

\$3.50

märklin



1980 E

A great gift on any occasion

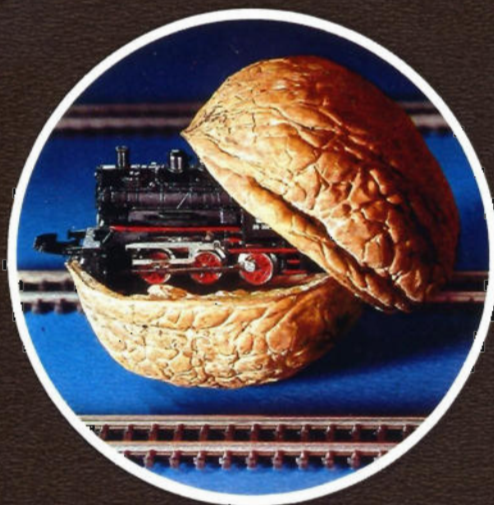
Basic sets

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

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 (10-7/8").

8163 S	220 Volt
8164 S	100 Volt Japan
8165 S	110 Volt (60 Hz) USA
8166 S	240 Volt

Freight train with power pack - With 1 tank locomotive 8800, 1 box 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 1 power pack. Length of train 160 mm (6-3/8").
The tracks of both these sets can be extended as desired, using the SET extension program, or the appropriate catenary system kits, or to your own design, using signals.



Train sets

mini-club train sets are coveted gifts—beautifully packed and in realistic arrangements. They often have features not available as separate items.

8100

Express train - With 1 express locomotive 8891, 2 express coaches 8731 and 1 express baggage car 8732. Length of train 372 mm (1 ft 2-3/4").

8101

Multiple unit train - With 1 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 tail-lights at the rear. Length of train 449 mm (1 ft 5-3/4").

Only the locomotive in this train set has the automatic red and white light changeover system. This locomotive can not be supplied separately.

8102

Express train - With 1 express locomotive 8892, 2 express coaches 8730 and 1 express baggage car. Length of train 372 mm (1 ft 2-3/4").

The express baggage car is not available as a separate item.

■ 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, Nürnberg, Regensburg, Salzburg and Kufstein.

8103

Track construction train - With 1 diesel locomotive 8864, 1 crane car 8621, 1 low sided car 8610 with boom support, 1 low sided car 8610 with stack of cross-ties, 1 low sided car 8610 with load of rail sections, 2 open freight cars 8622 with load of gravel and 1 accommodation car. Length of train 440 mm (1 ft 5-1/4").

■ Track construction trains consist of various combinations of cars, such as accommodation cars and cars for carrying equipment and materials. For large projects, in particular, construction crew sleeping cars are needed so that time is not lost in excessive traveling.

Regular maintenance and repair are necessary to keep the track and turnouts in good condition. The amount of maintenance required depends on axle loads, vehicle speeds, the daily load and the effects of weather. Heavily loaded tracks normally have to be replaced every 15 to 20 years.

8103



new

8101



8100



8102



8158



8163



Steam locomotives

The illustrations are actual size 1:1

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 · Metal body

☛ = 8953

8891

Express locomotive with tender · Model of the former German State Railways' class 18⁺ · Wheel arrangement 4-6-2 · Length over buffers 106 mm (4-1/8")

The mini-club range includes one of the most famous German steam locomotives in three different versions as it appeared in 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 of German Federal Railways (8893).

8891

8893

8892

mini-club locomotives must only be powered by Märklin power packs 6711, 6727 or 6731 (with maximum traction voltage 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 and in feeder track sections 8590, these ensure a high standard of suppression.

8892

Express locomotive with tender · Model of the former Royal Bavarian Railways' S 3/6 · Wheel arrangement 4-6-2 · Length over buffers 106 mm (4-1/8")

8893

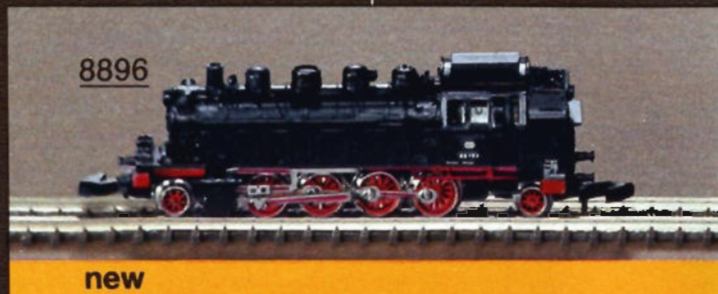
Express locomotive with tender · Model of German Federal Railways' class 18⁺ · Wheel arrangement 4-6-2 · Length over buffers 106 mm (4-1/8")

Examples of train composition:



8827

Freight train locomotive with tender · Model of German Federal Railways' class 41 · Wheel arrangement 2-8-2 · Length over buffers 112 mm (4- $\frac{1}{2}$ ")

**8896** ★ new

Tank locomotive · Model of German Federal Railways' class 86 · Wheel arrangement 2-8-2 · Three working headlights at each end · Red painted

driving rod assemblies · Automatic coupling at each end · Length over buffers 63 mm (2- $\frac{1}{2}$ ")

Q = 60210 (rear)

■ The class 86 locomotive was produced by various manufacturers between 1928 and 1943. The former German State Railways intended it to be used in various roles. It was to pull passenger and freight trains on branch lines and to achieve good average speeds over hilly routes. Of the 774 locomotives of the former railways, 385 survived the war to be taken over by German Federal Railways.

8803

Passenger train locomotive with tender · Model of German Federal Railways' class 24 · Wheel arrangement 2-6-0 · Length over buffers 82 mm (3- $\frac{1}{4}$ ")

8827**8803****8895****8800****8885****8895**

Tank locomotive · Model of German Federal Railways' class 74 · Wheel arrangement 2-6-0 · Coupling hook in front · Length over buffers 55 mm (2- $\frac{3}{16}$ ")

8800

Tank locomotive · Model of the class 89 · Wheel arrangement 0-6-0 · Automatic coupling at each end · Length over buffers 45 mm (1- $\frac{3}{4}$ ")

8885

Express locomotive with tender · Model of German Federal Railways' class 003 · Wheel arrangement 4-6-2 · Length over buffers 112 mm (4- $\frac{1}{2}$ ")

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.



Electric locomotives

Although only 40% of its rail network is electrified, by concentrating on major routes German Federal Railways has enabled 80% of all its transportation to be electric. Electric power is not only clean; being produced mainly in coal-burning power stations it is also reasonably independent of world energy crises. The railroad is also the most economical means of transport – the entire energy consumption of German Federal Railways is only about the same as the total energy used in West Berlin.

While rail transportation requires only 0.8% of our energy resources, road traffic accounts for 8% – ten times as much energy but achieving only 2.3 times as much transportation.

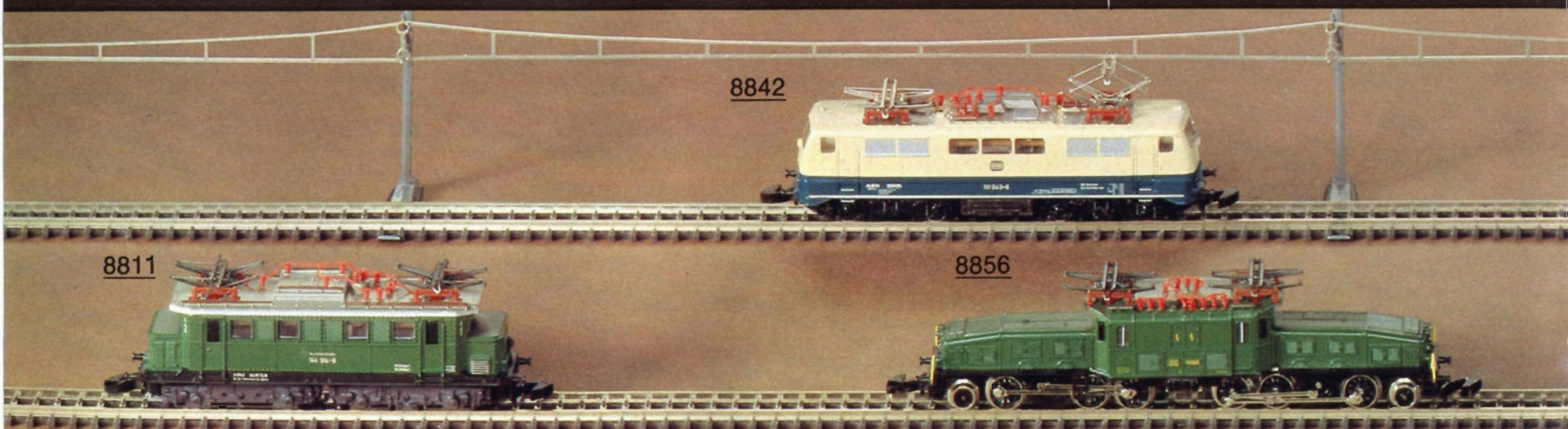
Features of electric locomotives

Remote control for forward and reverse drive · Both trucks driven · Three working headlights at each end, changing over with change of direction · Change-over 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

Q = 8953

8842

Electric express locomotive · Model of German Federal Railways' class 111 · Wheel arrangement B-B · Length over buffers 76.8 mm (3")



new

8811



Electric passenger train locomotive · Model of German Federal Railways' class 144 · Wheel arrangement B-B · Length over buffers 68 mm (2-1/16")

■ In 1931 the German State Railways ordered 20 B-B locomotives from the firm of Siemens-Schuckert. They were intended for use on passenger and light freight services on the Augsburg–Stuttgart route, which was to be electrified. By 1945 a total of 174 class E 44 machines had been delivered. German Federal Railways bought another 7 of this well-proven type even after 1945.

The E 44 was soon being used on all the electrified parts of the German Railways. Because of its versatility it became regarded as the workhorse of the railroads. It covered an average distance of 20,000 km (12,440 miles) per month.

The E 44 is driven by 4 axle-hung motors located in two double-axled trucks. All tractive and decelerative forces are absorbed by the trucks, which are coupled together. The total power is 1860 kW continuous rating, or 2200 kW hourly rating, and the maximum speed 90 km/h (56 mph).

8856

8856

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")

The "Crocodile" is one of the most interesting locomotives in the world. This mighty machine is 91 mm (3-5/8") 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 beams have been fitted.

■ Swiss Federal Railways (SBB) have to contend with difficult terrain, with a rail network covering 3000 km (1875 miles) which has about 3600 bridges, 250 tunnels and inclines of as much as 38‰.

These conditions, together with the availability of hydro-electric power, led to the rapid development of railroad electrification in Switzerland. 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 electrified in 1916. By 1936, 73% of the Swiss railroad system was equipped with overhead lines, and the overhead line has covered the entire network since 1960.

40% of all the rail traffic passing across the Alps uses the Gotthard line. In the early 1920s the growth in freight traffic

Electric locomotives should really have overhead lines. The mini-club catenary system looks right and works in the same way as the real thing.

8857

Electric freight train locomotive · Model of German Federal Railways' class 151 · Wheel arrangement C-C · Length over buffers 88 mm (3-½")

8854

Electric high speed locomotive · Model of German Federal Railways' class 103 · Wheel arrangement C-C · Length over buffers 88 mm (3-½")

8855

Electric locomotive · Model of German Federal Railways' class 111 used on urban high speed services in the Rhine and Ruhr districts · Wheel arrangement B-B · Length over buffers 76.8 mm (3")

8854

8855

8857

8858

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^{III} 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).

8858

Electric freight train locomotive · Model of German Federal Railways' class 151 · Wheel arrangement C-C · Length over buffers 88 mm (3-½")

Examples of train composition:



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 (except for 8802) · Die cast zinc frame

Q = 8953

8864

Diesel locomotive · Model of German Federal Railways' class 260 · Wheel arrangement 0-6-0 · Metal body · Length over buffers 49 mm (1-15/16")

■ The class 260 dates from 1955. The 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 the 260's power plant still depends partly on the use of a coke fire.



8864



8875



8874



8875

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

8874

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

■ In the mid 1950s, German Federal Railways began converting from steam to diesel and electric locomotives. This program resulted in an unusually limited range of locomotive types. One of these, developed by the Krupp industrial and steel corporation of Essen, was the standard mainline diesel locomotive 216, which appeared in 1956.

8816

Railbus - Model of German Federal Railways' type 798 - Length over buffers 62 mm (2-7/16")

To aid safe and smooth switching, the 260 is fitted with a standard radio system enabling communication between the driver, the switching controller and other points. The locomotive can also be operated by radio remote control.

Like the class 261, the 260 is also used on freight services.

8817

Trailer for railbus - Model of German Federal Railways' type 998 - Length over buffers 62 mm (2-7/16")

How the track-cleaning railcar works



8802

Track-cleaning railcar - 2 driven axles - Automatic coupling at car end - Length over buffers 62 mm (2-7/16")

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.

8816



8817



8802



The following items are required for locomotive maintenance:

7199

Bottle of oil - Containing about 10 cc lubricating oil for locomotives and cars

8953

Lighting fitting - With 10 V bulb - For use in locomotives which can take lighting

8987

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

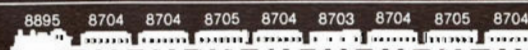
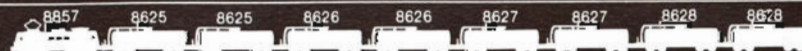
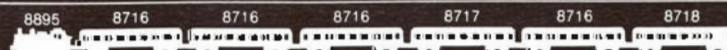
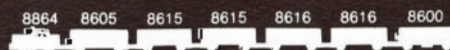
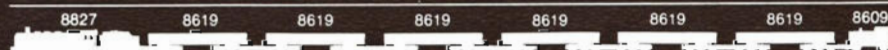
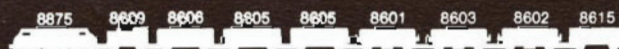
8988

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

8989

Pair of carbon brushes for locomotives 8811, 8827, 8842, 8855, 8856, 8885, 8891, 8892, 8893 and 8896

Examples of train composition:



Passenger cars

Passenger cars of German Federal Railways

Models of German Federal Railways · 3 axles · Windows inset in plastic frames

8706 ★ new

Passenger coach · AB3yge · 1st and 2nd class · Length 61 mm (2-3/4")

8707 ★ new

Passenger coach · B3yge · 2nd class · Length 61 mm (2-3/4")

8708 ★ new

Passenger coach with baggage compartment · BD3yge · 2nd class · Length 61 mm (2-3/4")

■ In the early 1950s there were a great many obsolete and damaged two and three axled passenger coaches in the reserve stocks of German Federal Railways. By modifying the underframes of several thousand old coaches, new types of three axled coach were developed, consisting of 1st and 2nd (mixed) class cars, 2nd class cars, and 2nd class cars with baggage compartments. These cars were fitted with beaded rubber interconnecting walkways.

8706



8707



8708



new

new

new



8716

8718



8717

Models of German Federal Railways · 4 axles · Windows inset in plastic frames · Length 120 mm (4-3/4")

■ These local passenger service coaches of German Federal Railways are sometimes called "Silberlinge" (Silver cars). The car bodies are made of stainless steel with peacock's-eye pattern.

8716

Local passenger service coach · Bnb · 2nd class

8717

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

8718

Local passenger service coach with baggage compartment and control compartment · BDnrzf · 2nd class · Three headlights and red tail-lights, operating in accordance with the direction of motion

■ Local service multiple-unit trains consist of a locomotive, a number of intermediate cars, depending on the traffic density, and a control car at the other end of the train. All the driver has to do at the end of the line is to get out of the locomotive and into the control car and he can then drive back again.

With the locomotive pulling (i.e. in front), the control car shows two red tail-lights.

With the locomotive pushing (i.e. with the control car leading), the control car shows three white headlights.

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 (2-3/4")

8700

Passenger cars

8701

Passenger cars

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

8730

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

Passenger cars of the former German State Railways

Models of the former German State Railways · 4 axles · Windows inset in plastic frames

8731

Express coach · C4ü bay 11 · 3rd class · Length 87 mm (3-5/8")

8732

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

Passenger cars of German Federal Railways

Models of German Federal Railways · 3 axles · Windows inset in plastic frames

8703 ★ ^{new}

Baggage car · Formerly Pw3-pr02 · Length 57 mm (2-1/4")

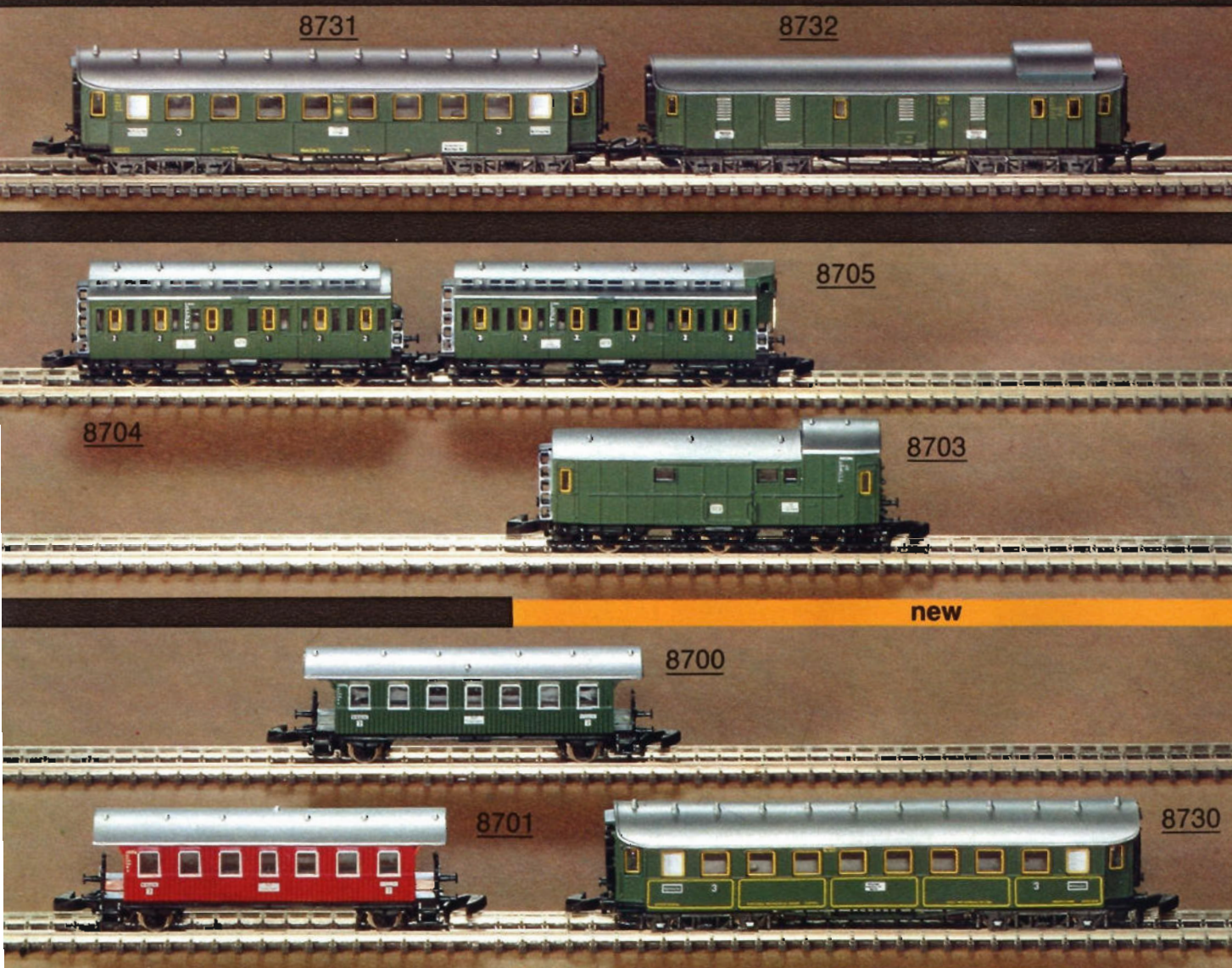
8704

Compartment car · Formerly BC3-pr03 · Length 57 mm (2-1/4")

8705

Compartment car with brakeman's cab · Formerly B3-pr03 · Length 57 mm (2-1/4")

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



8724
8734



8725 8735



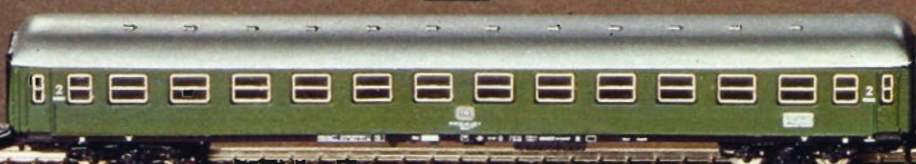
8726 8736



8710



8711



Passenger cars of German Federal Railways

All these models have the following features: 4 axles · Windows inset in plastic frames · Length 120 mm (4-3/4")

There are two versions of mini-club TEE coach: those with interior lighting and those without.

8724 without interior lighting

8734 with interior lighting

TEE compartment car · Avrm

8725 without interior lighting

8735 with interior lighting

TEE open-interior coach · Apm

8726 without interior lighting

8736 with interior lighting

TEE dining car · WRm

8728 without interior lighting

8738 with interior lighting

TEE dome car · ADm · Transparent observation dome

■ TEE coaches provide the best quality of passenger transportation to be found on German Federal Railways. The coaches have only 1st class open-interior seating accommodation which is fully air-conditioned and to the highest standards of comfort.

Intercity trains travel at maximum speeds of 160 km/h (100 mph) or even 200 km/h (125 mph) on suitable track.

8714

Automobile transporter · DDm 915 · Loaded with 8 miniature automobiles

■ Passenger/automobile trains usually consist of a combination of automobile transporters and express coaches. Automobile drivers drive their vehicles onto the loading decks of the transporters by means of ramps. The vehicle occupants can enter and leave their vehicle either via the ramps or by means of ladders at the sides of the transporters.

8710

Express coach · Aüm · 1st class

8711

Express coach · Büm · 2nd class

8712

Express baggage car · Düm

8713

Express dining car · WRüm

8720

Express coach · Aüm · 1st class

8721

Express coach · Büm · 2nd class

8722

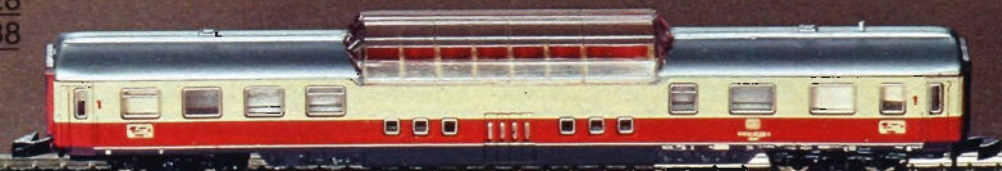
Express baggage car · Düm

8723

Express dining car · WRüm



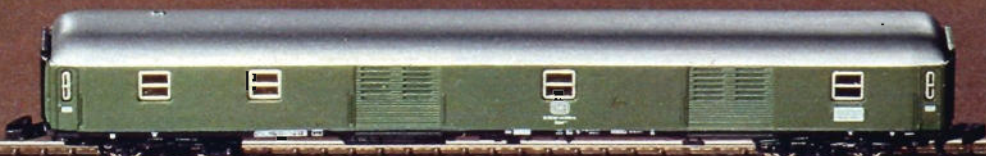
8728
8738



8714



8712



8713



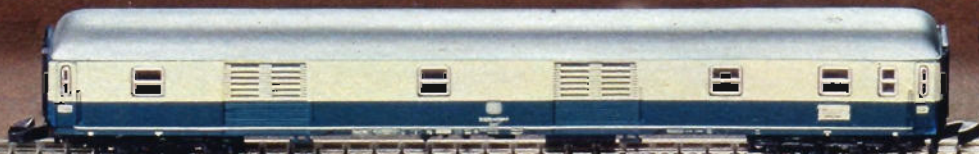
8723



8720



8722



8721



Freight cars

■ German Federal Railways have a stock of about 290,000 freight cars for national transportation, as well as about 16,000 maintenance and special purpose cars.

There are also about 50,000 privately owned freight cars in use on the Federal Railways.

About 65% of the freight cars on national transportation services are conventionally designed, and 35% are special designs.

8600



8601



8602



8603



8604



8600

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

8601

Beer car · Dortmund Union · Length 54 mm (2-1/8")

8602

Beer car · Spatenbräu München · Length 54 mm (2-1/8")

8603

Beer car · Kulmbacher Mönchshof-Bräu · Length 54 mm (2-1/8")

8604

Beer car · Kulmbacher Reichelbräu · Length 54 mm (2-1/8")

8609

Freight train baggage car · DB-Dg · Doors on each side which will open · Length 40 mm (1-5/16")

8610

Low-sided car · Length 54 mm (2-1/8")

8622

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

8606

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

8609



8610



8622



8606



8611



8612



8613



8611

Tank car · Shell · 2 axles · Length 40 mm (1-9/16")

8612

Tank car · Esso · 2 axles · Length 40 mm (1-9/16")

8613

Tank car · Aral · 2 axles · Length 40 mm (1-9/16")

8619

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

8621

Crane car with rotating crane, movable boom and boom support · Crane hook can be raised and lowered by hand crank · Length of under frame 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)

8619



8621



■ Development of a new freight car takes 4-5 years from the initial requirement until the start of series production. The typical freight car of German Federal Railways has a working life of 20 to 30 years. Plans for future freight cars therefore have to take into account not only the 5 year lead time but also whether the demand for a particular type of freight car will exist 20 to 30 years later.

The proportion of specially designed freight cars appears to be increasing. The Federal Railways have to respond to the market situation, where customer-

oriented and strengthened freight cars are the requirements. Designs have to take into account not only price and running life, but also factors such as the

optimum protection arrangements for the freight and automated loading and unloading systems.

8607



8608



8605



8615



8616



8607

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

new

8608

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

8605

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

8615

Container car · DB · Length 54 mm (2-1/8")

8616

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

8630

Open self-unloading freight car with steering trucks · German Federal Railways' type Fads 176 · Length 53 mm (2-1/16")

8627

Tank car · Aral · 4 axles · Length 75 mm (3")

8626

Tank car · Esso · 4 axles · Length 75 mm (3")

8630



8627



8626



8614



8625



8628



8614

Tank car · BP · 2 axles · Length 40 mm (1-9/16")

8625

Tank car · Shell · 4 axles · Length 75 mm (3")

new

8628

★ new
Tank car · BP · 4 axles · Length 75 mm (3")

8620

Well car · Loaded with transformer · Length 154 mm (6-1/16")

8620

