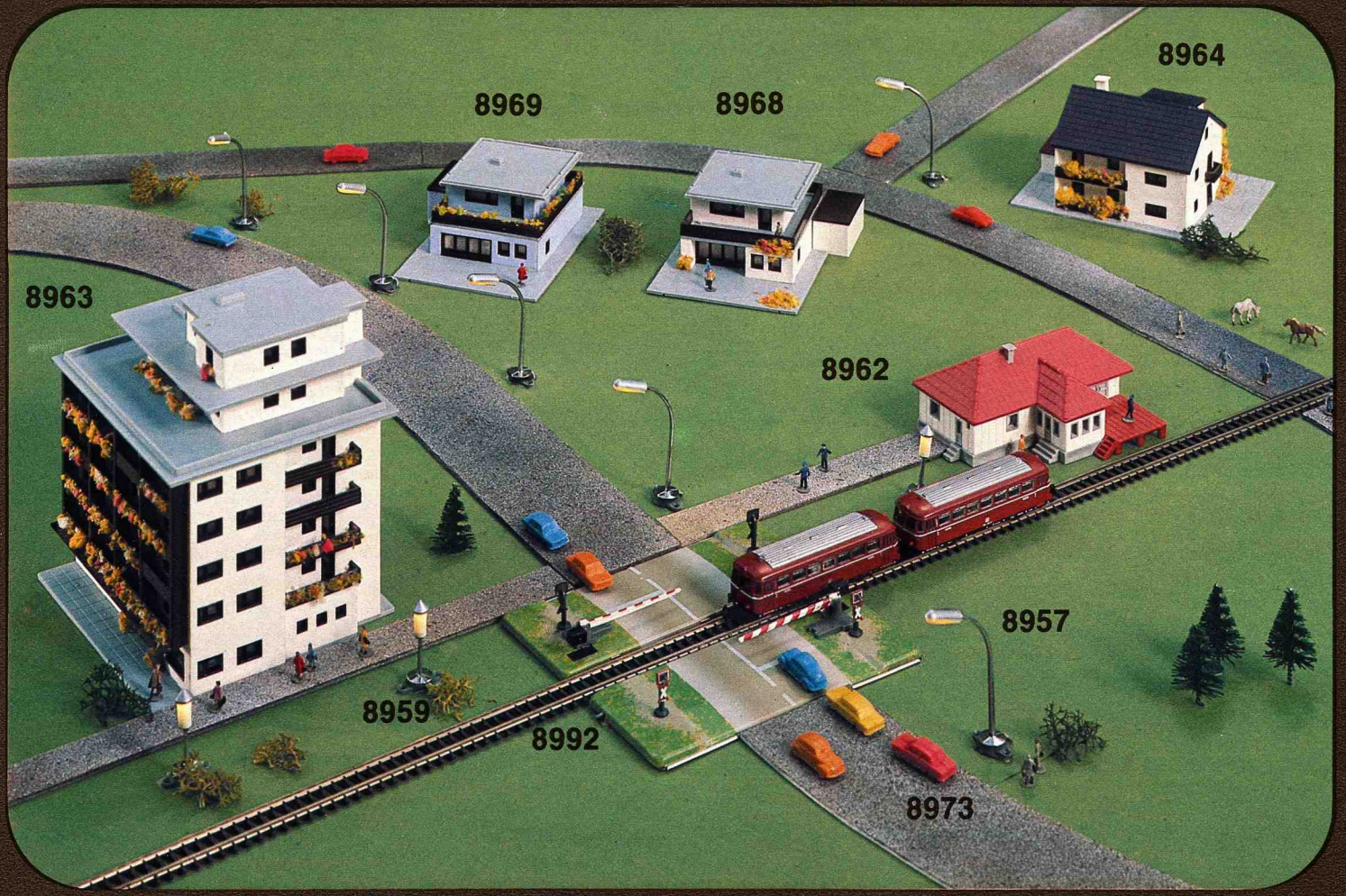
60210
Light bulb for items 8957, 8958 and 8959

8970
Wintersdorf station building kit with main building, annex and covered passage way · Can be used on its own or in conjunction with 8971 · Base area 72×112 mm (2-7/8″×4-3/8″) · Height 54 mm (2-1/8″)

8971
Freight shed building kit with freight storage area, loading ramps and equipment storage room · Can be used on its own or in conjunction with 8970 · Base area 53×130 mm (2-1/8″×5-1/8″) · Height 38 mm (1-1/2″)

8981 new
Building kit for locomotive shed with solenoid-operated door mechanism · Can accommodate one locomotive parking track · The kit includes a barrier track section which will stop a locomotive automatically as it enters the shed · Base area 150×50 mm (5-7/8″×2″)

8982 new
Coaling point building kit with crane, coal bunker, water tower, sand bunker and separate water hose crane · Base area 150×35 mm (5-7/8″×1-3/16″)



8957

Lamp standard · Height 46 mm (1-3/4") · Base 8×14 mm (5/16"×9/16")

= 60210

8959

Sidewalk lamp standard · Height 25 mm (1") · Base 8×14 mm (5/16"×9/16")

= 60210

8962

Dürnau Station building kit · Multipurpose building with annex and loading ramp · Base area 70×50 mm (2-3/4"×2") Height 30 mm (1-3/16")

8963

Apartment block building kit with roof penthouse · The two top sections can also be used separately as a bungalow and a kiosk · Base area 86×84 mm (3-3/8"×3-5/16") · Height 97 mm (3-7/8")

8964

Dwelling house building kit with garage, for use either one or two-storied · Base area 91×71 mm (3-5/8"×2-3/4") · Height 45 mm (1-3/4")

8968

Terrace house building kit with garage · White · Can be built one or two-storied in a number of different ways, or can be used as a terrace house · Base area 81×45 mm (3-1/4"×1-3/4") · Height 29 mm (1-1/8")

8969

Terrace house building kit with garage · The same kit as 8968, but with pale blue wall sections

8973

Pack containing various miniature automobiles

8992

Grade crossing with half barriers · Comprising 2 solenoid-operated barriers · 2 red warning lamps on each side which light when the barrier is closed · Size of base 96×37 mm (3-3/4"×1-1/2")

= 8953

The following items are also required with the grade crossing:

a) for **manual operation:** 1 manual signal control panel 8946

b) for **automatic** operation by a moving train: 1 universal remote control switch 8945, 2 switching track sections (of appropriate type, e.g. 8529, 8539 or 8599)

märklin mini-club


märklin
I
Shell
Shell
Shell
the big one
for indoors,
on the terrace
and in the garden

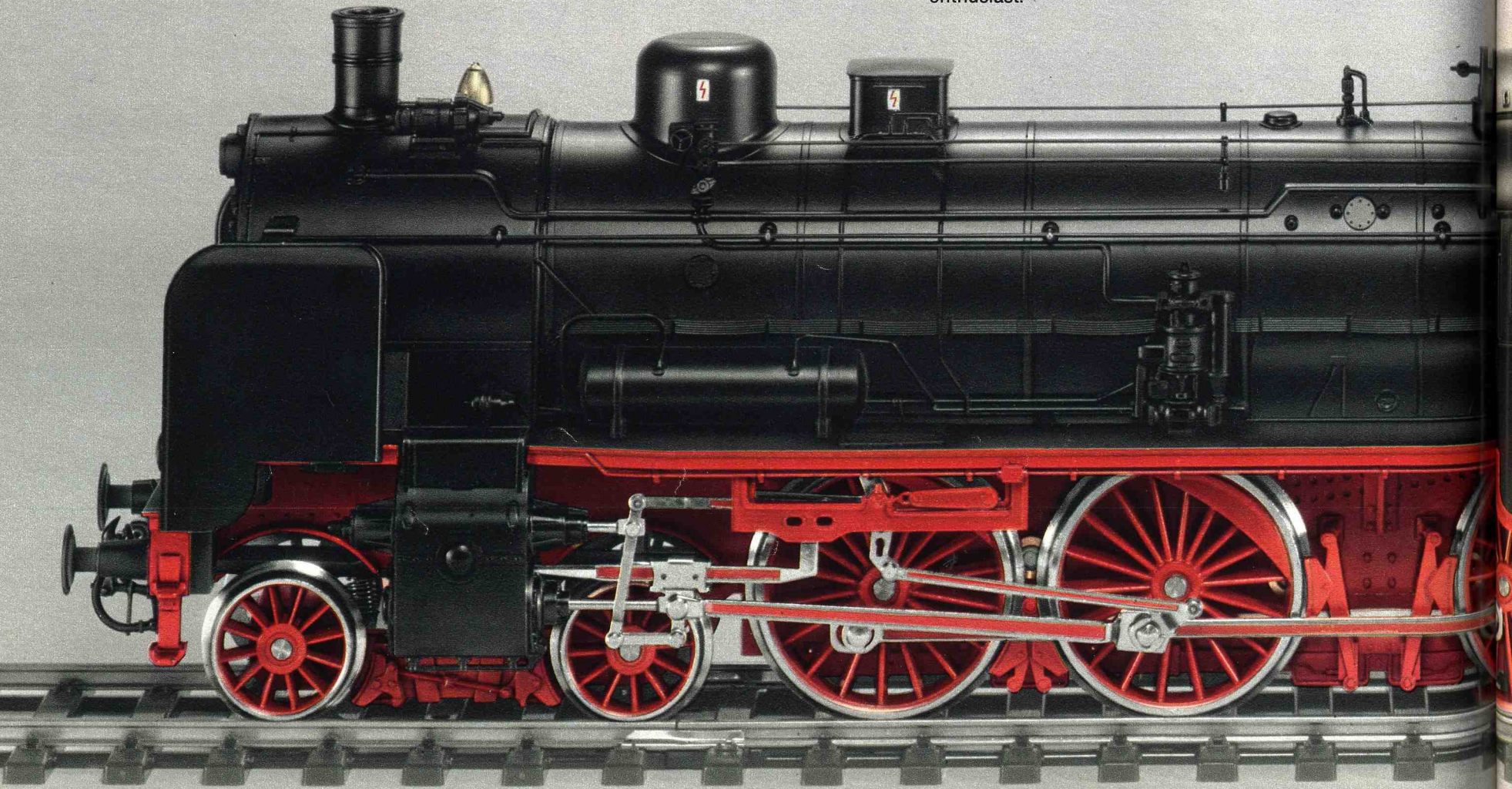
Märklin I – the large scale model railroad

Scale 1:32

This system enables the pleasures of model railroading to be enjoyed in or out of doors.
The Märklin large scale railroad has many particularly good features.
Firstly, anyone can enjoy it. Small children can locate locomotives and cars on the rails easily, and they will love their large size and the variety of their fittings.

Then Märklin I also makes a really original method of transport to show off at a party in your cellar or yard, and its high quality and accuracy of detail will impress the most experienced model railroad enthusiast.

This railroad can be laid and re-laid anywhere with great speed.
Märklin I locomotives are AC-powered and run on realistic looking tracks. The direction of motion is controlled by a switch in the locomotive, as on HO gauge.



5799

Locomotive with tender for 2-rail AC operation · A model of the German Federal Railways' 4-6-0 class 38 locomotive · 3 axles driven through concealed gears · Ball bearings on each side for the armature shaft · 2 non-skid tires · Simulated Heusinger reversing gear · Die cast zinc frame · Mat black body with large smoke deflector plates and detailed representation of the fittings on the boiler and in the driver's cab · Forward or reverse drive switched by electronic control · Built-in smoke set · 3 lights on locomotive and tender which burn with constant brightness whether the train is stationary or in motion · 8 wheeled tender with 2 trucks · Coal box filled with real coal · Sprung buffers and imitation brake hoses on both buffer beams · Scale model screw coupling in front, which can be replaced by an automatic claw coupling · Automatic claw coupling on the tender · Illuminated driver's cab · Figures of driver and fireman included · Length over buffers 58 cm (1 ft 11″)

Bulb	=	60019
Pair of carbon brushes	=	60146
Smoke fluid	=	0241

This model will not run on track sections where the radius of curvature is less than 1 meter (3 ft 3″). Suitable track sections are 5932 and turnouts 5972/5973.

5797

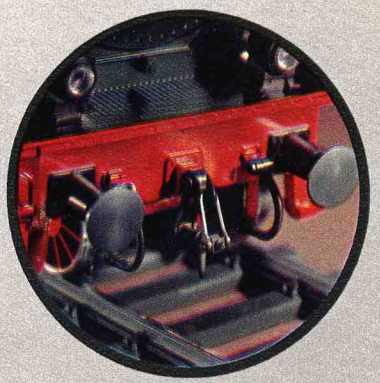
Locomotive with tender · The same model as 5799, but with electronic noise maker and whistle arrangement · The electronic noise maker in the tender produces realistic exhaust noises · The locomotive can be caused to whistle at any desired point of the layout by means of special magnets placed in the track · Two of these magnets are provided

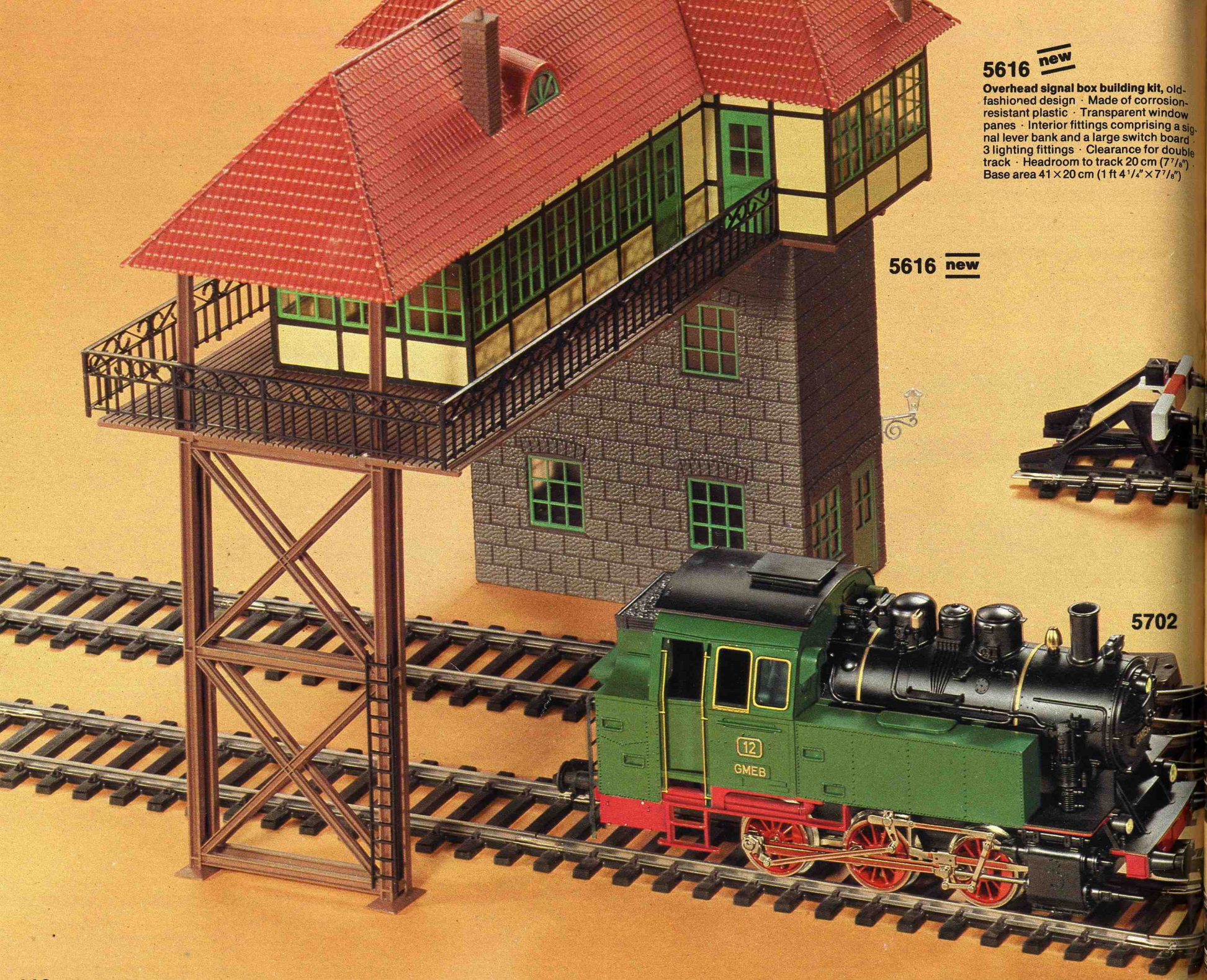
5749

Locomotive with tender · The same model as 5799, but arranged for 2-rail DC operation

5747

Locomotive with tender · The same model as 5797, but arranged for 2-rail DC operation





5616 new

Overhead signal box building kit, old-fashioned design · Made of corrosion-resistant plastic · Transparent window panes · Interior fittings comprising a signal lever bank and a large switch board · 3 lighting fittings · Clearance for double track · Headroom to track 20 cm (7 7/8") · Base area 41 × 20 cm (1 ft 4 1/4" × 7 7/8")

5616 new

5702

Locomotives and accessories

5700

Tank locomotive · A model of the German Federal Railways' 0-6-0 class 80 locomotive · 2 non-skid tires · Simulated Heusinger reversing gear · Remote control for forward and reverse drive · 3 working headlights at each end · Mat black body · Driver's cab doors will open · Windows with "Cellon" panes · Die cast zinc frame · Automatic claw coupling and sprung buffers at each end · Length over buffers 30.25 cm (1 ft)

Bulb = 60015
Pair of carbon brushes = 60041

5702

Tank locomotive · Wheel arrangement 0-6-0 · 2 non-skid tires · Simulated Heusinger reversing gear · Remote control for forward and reverse drive · 3 working headlights at each end · Black boiler, dark green water tanks and cab, brass-colored window frames and hand rails · Driver's cab doors will open · Windows with "Cellon" panes · Die cast zinc frame · Automatic claw coupling and sprung buffers at each end · Length over buffers 30.25 cm (1 ft)

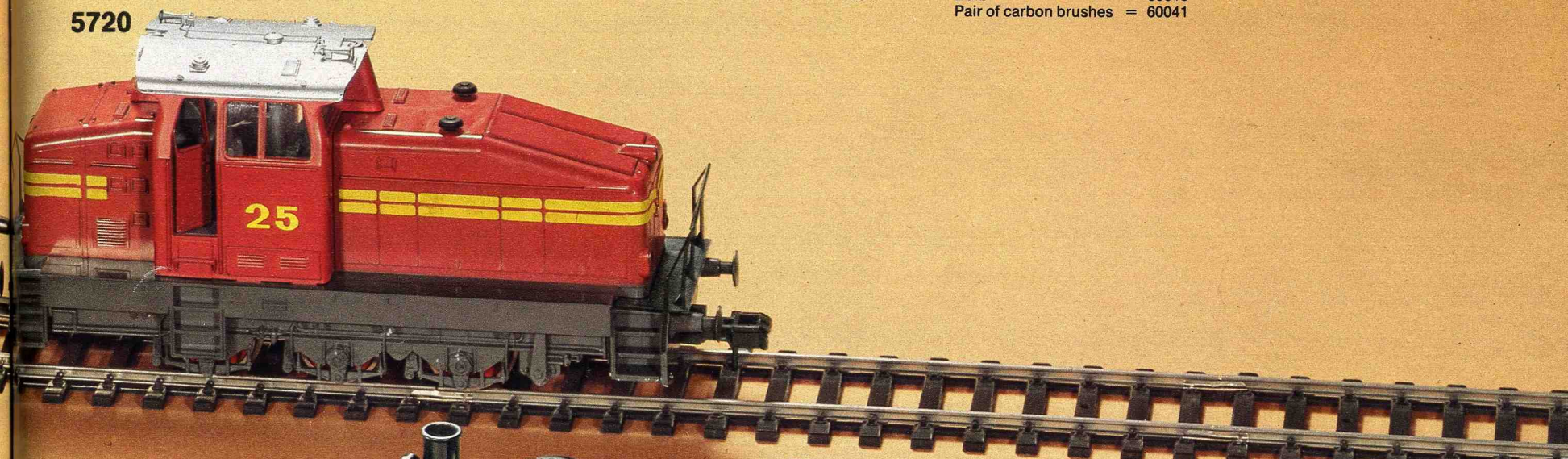
Bulb = 60015
Pair of carbon brushes = 60041

5720

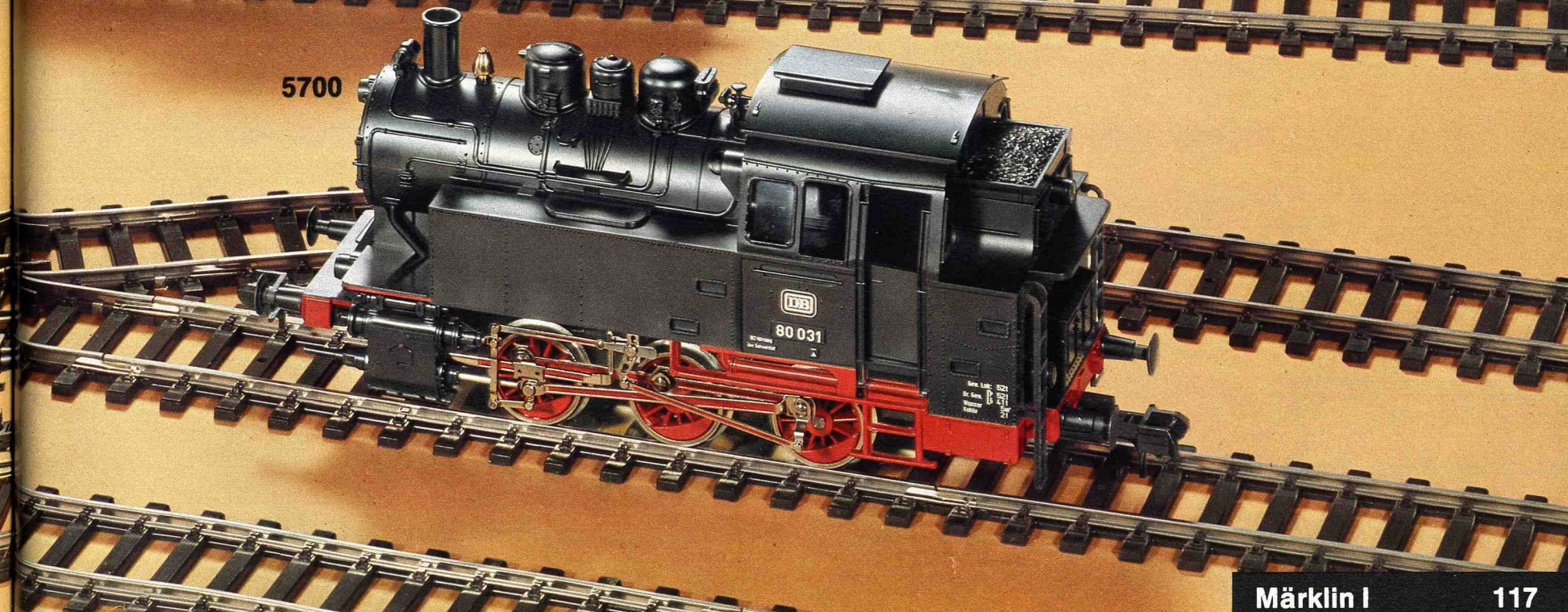
Diesel locomotive · A model of a 0-6-0 industrial locomotive · 2 non-skid tires · Remote control for forward and reverse drive · 3 working headlights at each end · Red body with 2 yellow horizontal stripes · Driver's cab doors will open · Windows with "Cellon" panes · Die cast zinc frame · Automatic claw coupling and sprung buffers at each end · Length over buffers 30.25 cm (1 ft)

Bulb = 60015
Pair of carbon brushes = 60041

5720



5700



Train sets and accessories

5611

Home signal with one semaphore arm Signal lights change from red to green Operated by double solenoid and can control trains · 2 connector terminals, 2 leads, and insulators for 6 isolating points are included · Height 26.5 cm (10-1/2″) · Width 6 cm (2-3/8″) · Length 11 cm (4-3/8″)

5602

Bumper, riveted steel type · Sprung buffers · Clips on to the rails · Length 9.8 cm (3-7/8″)

5602

5500

5607 new

Bumper, riveted steel type · With barrier signal mounted on · Working signal light · Sprung buffers · Pushes on to the track rails · Length 9.8 cm (3-7/8″)

= 60000

5607 new

5500

Freight train (without transformer) · With tank locomotive 5700, 1 open freight car 5850, 1 dump car 5859, 2 straight track sections 5900, 12 curved track sections 5921 and 1 connector kit 5604 · Length of train 97 cm (3 ft 2-1/4")

5520

Freight train (without transformer) · The same set as 5500 but with diesel locomotive 5720

5615 new

Altmühlhof station building kit in the style of an old-fashioned small town station · Made of corrosion-resistant plastic · Transparent window panes · 3 lighting fittings · Destination boards and other small accessories · Base area approx. 60×25 cm (1 ft 11-3/8"×9-7/8")

Passenger cars

5800

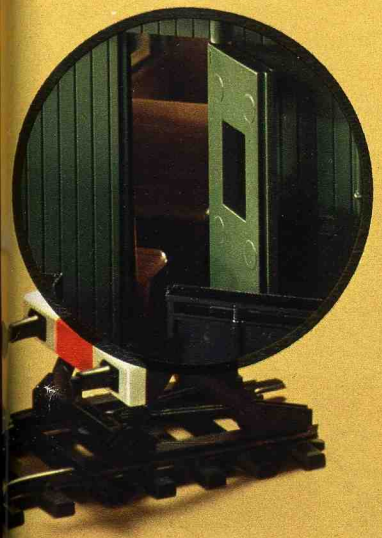
5801

5804

5808 new

5808 new

Baggage car · A model of the German Federal Railways' type D3pr02 · 3 axles Steering axles controlled via center axle · Sprung buffers · Hinged and sliding doors which will open · Windows inset in plastic frames · Interior fittings · Roof can be taken off · Length 39.1 cm (1 ft 3 3/8") · Can be fitted with interior lighting set 5605



5800

Passenger car · Modeled on a private railroad coach · 2 doors which will open · Dummy ventilators on roof · Windows inset in plastic frames · Interior fittings representing wooden seats · Length 31 cm (1 ft 1/4")

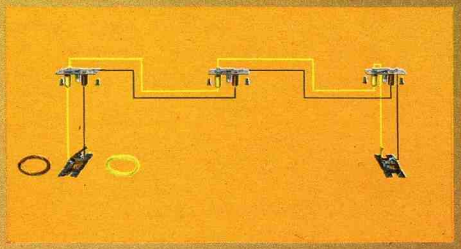
5801

Passenger car · Modeled on a car of the former Royal Württemberg Railways · Green finish, otherwise similar in design to 5800

5605

Interior lighting set for cars 5804, 5805 and 5808 · Consists of 2 current pick-ups, 3 lighting units, leads and plugs · Installation instructions are included

= 49342 = 60000



5805

5804

Compartment car · 2nd class · A model of the German Federal Railways' type B3pr07 · 3 axles · Steering axles controlled by center axle · Sprung buffers · All doors will open · Windows inset in plastic frames · Interior fittings · Roof can be taken off · Length 39.1 cm (1 ft 3 3/8") · Can be fitted with interior lighting set 5605

5805

Compartment car with brakeman's cab · 2nd class · A model of the German Federal Railways' type B3pr07 · 3 axles · Steering axles controlled via center axle · Sprung buffers · Doors will open · Windows inset in plastic frames · Interior fittings · Roof can be taken off · Length 39.1 cm (1 ft 3 3/8") · Can be fitted with interior lighting set 5605

Playing with Märklin I

I-Gauge is a particularly suitable size for small children to play with.

Märklin I gauge track is easy to lay. It takes hardly any time to cover quite large distances.

If space is a problem, a different shape of layout may help. Tracks don't always have to be laid in a circle. This is a chance for the child to use his imagination. The track can be laid along the wall, for example, or from the child's room to the kitchen, or a scenic route can be laid out of doors.

The number of different ways of playing with Märklin I is almost infinite: Märklin I cars can be used in the yard, for example, to transport real sand and gravel, or to carry freshly picked strawberries straight from the bed to the kitchen. Or tank cars can easily be filled with water, which can then be discharged again by turning the valve at the base of the tank.

The good-sized models are strong, they have lots of moving parts, and they can be loaded with the bits and pieces to be found in any child's room.

Working models of freight cars

There are all sorts of ways of using Märklin I freight cars · Length of cars 31 cm (1 ft 1/4")

5853

5863

5864

HALLER LÖWENBRÄU

KULMBACHER Mönchshof-Bräu

5872 new

Box car with taillights · German Federal Railways' type Gls 205 · 2 illuminating diodes, with tail lamps which can be mounted individually for day or night settings

5872 new

5860

new 5871

MANNESMANN

5850
Open freight car · German Federal Railways' type Omm 55

5851
Open freight car

5853
Flat car with removable stanchions

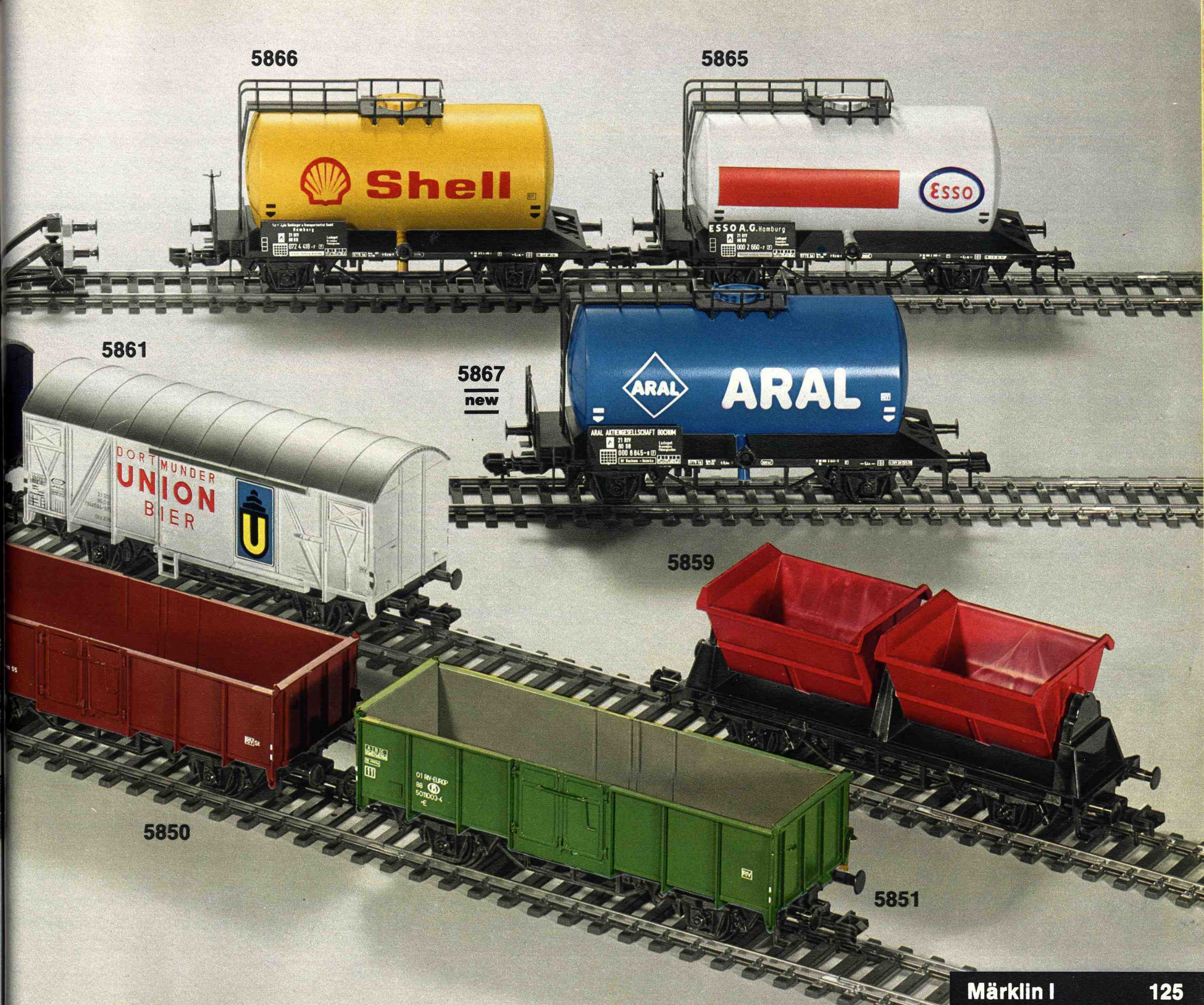
5859
Dump car · Hoppers dump to either side

5860
Box car · German Federal Railways' type Gls · Sliding doors

5861 · 5863 · 5864
Beer cars · Sliding doors

new
5865 · 5866 · 5867
Tank cars · With filler cap and discharge valve which open and close

new
5871
Pivoting platform car loaded with steel tubing · Length 64 cm (2 ft 1-1/4")


5866
5865
Shell
ESSO
ESSO A.G. Hamburg
5861
5867
new
ARAL
ARAL
ARAL AKTIENGESELLSCHAFT BOCHUM
DORTMUNDER
UNION
BIER
5859
5850
5851

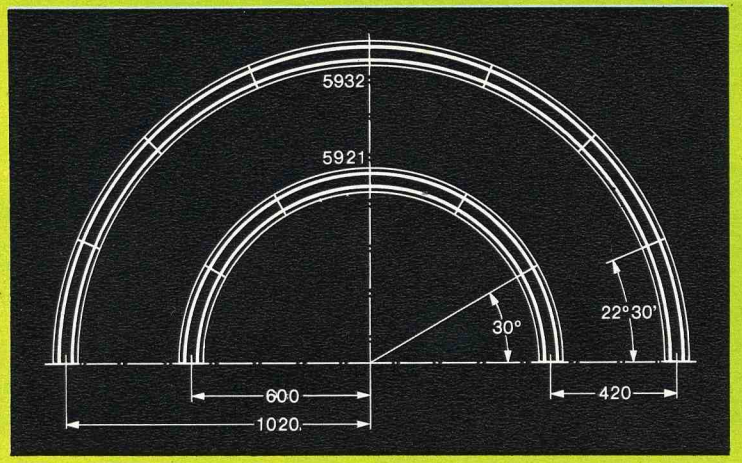
Tracks and track construction

The introduction of the P8 locomotive was accompanied by extension of the Märklin I range of tracks. The curved track section 5932 was added, with its radius of 1020 mm (3 ft 4″) and curvature of 22° 30′, as it is the radius which determines whether a locomotive will be able to negotiate a particular curve.

In contrast to straight tracks, the length of curved tracks is not given in cm or mm, but in degrees of curvature. That is more meaningful, as it can be related to the number of sections required to produce a complete circle.

Thus a 30° section with a radius of 600 mm (1 ft 11-5/8″) is shorter than a 30° section with a radius of 1020 mm (3 ft 4″).

The radius and curvature of a turnout usually match those of one of the ordinary curved tracks. This is the case with the 30° curvature and 600 mm (1 ft 11-5/8″) radius of Märklin I turnouts 5962, 5963, 5965 and 5966. A new turnout was necessary for the P8, with a branch track matching the 22° 30′ curvature and 1020 mm (3 ft 4″) radius of track section 5932.

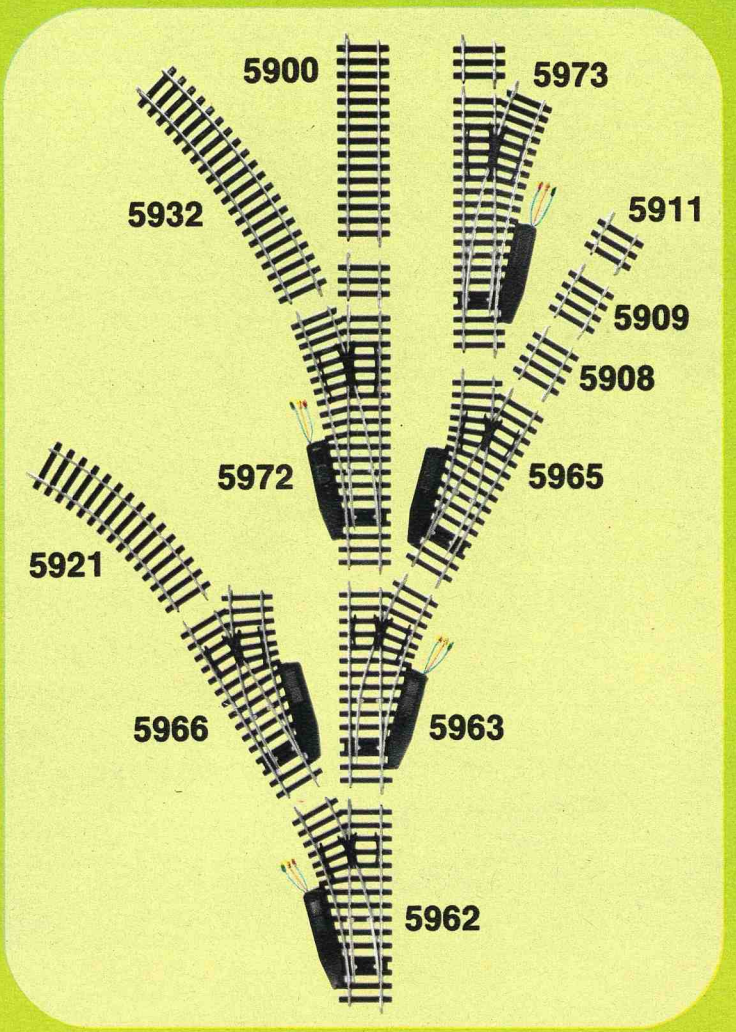


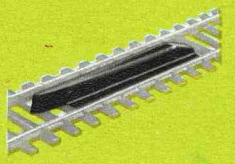
The number of degrees determines the number of sections making up a circle. The 360° of a circle can be divided into segments, for example 22° 30′ segments, of which 16 make up the circle, i.e. 16 track sections required.

The combination of radius and curvature determines the length of a curved track.

Short track sections 5908 and 5911 are useful as make-up lengths for branch tracks of old and new turnouts in station layouts or reversing loops (see Fig. on page 127).

Märklin I rails are solid, stainless and corrosion resistant. The crossties are made of non-corroding synthetic material. Thus all Märklin I tracks may be laid out of doors.





5600

Uncoupler · Can be fitted between the rails of track section 5900 · Releases couplings in one direction of travel only, thus enabling cars to be pushed away · Length 175 mm (6-7/8″)

5603

Retaining clips · Bag of 28 · For securing the joints between I gauge track sections

5604

Connector kit · Consisting of 2 connector terminals, one with a red and one with a brown lead · Length 1 meter (3 ft 3-3/8″) · Built-in capacitor for radio interference suppression

5900

Straight track section · Length 300 mm (11-3/4″)

5908

Straight track section · Length 80.4 mm (3-3/16″)

5909

Isolating track section, straight · For dividing the layout into electrically isolated sections · Length 80.4 mm (3-3/16″)

5911

Straight track section · Length 59.5 mm (2-3/8″)

5921

Curved track section · Radius 600 mm (1 ft 11-5/8″) · Curvature 30°

5932

Curved track section · Radius 1020 mm (3 ft 4″) · Curvature 22° 30′

5962

Solenoid-operated left-hand turnout · Operated by double solenoid · Sprung switch points · Turnout angle 30° · Radius of branch track 600 mm (1 ft 11-5/8″) · Length of straight track section 300 mm (11-3/4″)

5963

Solenoid-operated right-hand turnout · Operated by double solenoid · Sprung switch points · Turnout angle 30° · Radius of branch track 600 mm (1 ft 5/8″) · Length of straight track section 300 mm (11-3/4″)

5965

Manually operated left-hand turnout · Sprung switch points · Turnout angle 30° · Radius of branch track 600 mm (1 ft 11-5/8″) · Length of straight track section 300 mm (11-3/4″)

5966

Manually operated right-hand turnout · Sprung switch points · Turnout angle 30° · Radius of branch track 600 mm (1 ft 11-5/8″) · Length of straight track section 300 mm (11-3/4″)

5972

Solenoid-operated left-hand turnout · Operated by double solenoid · Sprung switch points · Turnout angle 22° 30′ · Radius of branch track 1020 mm (3 ft 4″) · Length of straight track section 390.5 mm (1 ft 3-3/8″)

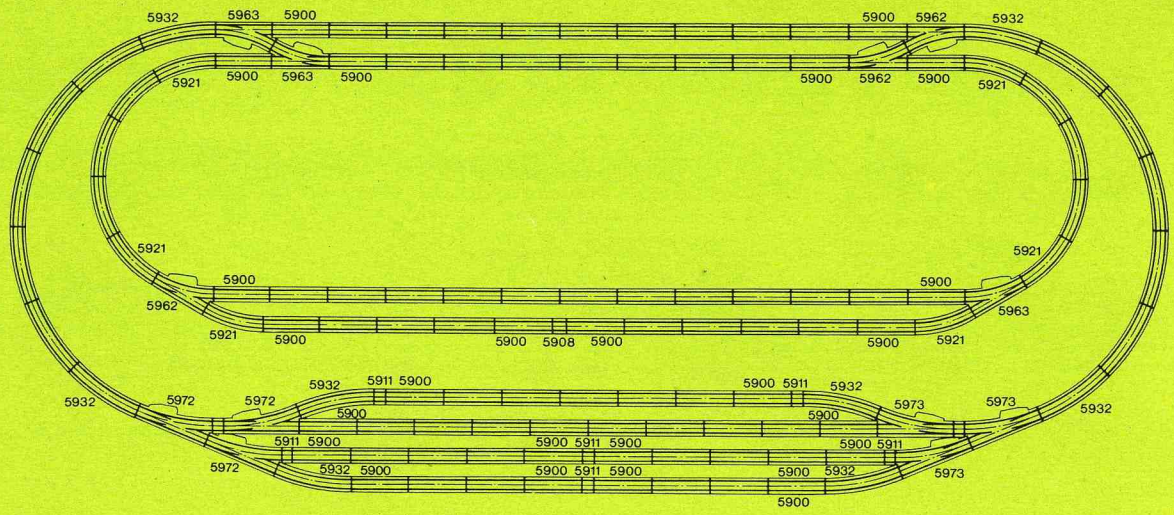
5973

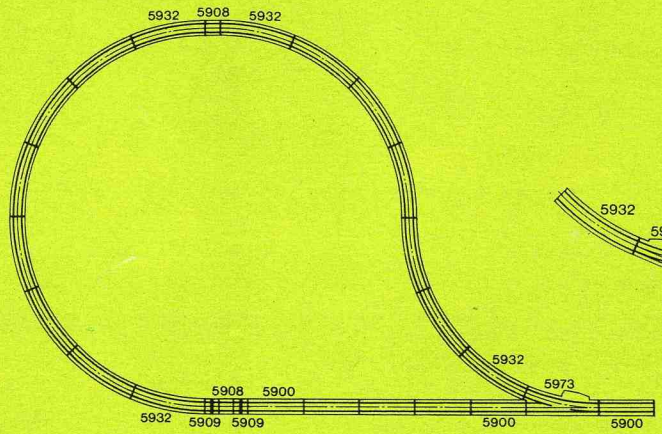
Solenoid-operated right-hand turnout · Operated by double solenoid · Sprung switch points · Turnout angle 22° 30′ · Radius of branch track 1020 mm (3 ft 4″) · Length of straight track section 390.5 mm (1 ft 3-3/8″)

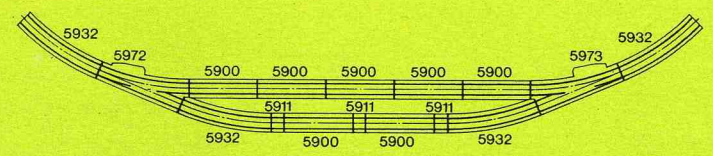
Examples of track construction

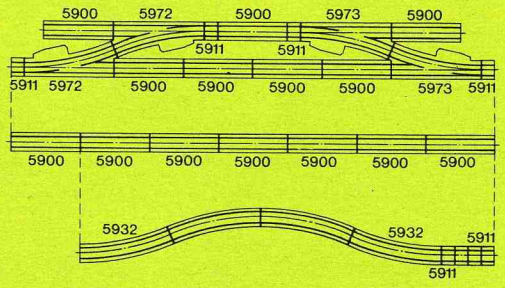
Although a 2-rail conductor system is used, no polarity problems arise even on reversing loops, diagonals or Y-tracks. This large scale Märklin railroad uses AC motors, sharing the advantages of this technique with the HO gauge system. As with the HO gauge, the direction of travel is switched by the "driver" built-in to the locomotive.

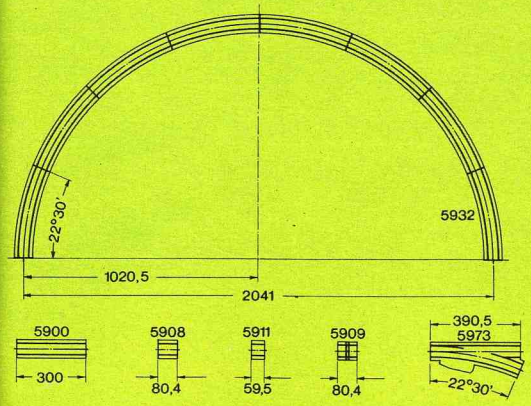
Items 5972 and 5973 are supplied together with a track section 5911 which can be used to extend the length of the straight track sections to 450 mm.

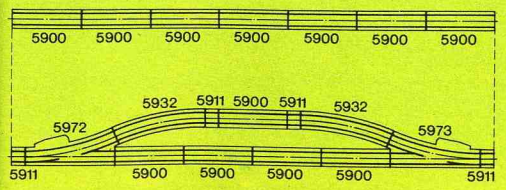


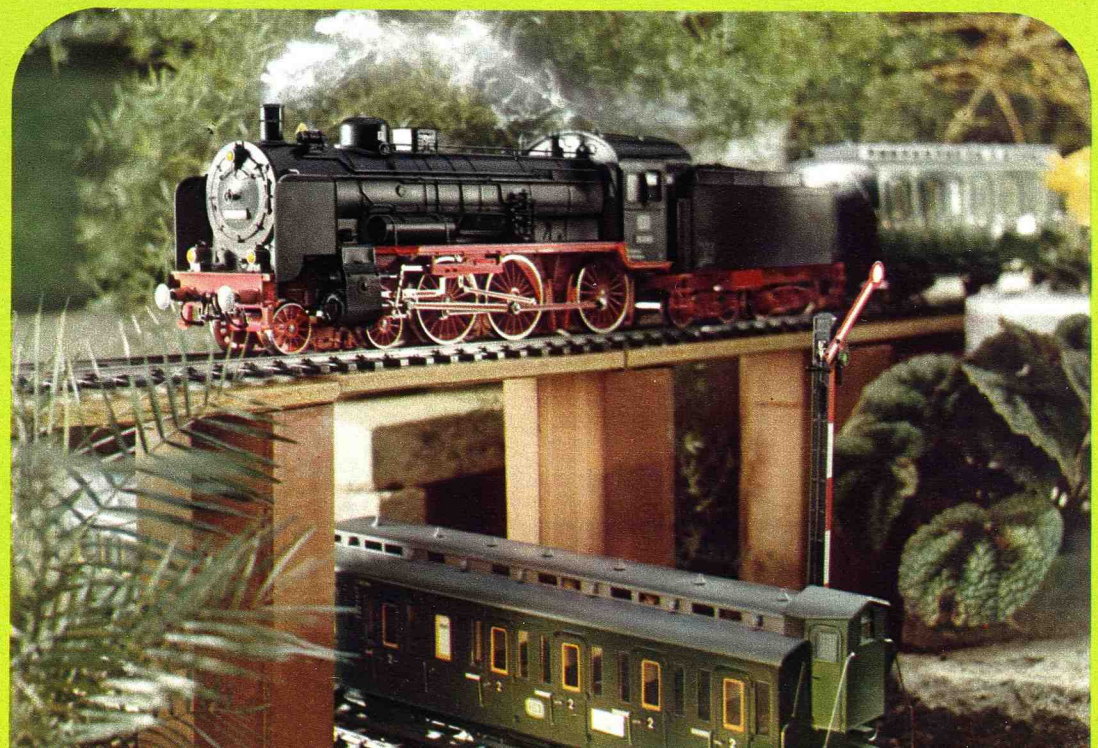












Electronic unit/power pack and accessories

Usual colors of electrical leads in Märklin circuits:

Red = traction current connection (from transformer to track center conductor or overhead line)

Yellow = lighting and solenoid-operated items

Brown = ground lead from tracks, lighting fittings or a position control box to the transformer

Blue = return lead from solenoid-operated items to position control box or switching track (with green, red and orange plugs)

Sleeves

7111 = brown
7112 = yellow
7113 = green
7114 = orange
7115 = red
7117 = gray

Electrical leads

The copper conductor in these stranded leads consists of 24 separate strands each of 0.10 mm (0.004") diameter, giving an overall cross-sectional area of 0.19 mm² (0.03 sq"). That is more than enough to cope even with the current flowing through a short-circuited 40 VA transformer.

7100 **Lead** · Single core · Gray · 10 meters (33 ft)

7101 **Lead** · Single core · Blue · 10 meters (33 ft)

7102 **Lead** · Single core · Brown · 10 meters (33 ft)

7103 **Lead** · Single core · Yellow · 10 meters (33 ft)

7105 **Lead** · Single core · Red · 10 meters (33 ft)

Plugs with side sockets

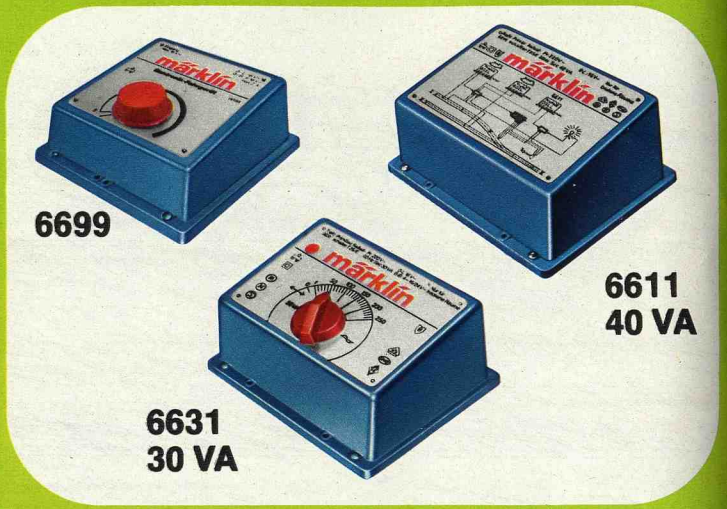
7131 = brown
7132 = yellow
7133 = green
7134 = orange
7135 = red
7137 = gray

The following transformers and the electronic unit/power pack may be used to provide power for Märklin I locomotives.

For connection to AC supply only

The insulation of every Märklin transformer is tested at several thousand volts and is thus completely safe. A short-circuit cut-out protects against overloading. Power pack 6699 is recommended for out of doors use.

Locomotive speed is increased by turning the red knob clock-wise. Each time the knob is briefly turned counter-clockwise from its normal position, the direction of motion of the locomotive is reversed.



6699

Electronic unit/power pack for use in or out of doors · For connection to Märklin lighting transformer 6611 or to the lighting sockets of a Märklin transformer with 30 VA output power · Lighting voltage 16 Volt · Electronic control of locomotive speed and direction of motion · Maximum permitted load 1.8 Amperes · Plastic case · Weight 315 grammes · Dimensions 125×135×55 mm (4-15/16"×5-5/16"×2-3/16") · Use Märklin leads and plugs to extend connector leads if required

In conjunction with 6611 or 6620, 6631 this power pack makes it possible to operate the railroad out of doors.

This power pack also enables locomotives to be run extremely slowly.

6631 220 Volt
6620 100 Volt Japan
6627 110 Volt (60 Hz) USA
6629 240 Volt

Transformer · Output 30 VA · Traction voltage adjustable between about 4 V and 16 V · Lighting voltage 16 V · Plastic case · Red pilot lamp · Weight 2.1 kg · Dimensions 158×135×75 mm (6-1/4"×5-5/16"×3")

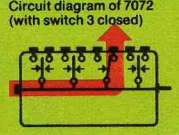
= 60015

6611 220 Volt

Transformer for lighting and for solenoid-operated items · Output 40 VA · Output voltage approximately 16 VA a.c. · Plastic case · Weight 2.0 kg · Dimensions 158×135×75 mm (6-1/4"×5-5/16"×3")

Accessories for remote operation

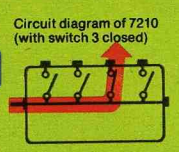
7072



7072

Position control box with 8 sockets for connecting 4 double-solenoid-operated articles · The position of signals, turnouts, etc. can be seen from the position of the push-buttons · Length 80 mm (3-1/8") · Width 40 mm (1-8/16")

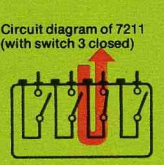
7210



7210

Control box with indicator push buttons for distributing current to 4 traction current or lighting circuits · Length 80 mm (3-1/8") · Width 40 mm (1-1/2")

7211



7211

Control box for switching 4 different traction or lighting circuits on and off by indicator push buttons · Length 80 mm (3-1/8") · Width 40 mm (1-1/2")

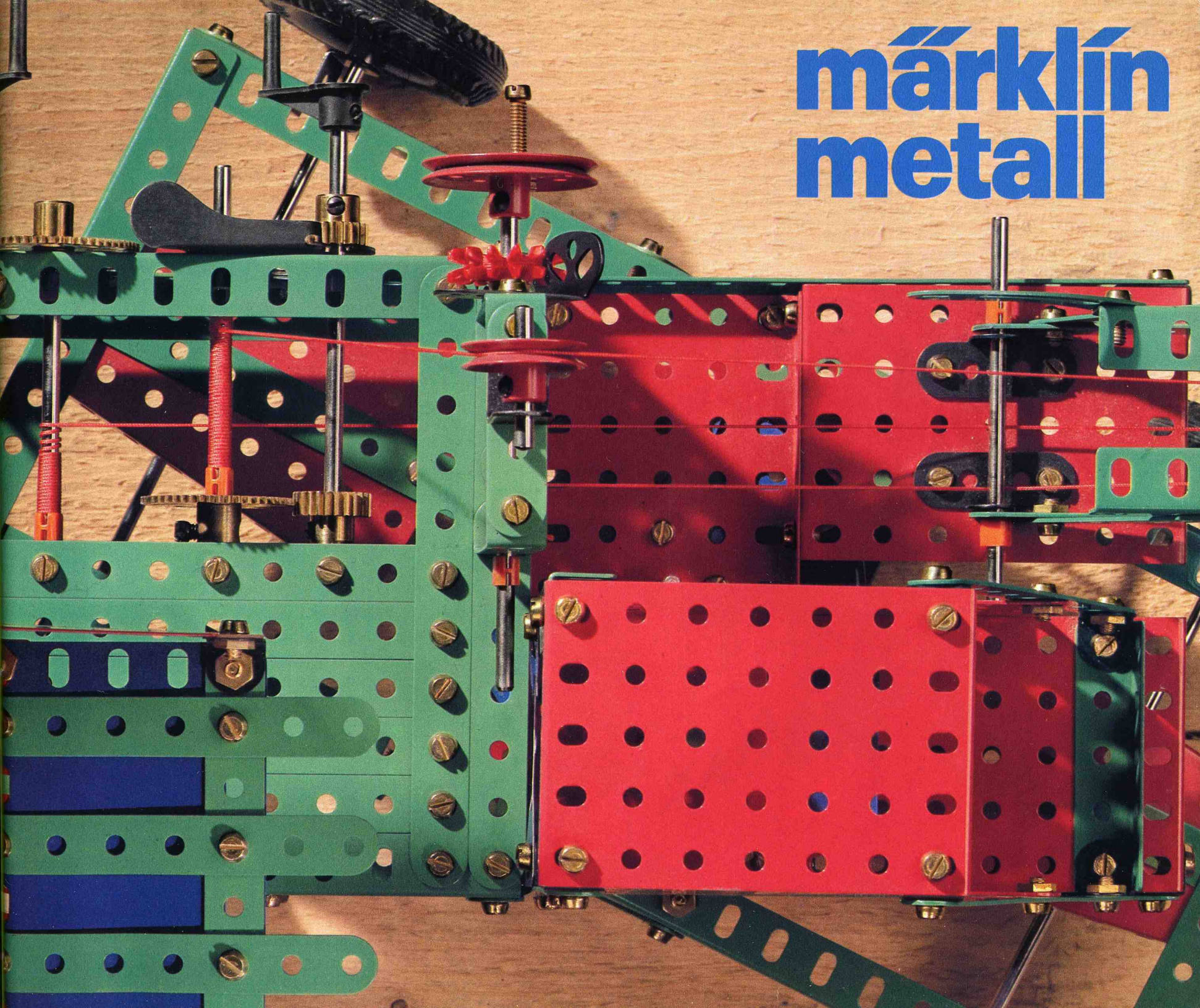
7209

7209

Distribution strip · With 11 single sockets · Size 50×20 mm (2"×3/4")

märklin I

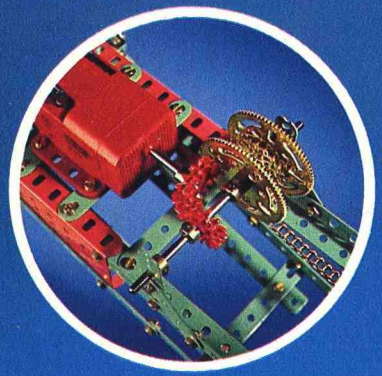
large scale model railroad

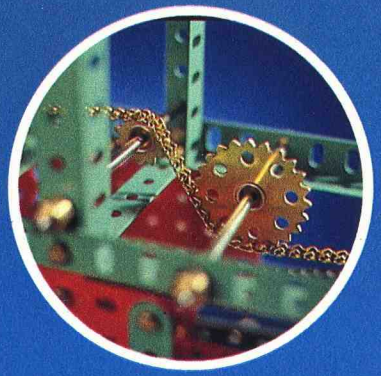

märklín
metall

Märklin metall

While enjoying this practical hobby you become familiar with engineering problems and practices. Your designs will withstand a lot of heavy treatment, being made of robust materials joined firmly together by nuts and bolts.

Märklin models can be used vigorously and for as long as you like.





Basic sets

1051/1081
Basic set A containing 178 parts

1052/1082
Basic set B containing 265 parts

1053/1083
Basic set C containing 442 parts

Extension sets

1061/1091
Extension set E 1
extends basic set A to equal basic set B

1062/1092
Extension set E 2
extends basic set B to equal basic set C

1063
Extension set E 3
extends basic set C one stage further

Construction system using real nuts and bolts

AC/DC electric motors

1072
ELEX AC/DC electric motor
with 2 pulley wheels running in opposite directions

1073
AC/DC electric motor
with 2 speed gearbox

Can be powered by any model transformer with an output between 12 and 16 Volts.

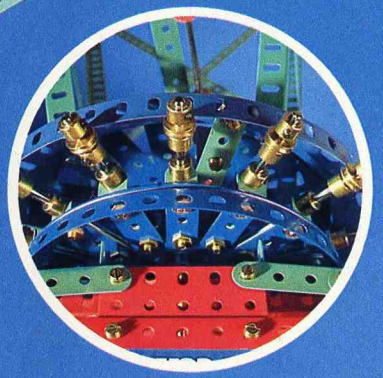
Assembly kits for large models

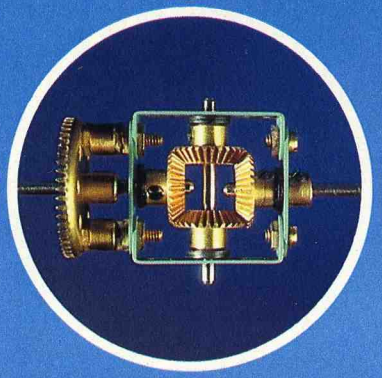
1001
Class 160 electric locomotive
Length of model 72 cm (2 ft 4-1/2")

1002
"Der Adler"
Length of model 75 cm (2 ft 5-1/2")

1003
Class 050 freight train locomotive
Length of model 165 cm (5 ft 5")

Each kit contains individual components, tools and assembly instructions for constructing a large model.



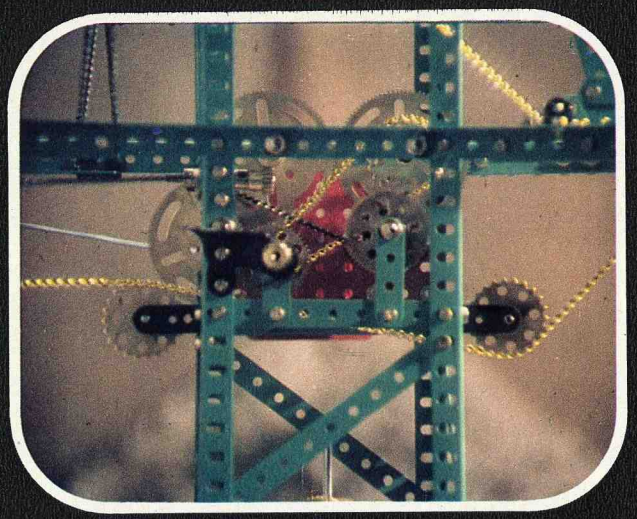


Many special parts are available to add the finishing touches to your designs or to perform special functions.

The Märklin metall prospectus is available free of charge from your dealer.

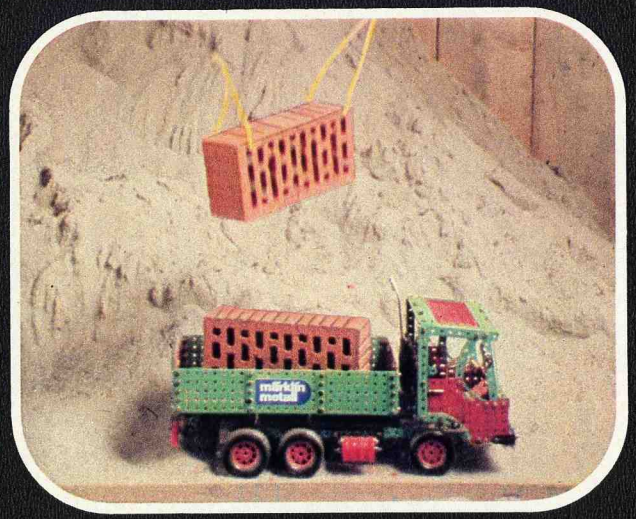
Märklin metall

1



2

3



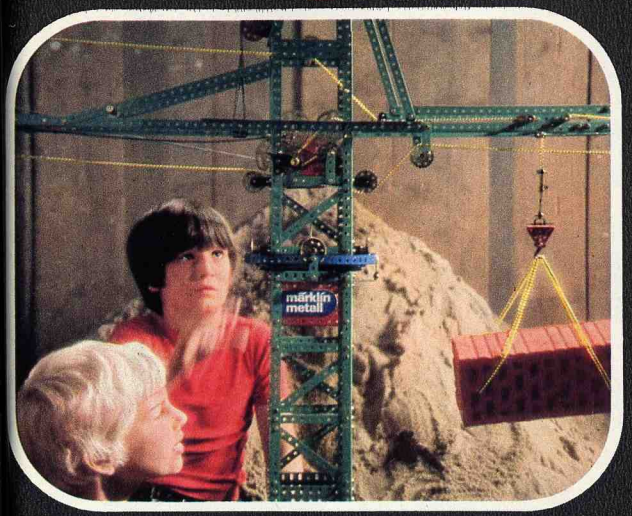
7

8

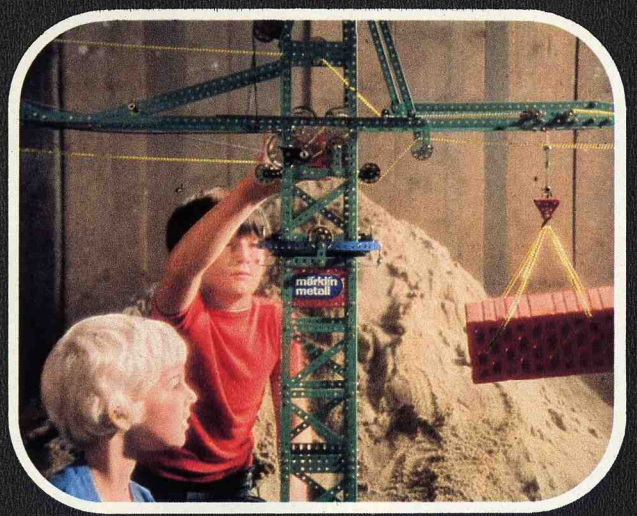
9

just what a boy wants

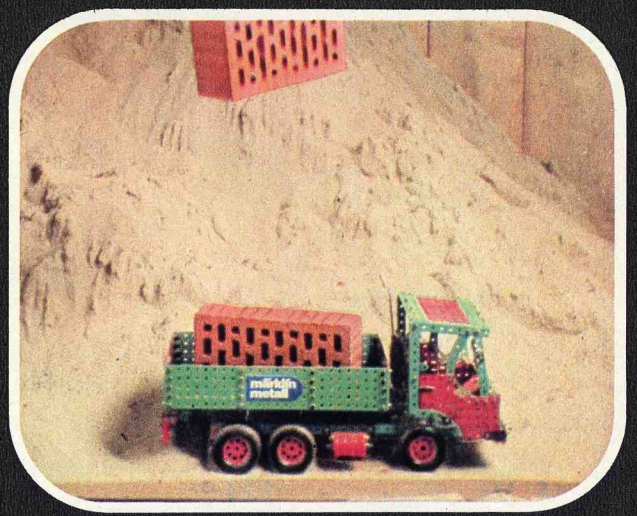
4



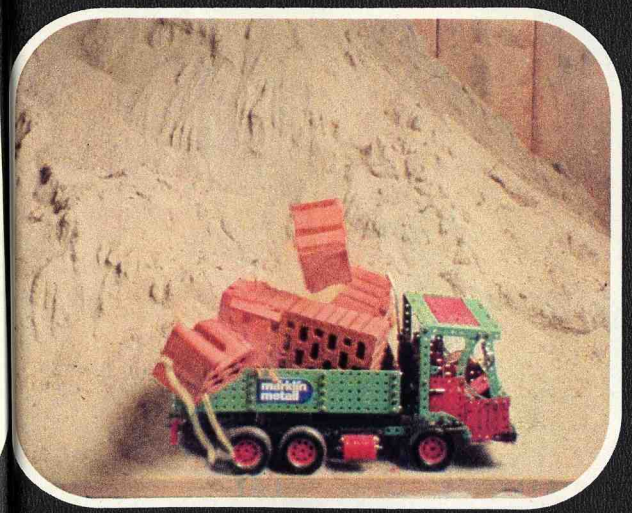
5



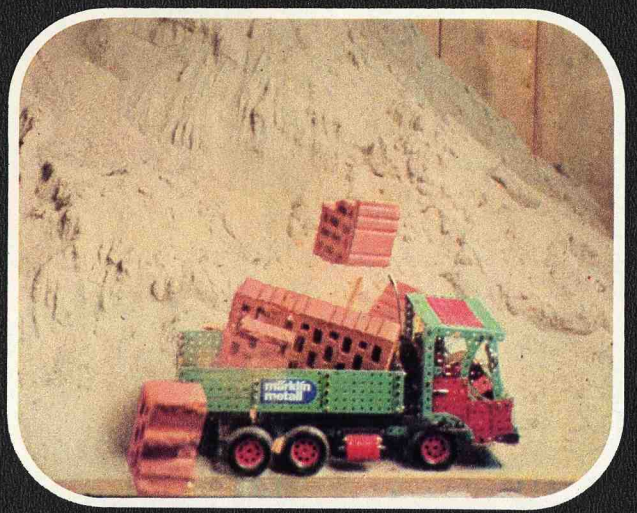
6



10



11



12

märklin Sprint

tipped to win by those who know

A special detailed Märklin sprint prospectus is obtainable from Märklin dealers.

Basic sets contain 2 racing automobiles, two speed controllers, a number of course sections, crash barriers and piers (except 1400) and a 24 page instruction booklet with race track layouts.

Whether automobiles take curves properly or in a power slide depends on the ability of the "driver".

Superb cornering characteristics provided by front axle steering. Self-cleaning sprung skid-type electrical pick-ups.

1400

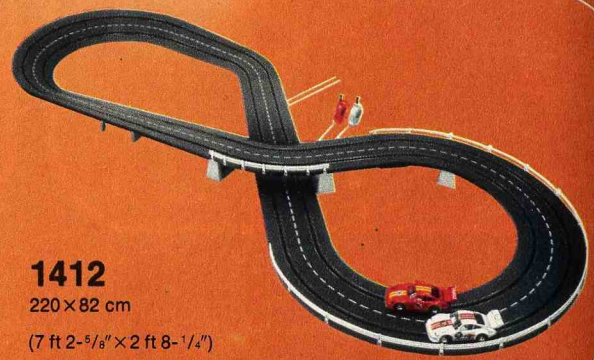
1409

1412

Märklin motors are designed for high performance – robust, high revving, with good center of gravity location and gearbox transmission.

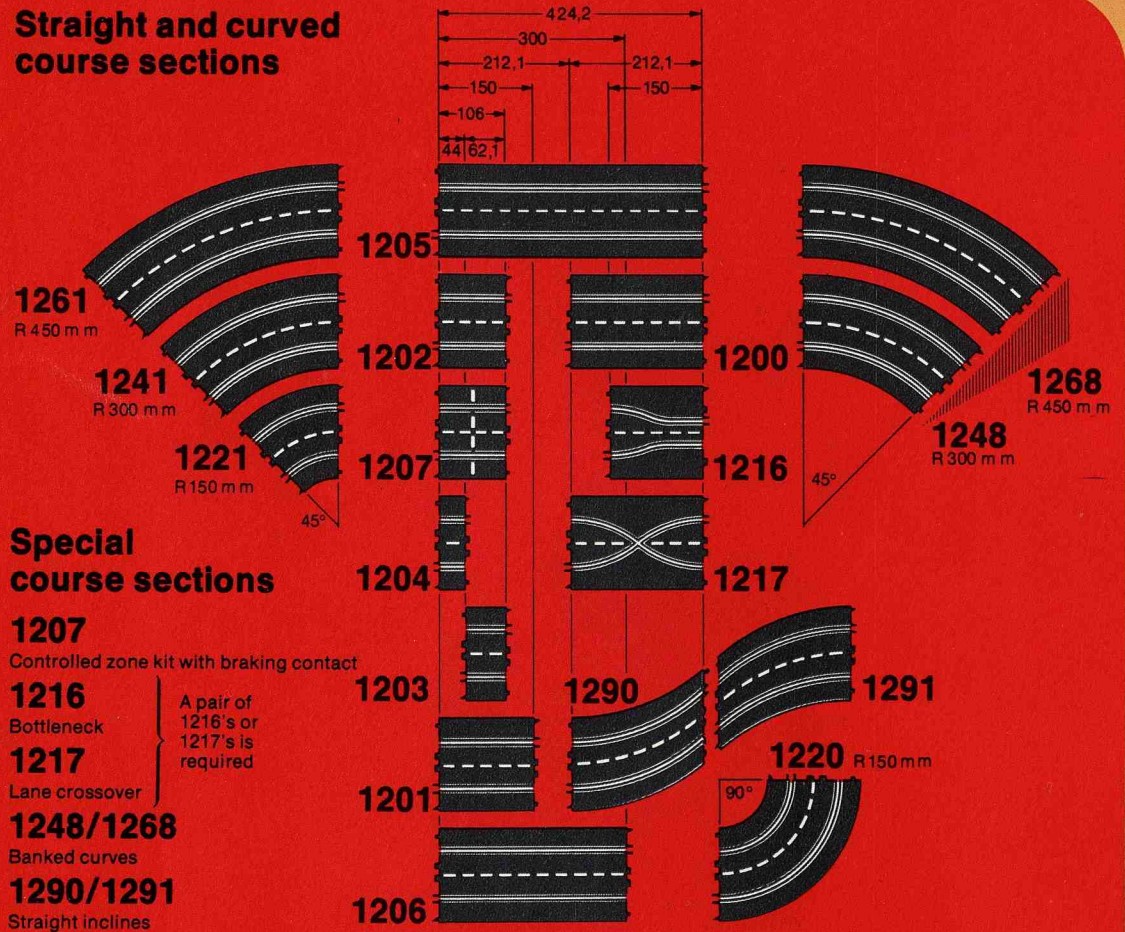
1400
87,5×45 cm
(2 ft 10-1/2″×1 ft 5-3/4″)

1409
140×87,5 cm
(4 ft 7-1/8″×2 ft 10-1/2″)



1412
220×82 cm
(7 ft 2-5/8″×2 ft 8-1/4″)

Straight and curved course sections



Special course sections

1207
Controlled zone kit with braking contact

1216
Bottleneck

1217
Lane crossover

A pair of 1216's or 1217's is required

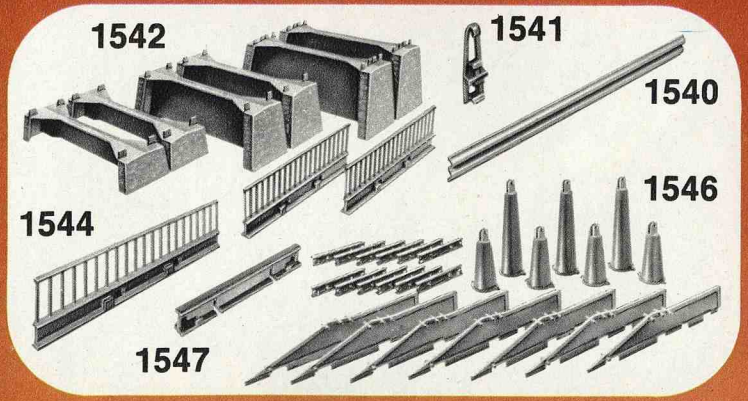
1248/1268
Banked curves

1290/1291
Straight inclines

Rapid and secure track assembly and dismantling using Märklin hinged locking couplings.

The speed controller lead can be connected to the track at the point which seems to the "driver" to be tactically most favorable.

Crash barriers are simply a safety feature, just as in real life.



Tire sets

1500
Contains 2 rubber tires 20.5 mm diameter × 6 mm (13/16" × 1/4") · For models 1300, 1301, 1308, 1310, 1311, 1312, 1316, 1317, 1318

1501
Contains 2 rubber tires 23 mm diameter × 7 mm (7/8" × 5/16") · For models 1300, 1301

1503
Contains 2 rubber tires 20.5 mm diameter × 7.6 mm (13/16" × 5/16") · For models 1308, 1310, 1311, 1312, 1316, 1317, 1318

1505
Contains 2 rubber tires 20.5 mm diameter × 8.5 mm (13/16" × 3/8") · For models 1319, 1320, 1321, 1322, 1323, 1324, 1325, 1326, 1327, 1328, 1329, 1330, 1331, 1332

1506
Contains 2 rubber tires 24 mm diameter × 12 mm (15/16" × 1/2") · For models 1330, 1331

1510
Current pick-up adapters (1 pair) · For clipping onto the pick-up skids of Märklin sprint automobiles · To enable them to be used on race tracks of other makes

60146
Pair of carbon brushes for motors of Märklin sprint automobiles

1540
Flexible crash barrier · Length 2 m (6 ft 6-3/4")

1541
Crash barrier support

1542
Overpass construction kit · Consists of 2 piers 27 mm (1-1/16") high, 2 piers 49 mm (1-15/16") high, 2 piers 61.5 mm (2-3/8") high and 2 bridge parapets

1544
Bridge parapet · Length 135 mm (5-5/16")

1545
Mechanical lap counter · Displays up to 99 laps · Number discs can be re-set manually · A course length 1202 is required as a make-up length

1546
Set of banked curve supports · For use when a banked curve is extended to 4 lanes

1547
Joining section for connecting adjoining straight course sections and stiffening the joints · Length 74 mm (2-15/16")

1591/1594
Speed controller with connection kit · Built-in capacitor for radio interference suppression · A speed controller may only be used to control one automobile at a time

1592
Rectifier · For connecting to Märklin railroad transformers with at least 16 VA output · 57 × 52 × 15 mm (2-1/4" × 2" × 5/8") · DC supply for operating up to 4 automobiles simultaneously can be taken from the pairs of sockets marked "Auto 1" and "Auto 2"

1593
Starting clock · For connecting between the power pack and the race track layout · When the time set on the knob (adjustable between 0 and 5 minutes) has elapsed, the current supply to the track is cut off

6771
Märklin sprint power pack for connecting to 220 V AC mains supply · Output approx. 14 V DC · Power output 10 watts · Overload protection by automatic current limiter · Plastic case · Weight 1.2 kg · Dimensions 125 × 135 × 55 mm (5" × 5-1/4" × 2-1/8")

1300
A model of the Mercedes W 196 Monoposto · (front 1500, rear 1501)

1301
A model of the Ferrari Supersqualo · (front 1500, rear 1501)

1308
A model of the E-Type Jaguar · (front 1500, rear 1503)

1310
A model of the Porsche 911 T Targa · (front 1500, rear 1503)

1311/1312
A model of the Mercedes C 111 · (front 1500, rear 1503)

1316/1317
A model of the Porsche Carrera 6 · 2 working headlights · (front 1500, rear 1503)

= 60000

1318
Porsche 911 T Targa as police car · Continuously operating flashing blue light · (front 1500, rear 1503)

= 60209

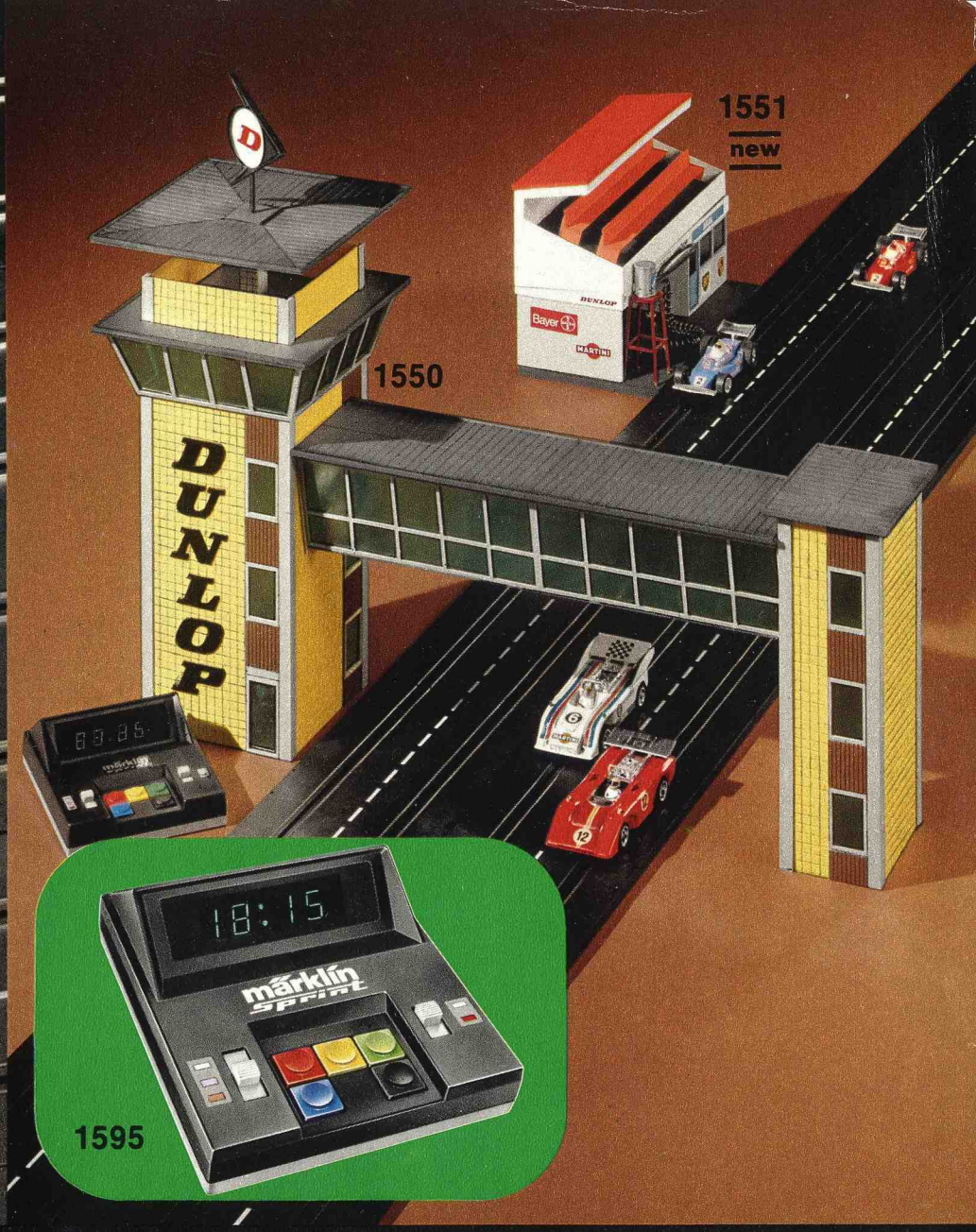
1319
A model of the McNamara · (1505)

1320
A model of the Lola T 222 · (1505)

1321/1329
A model of the Porsche Can Am 917/10 · (1505)

1322/1323
A model of the BMW 2002 turbo · (1505)

1324/1325
A model of the Porsche 935 · (1505)



1326

1332 new
A model of the BMW 320 i RC · (1505)

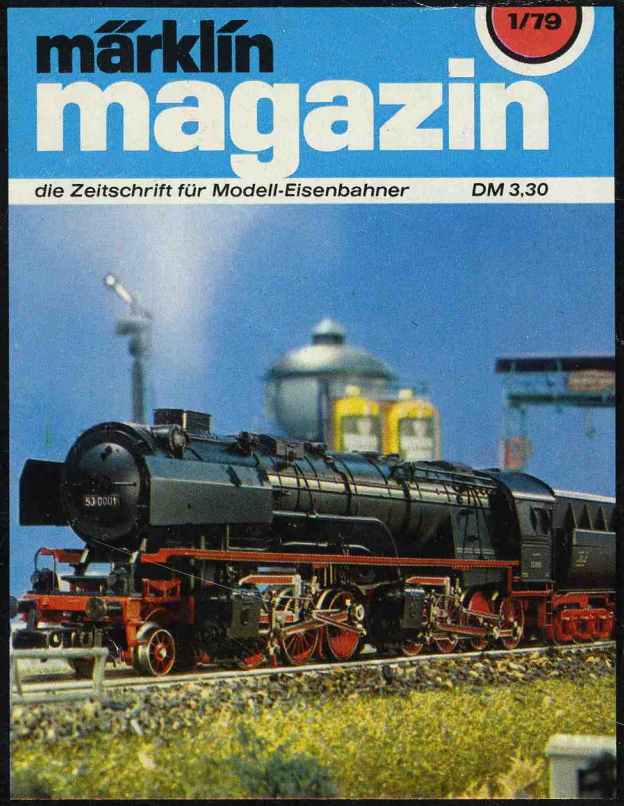
1327/1328
A model of the Porsche 936 · (1505)

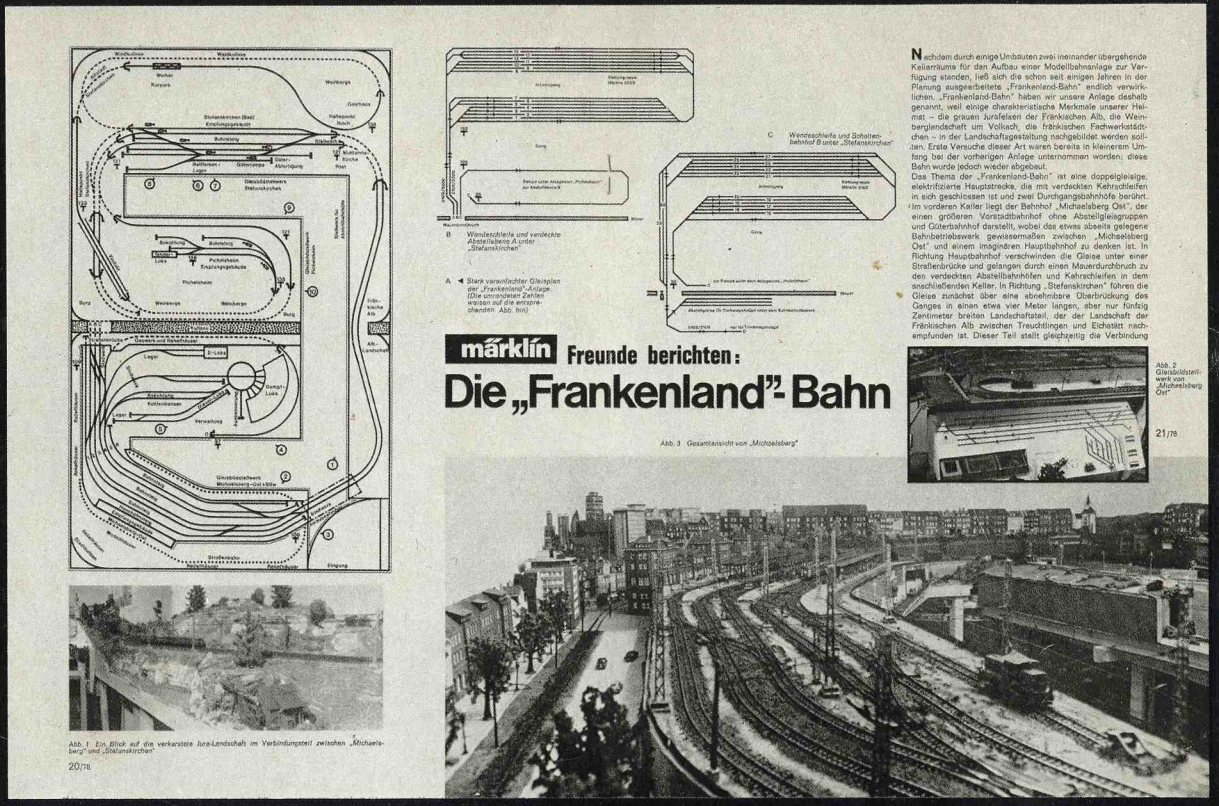
1330
1331 new
A model of the Ferrari 312 T2 · (front 1505, rear 1506)

1550
Building kit for race controller's tower and walkway · Walkway can be used for 2 or 4 lanes

1551 new
Building kit for pits and fueling point with seating on roof of pits · Accessories: spare tires, gas bottles, oil drum on stand · Base area 250 × 110 mm (9 7/8" × 4 1/4")

1595
Race control center with microprocessor · Can be used either as electronic lap counter or as 24 hours digital clock · Counts laps on 2 lanes up to 99, or displays current or fastest lap time on either lane





Märklin magazine

The Märklin magazine is published in German, four times a year–in mid February, May, September and November. A subscription brings a whole year's worth of valuable and interesting information to your home.

Obtainable from:
Modellbahnen-Welt Verlags-GmbH, Postfach 9 40, D-7320 Göppingen
or from your Märklin dealer or through bookshops.

Every issue contains a mass of information, tips and suggestions both for "old hands" and beginners. A valuable aid to assist you to achieve a truly realistic railroad system:

- layout design and landscaping
- new items of interest to modelers (new models, books, tools, materials)
- the regular article "Märklin owners report"
- the German Federal Railways originals of your Märklin models
- items of topical interest from full-scale railroads
- railroads in foreign countries
- electrical circuits
- circuit diagrams for electronic control and monitoring devices
- assembly instructions for locomotives and cars (I, HO and mini-club gauges)