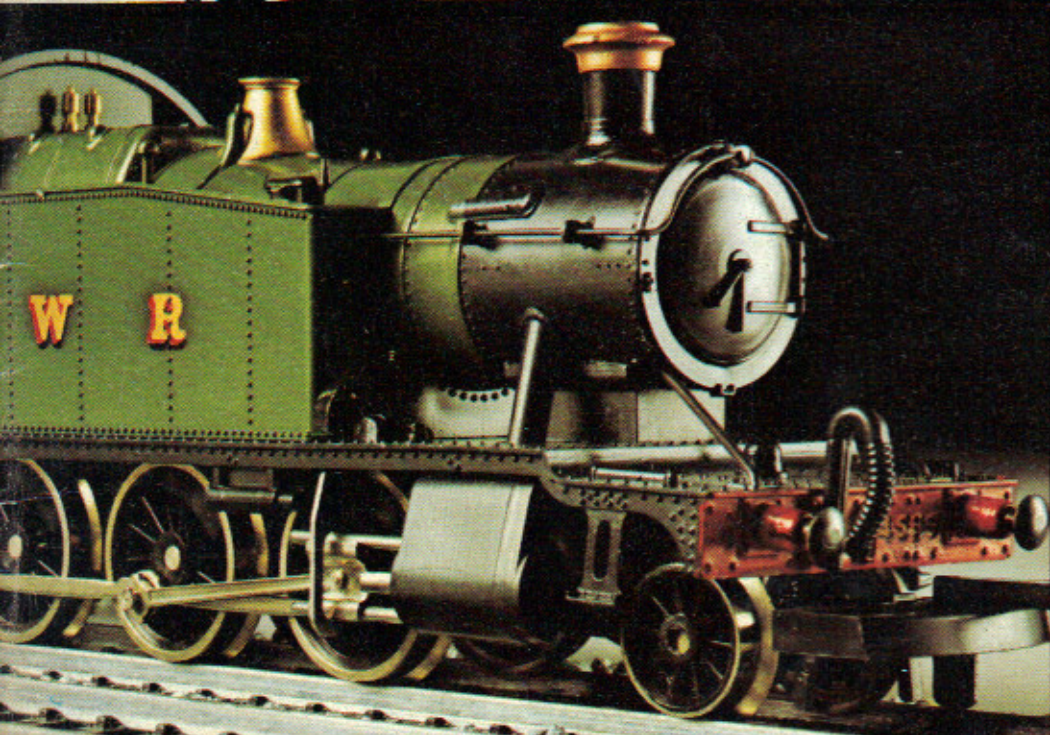
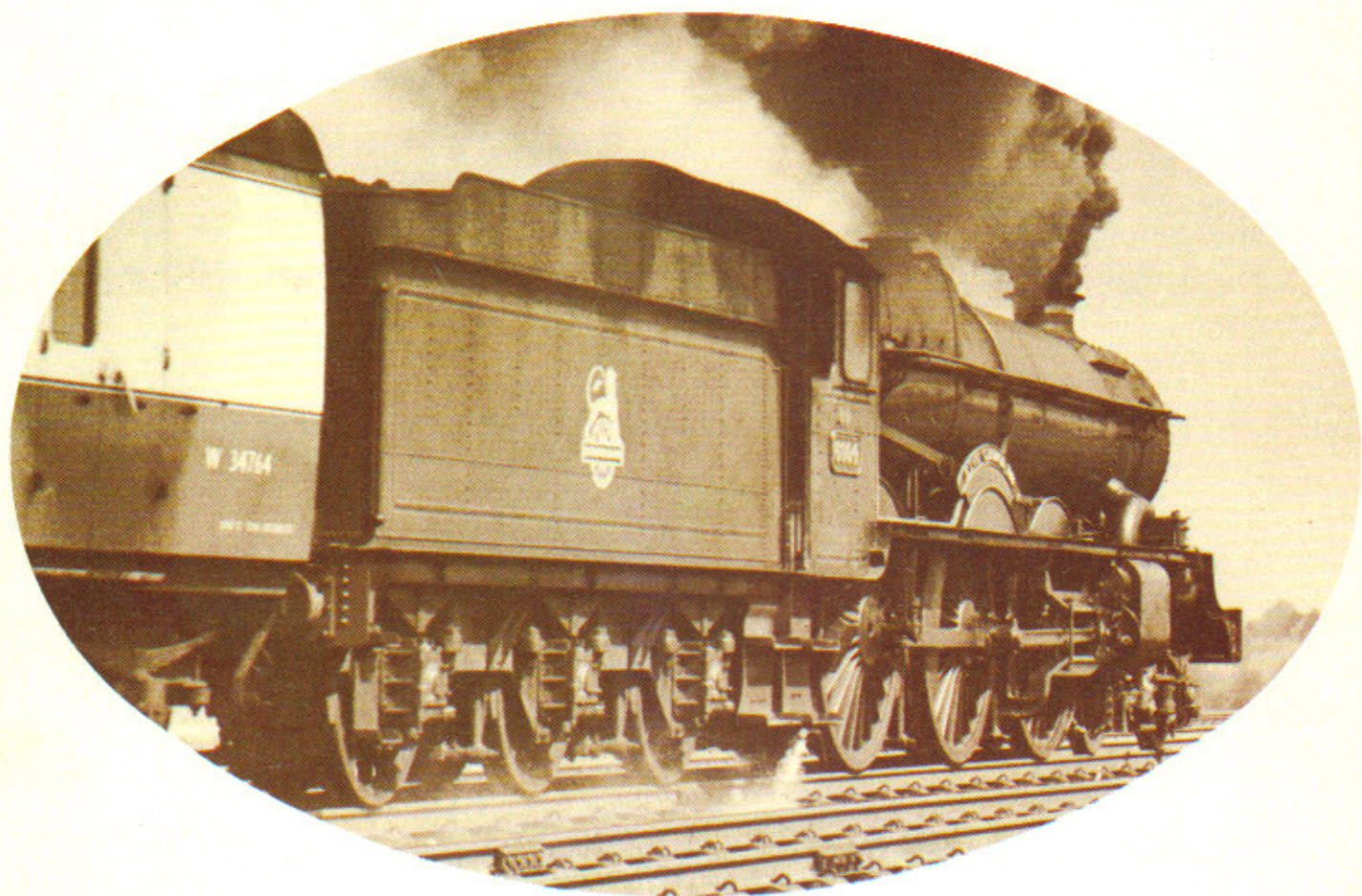


LIMA RAILWAYS

1980/81 BRITISH EDITION, OO SCALE, N GAUGE



HOW LIMA CREATE THE FASCINATING



WORLD OF RAILWAYS.

IN MINIATURE.

A LITTLE RAILWAY HISTORY

Until 1825 no one could travel faster than a horse. But that was the year the first public steam locomotive made its debut.

And suddenly within the span of one lifetime the world was criss-crossed by a network of 500,000 miles of rails.

By 1860 the railway map of Great Britain was pretty much like it is now.

In those early days the steam train reigned supreme. And it was a reign that was to last for over a century.

Loco's like the King George V and the V2 4-6-0 'Green Arrow' were to capture the public imagination and stay there.

But during the 1930's, it became clear that the days of steam travel were numbered. And the railways were turned more and more to diesel and later to electric power.

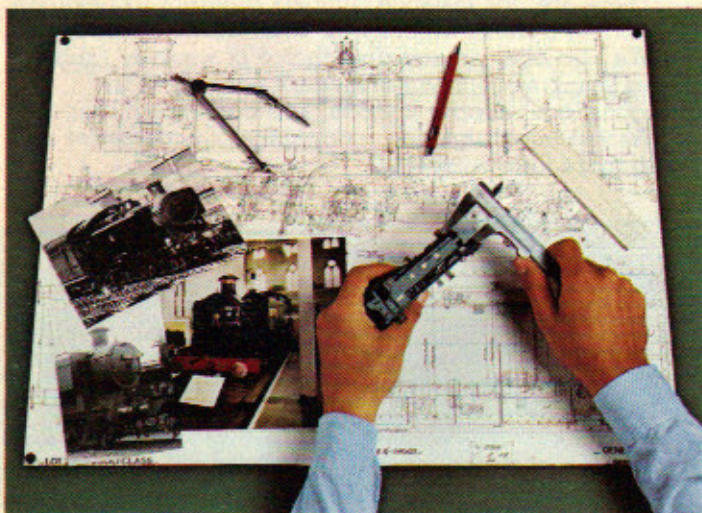
Speed and greater cost efficiency became crucial. One of the first diesels to make a name for itself was the powerful Warship Class Bo-Bo of the Western Region.

And electric trains like the Class 87, collecting its power from the overhead catenary system and running at speeds up to 100 m.p.h.

In the meanwhile, exploration continues and new sources of power, like remote guiding beams and nuclear power are under scrutiny.

But however the railways develop, they're sure to be just as exciting and colourful as they have been in the past.

Which is something that all railway modellers can look forward to with eager anticipation.



LIMA HAVE THE RIGHT SCALE FOR YOU

One of the most important choices you make when buying a model railway is the right scale.

This means choosing a gauge that is right for you and that fits in with the space available in your home.

We make that choice easy. Because of all the major model train manufacturers, Lima offers all three important gauges.

We give you a choice of:
'OO' scale - a long time favourite with modellers. Lima offer a vast new range of British outline stock, all with British Standard Couplings.

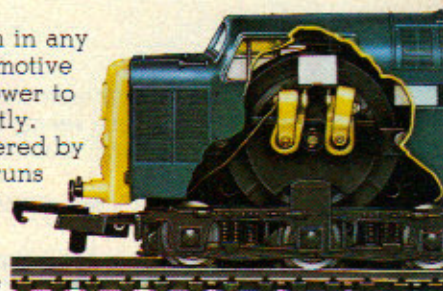
'N' gauge - the mini gauge. Superbly engineered micro models, ideal for those with limited space to set up their layouts.

And finally, 'O' gauge - maxi trains. The giant size classic gauge. This is especially effective out of doors. (There is a separate Lima catalogue for the 'O' gauge enthusiast.)

LIMA G MOTOR

The most important item in any railway system is the locomotive because it contains the power to haul big payloads efficiently.

Every Lima loco is powered by the Lima G Motor which runs between 4 and 12 volts dc from either the battery power speed controller (which in supplied is some



Lima train sets) or a Lima power/unit transformer, which has variable speed controls and forward/reverse action.

The Lima motor is the most recent innovation in Lima power units, which, over the years, have been continuously improved. With the Lima G a combination of a condenser and a linear resistor connected to the three collection points means more efficient noise reduction, TV and radio suppression, and longer life.

The motor, because the gears are made from self lubricating plastic, do not require any oil.



LIMA HAVE THE EXPERTISE

The first thing you should know about us is that when you buy Lima you buy expertise.

Technical expertise to ensure that your trains will always run on time --year after year.

Before any model leaves our factory it is individually tested and double checked to make sure that everything is in perfect order.

You also get modelling expertise. We go to great lengths to ensure that every detail is exactly right. (Every locomotive and piece of rolling stock is designed from the original blueprints and photographs of the real thing.)

We also offer an unrivalled choice of rolling stock and accessories in three different scales. So your railway system can keep on growing and develop into a lifetime hobby.

But perhaps the most important benefit you obtain from our expertise is value. The kind of value for money that makes your model railway not only a lifetime interest but also a lasting investment.

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LIMA RAILWAYS

PACK IN MORE ACTION.

THE WAY TO BEGIN.

To the beginner, first entering the fascinating world of model railways, there seems a bewildering choice. Locomotives, coaches, wagons, track, power units, accessories - where best to start?

Happily, there is a simple and economic answer. Start with a set.

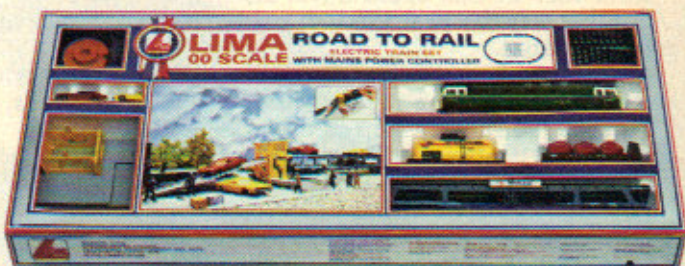
Lima sets range from the simplest circle layout, to advanced systems with sophisticated track accessories. And you can choose just what type of train you want, too. Lima sets offer steam goods, steam passenger, diesel goods, diesel passenger etc. - the choice is almost endless.

(There is a separate leaflet describing the range of superb Lima Train Sets.)



WORKING ACCESSORIES.

Nothing can make a model railway come alive like carefully chosen accessories. They are the authentic touches that create a feeling of realism, the little details that make your railway world complete, and they can provide the thrills in an action packed layout.



With Lima, there's an almost endless choice. Everything from the very basic to the most sophisticated is there for you to choose from.

There are railway buildings for you to fit into stations, goods yards and maintenance areas. Drive-through Coach Washers and Container Terminals.

With just a few accessories you can convert a model railway into a perfect and complete miniature world.

And with just a little imagination you can transform your railway from a simple track system into a work of art.

MORE LOCOMOTIVES, COACHES, WAGONS AND ACCESSORIES TO CHOOSE FROM.

Because Lima is the largest manufacturer of model railways in the world, we're able to offer a larger choice of locomotives, coaches, wagons and accessories.

There are, for instance, fifty-six different locomotives to choose from as well as fifty-three different coaches.

We also offer an amazing choice of wagons, ranging from plank wagons to refrigerator vans, foundry wagons, coal hopper wagons, and breakdown cranes.

As you might imagine, our choice of accessories is also more than complete.





With a choice like the one Lima offers, the only thing to limit your railway is your own imagination.

You can recreate any style, any period. Whether you follow freight or prefer the passenger stock, whether you're drawn to diesel or dream of the days of steam, we can satisfy your needs.

And since we make all our models with the same love and care that was lavished on the originals, you can rest assured that when you choose Lima, railway history really comes alive.

Whilst every attempt is made to ensure the complete accuracy of all items in the Lima range, the manufacturers have altered/amended designs, specifications, materials, etc., as necessary, to enable them to produce such models by current production methods.

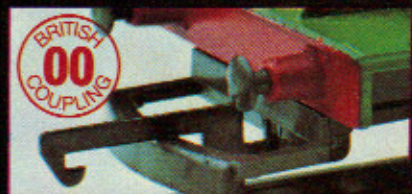
Items marked **NEW** are not necessarily readily available at this time.



OO SCALE LOCOMOTIVES

'OO' has become the most popular and widely used scale in the U.K., and Lima offers the biggest selection of locomotives in British outline in this scale. The gauge (between the rails) is 16.5 mm and the general dimensions are 'OO' scale (4 mm: 1 ft).

Most other countries use the 'HO' scale (3.5 mm: 1 ft) and certain items in the Lima range are based on this International outline. These are larger in real life than their British counterparts, but since their buffer beam heights are the same, the two systems are compatible when mixed. The track gauge for both 'OO' and 'HO' is 16.5 mm.



1150



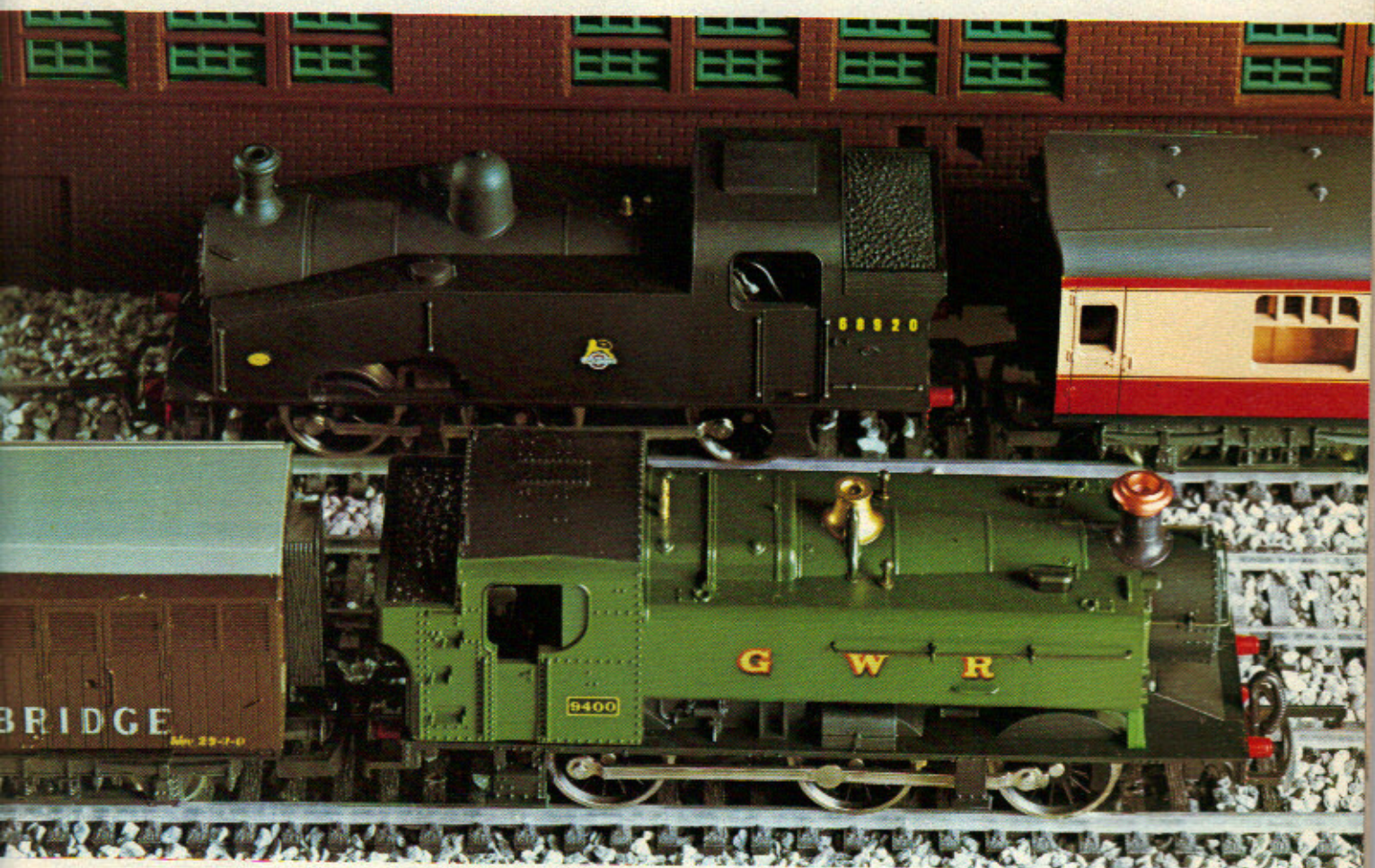
205101MG 0-6-0 T Class J50 Tank Locomotive. LNER Lined Apple Green Livery.



205102MG 0-6-0 T Class J50 Tank Locomotive. BR Unlined Black Livery.

J. 50

0-6-0 Pannier Tanks were considered by the L.N.E.R. to be the most suitable type of locomotive for short haul and shunting duties. Designed by Sir Nigel Gresley in 1914, the J-50 Class were adapted for use on the steep inclines of West Riding. An increase in cylinder size and the tank engine design provided the extra adhesion. Lima's model is of engine No. 8920 built at Doncaster works in 1924, re-numbered 68920 by B.R. in 1948, was finally withdrawn from service in July 1961.



94xx

94xx Class intended for heavy shunting work and passenger traffic was last in the line of Pannier Tanks produced for the G.W.R. at Swindon. Designed by F.W. Hawksworth and built in 1947 engine No. 9400 had all-welded tanks, an incredible coal capacity of 3½ tons, was super-heated and was fitted with Automatic Train Control. It was withdrawn from service in 1959 and is now preserved at the Great Western Railways Museum at Swindon.



1150

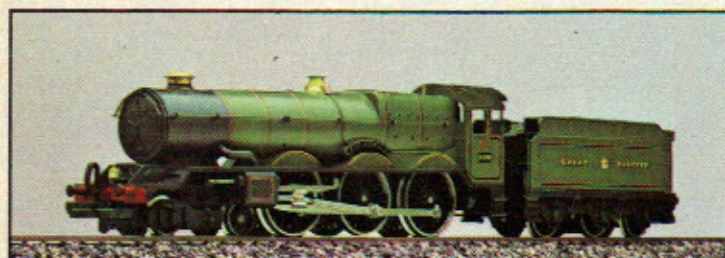


205117MG 0-6-0 T 94xx Class Tank Locomotive. Original GWR Livery.



205118MG 0-6-0 T 94xx Class Tank Locomotive. BR Unlined Black Livery.

PRAIRIE



205103MG 4-6-0 'King' Class Express Locomotive, No. 6000 "King George V" in Lined GWR Green Livery.



205104M 4-6-0 'King' Class Express Locomotive No. 6009 "King Charles II". Experimental BR Lined Blue Livery

Possibly the most famous of all G.W.R. locomotives, these magnificent express passenger engines were built by C.B. Collect at Swindon and introduced in 1927. The original No. 6000 King George V represented Gt. Britain at the Baltimore and Ohio Railroad centenary celebrations in 1927, where its unusual warning bell was fitted. Withdrawn for preservation in 1962 this loco can still be seen on periodical excursions.



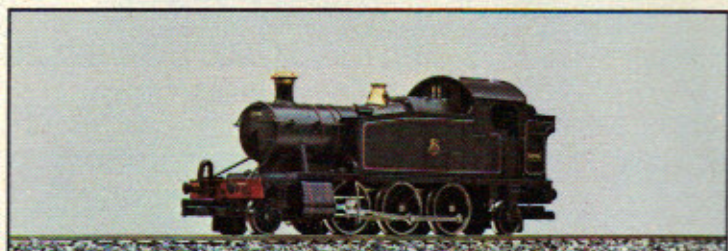
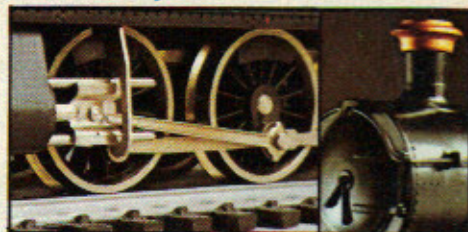
'KING' CLASS





One of G.W.R.'s Standard Tank locomotives for cross country and branch line passenger works. The 45 xx Class was designed by G.J. Churchward and 175 were built at Swindon Works between 1906 - 1929. These small Prairie tanks weighed 57 tons, produced a pressure of 200 lbs and had tractive effort of 21250 lbs superheated. They were a lighter and smaller development of the earlier 31xx.

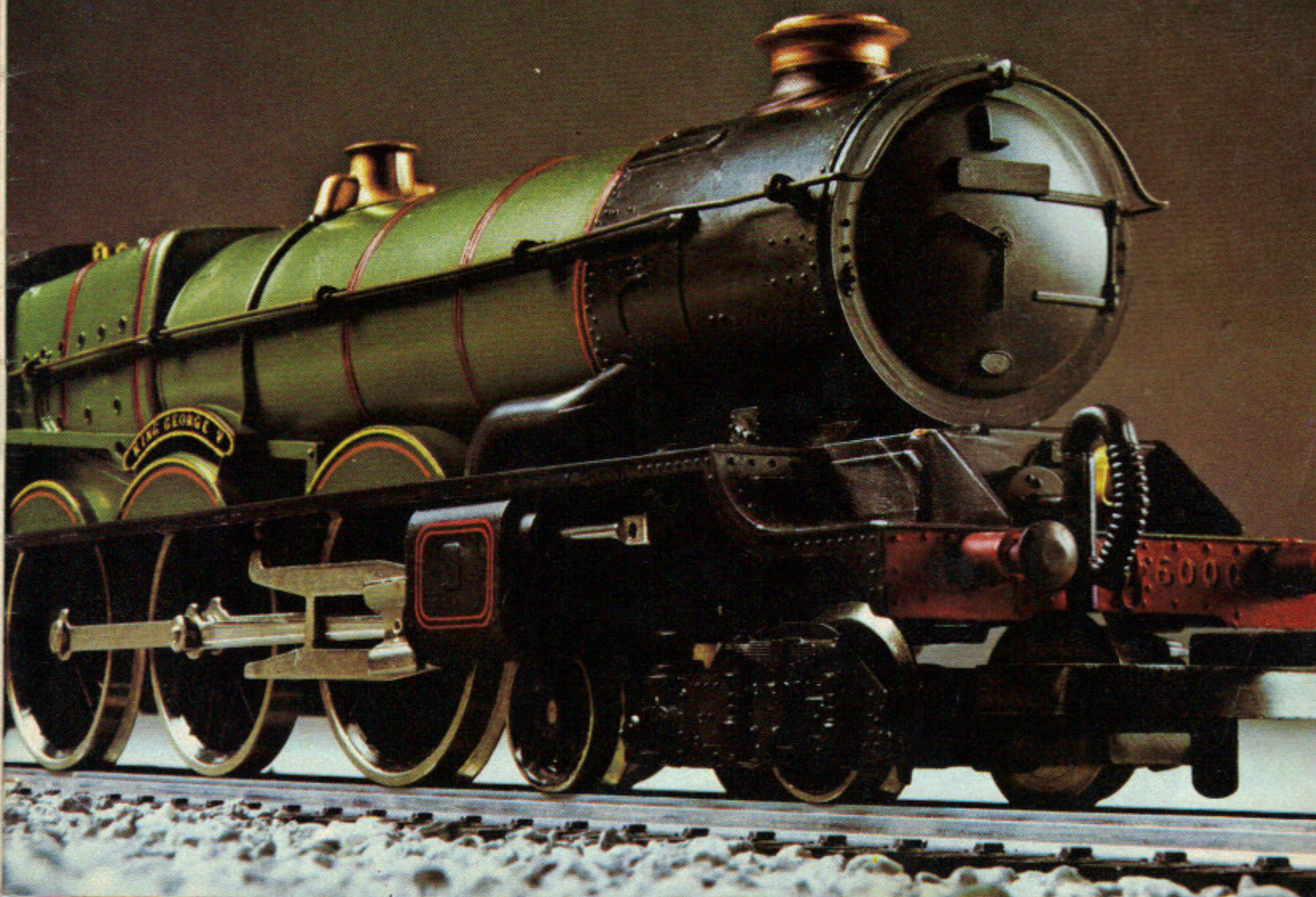
16.75



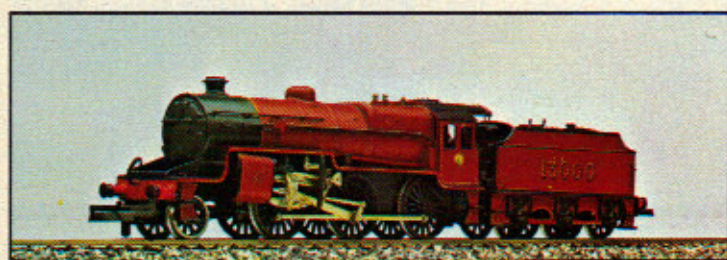
205110MG 2-6-2 T Class 45xx Prairie Tank Loco. BR Lined Black Livery.



205111MG 2-6-2 T Class 45xx GWR Prairie Tank Locomotive in Original Livery.

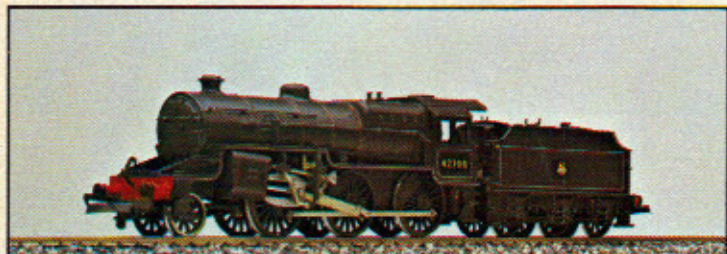


These impressive mixed traffic locomotives were the first new design of main line engine on the L.M.S.R. after grouping. Introduced in 1926 and designed by George Hughes C.M.E., they were hard working, and highly successful. Over 240 were built at Horwich and their unusual valve gear led to the nickname "Horwich Crab".



205119MG 2-6-0 'Crab' Class Express Locomotive.
LMS Lined Maroon Livery.

NEW



205120MG 2-6-0 'Crab' Class Express Locomotive.
BR Lined Black Livery.

NEW

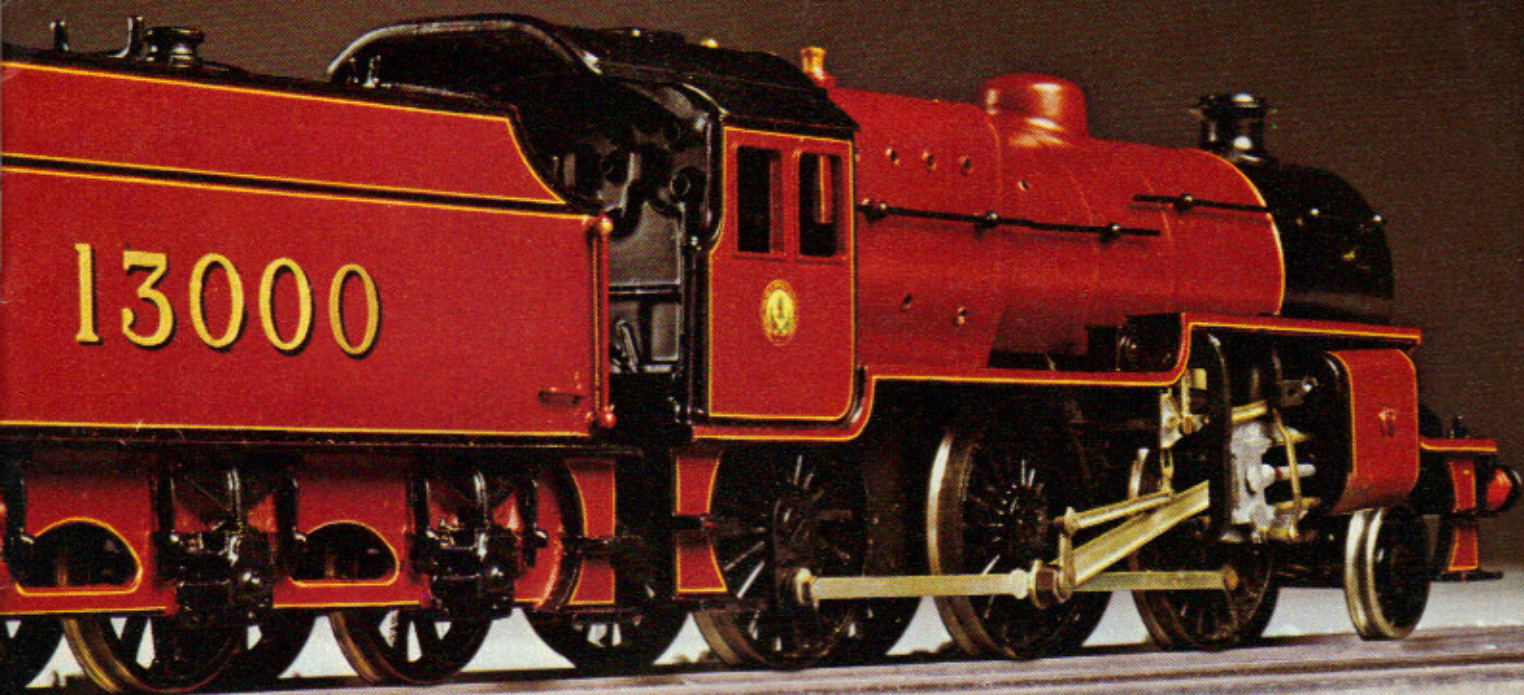
2399



V2



'CRAB'



205130MG L.N.E.R. V.2 Class 2-6-2 Green Arrow No. 4771.

23 99

NEW



205131MG V.2. Class 2-6-2 in Lined B.R. Livery. No. 60964. "The Durham Light Infantry".

NEW

These V.2 Class 2-6-2 locomotives were designed by Sir Nigel Gresley and the first numbered 700 was called "Green Arrow" and entered service in 1936. After giving Yeoman service during the Second World War, it was re-numbered 4771 in 1945 and continued in service until 1962. Over 180 of this class of engine were built and many underwent various modifications and some were involved in "self cleaning smoke box" experiments after the War. Green Arrow is preserved at the National Railway Museum and can be seen under steam on its periodical excursions.

'SHUNTERS'



205114MG BR Class 33 Bo-Bo Diesel Locomotive in BR Livery of the late 1960's.

1145



205115MG BR Class 33 Bo-Bo Diesel Locomotive in original Livery.

Based on the earlier Class 26 these diesel-electric Class 33 Bo-Bo's were manufactured by the Birmingham Carriage Company. They are largely based on Southern because their unique control system enables them to inter-work in multiple with Southern electric-diesel locomotives and electric multiple-unit trains. They weigh 73 tons, have a fuel capacity of 800 galls and a top speed of 80 mph.



CLASS 33





Manufactured by the English Electric Company at Derby works in 1945 these diesel electric units producing a tractive effort of 35,000 lbs, formed the basis for many more shunters built by various regions of B.R. 1285



205107MG 0-6-0 Class 09 350 BHP Diesel Shunter.
BR Livery.



205108MG 0-6-0 Class 09 350 BHP Diesel Shunter.
Early BR Livery.



205109MG 0-6-0 Class 09 350 BHP Diesel Shunter.
LMS Livery.





'DELTTIC'

The Class 55 "Deltics" considered by many the 'King' of the diesels, were built by English Electric and entered service in 1961. They are the most powerful on B.R., with two 1650 hp 18-cylinder engines and were the first Diesels built for regular working at 100 mph. They proudly carry the names and insignias of famous Scottish Regiments.

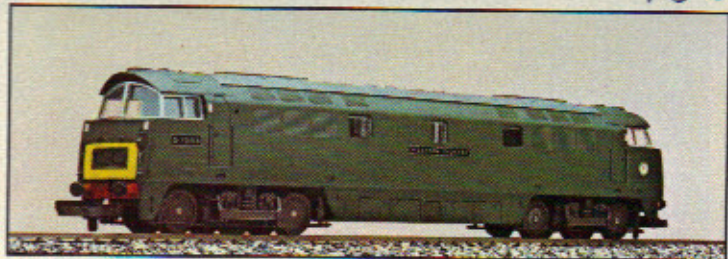
12 45



205105MG BR Class 55 'Deltic' Co-Co Diesel Loco. Early Livery No. D9003 "Meld".



205106MG BR Class 55 'Deltic' Co-Co Diesel Locomotive. No. 9006 "The Fife and Forfar Yeomanry".



205134MG BR Class 52 'Western' Diesel-Hydraulic Locomotive No. D 1003 "Western Pioneer".

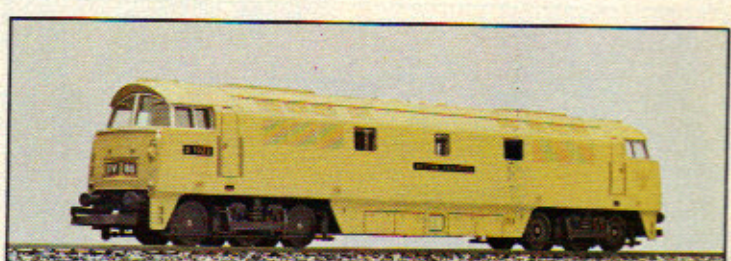
NEW



205122MG BR Class 52 'Western' Diesel-Hydraulic Locomotive. No. D1071 "Western Renown".



205121MG Class 52 'Western' Diesel-Hydraulic Locomotive. Western Maroon Livery. No. D1016 "Western Gladiator".



205126MG Class 52 'Western' Diesel-Hydraulic Co-Co No. D1000 "Western Enterprise".

'WESTERN'

Based on a German design and developed from the "Warships" the diesel-hydraulic "Westerns" were built at Swindon and Crewe and introduced in 1961. In early

years their Voith hydraulic transmissions and bogies gave trouble and to improve availability they were restricted to West of England service. Their two engines produced 1350 b.h.p. and their coach-profile body, recessed windscreen and clean styling make them the most handsome diesels built.





205135MG BR Class 42/43 'Warship' Diesel-Hydraulic Bo-Bo No. D843. "Sharpshooter". **NEW**



205128MG Class 42/43 'Warship' Diesel-Hydraulic Bo-Bo, Original Western Region Maroon, No. D838 "Rapid". **NEW**



205127MG Class 42/43 'Warship' Diesel-Hydraulic Bo-Bo, Rail Blue Livery, No. D814 "Dragon". **NEW**



'WARSHIP'

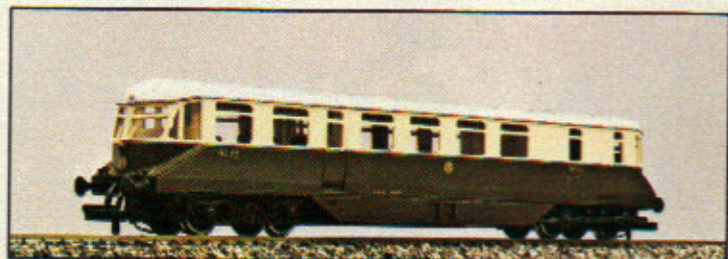




The Class 42 and 43 diesel-hydraulic "Warships" were built between 1959 and 1962. Class 42 was built at Swindon and Class 43 at North British. Their engines produced 2,200 b.h.p. with a tractive effort of 52,000 lbs. They were BR's first real success in diesels, with a top speed of 90 mph. Unusually, the bogies are without axle-boxes, bolsters or central pivots and they incorporate laminated coil springs to transmit body weight to bogie frames.

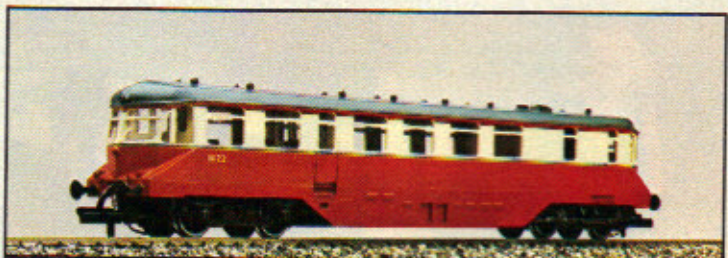


RAILCAR



205132MG G.W.R. Rail Car No. 22 original Livery.

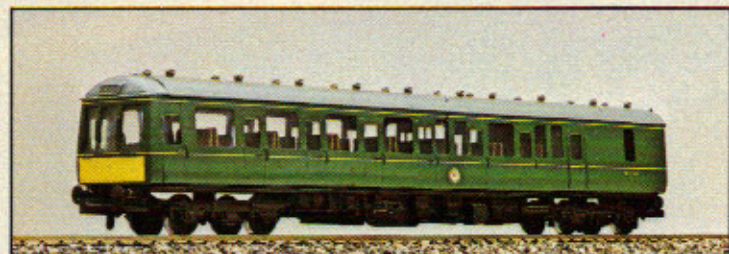
NEW



205133MG G.W.R. Rail Car No. 22 1948 Crimson/Cream Livery.

NEW

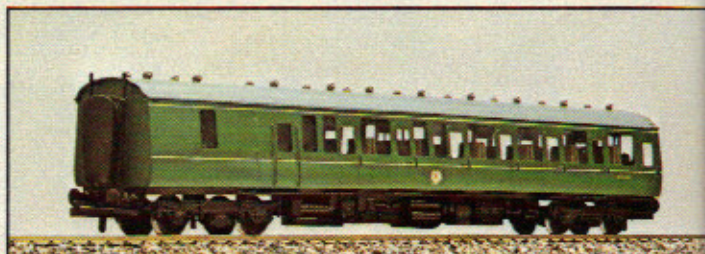
The G.W.R. was the only railway Company to produce a really successful diesel powered rail car design and they first went into service in 1933. All were third class and powered by two AEC 121 BHP engines. They were used for both express and branch line working and some were even fitted with buffet facilities. No. 22 was built at Swindon works in 1941 to a newer, more angular design. It had second class seating for 48 with limited luggage space at one end. It saw continuous service throughout the War and was withdrawn for preservation in 1962.



205137MG Class 117/2 DMU Motor Brake 2nd 1959 Livery.

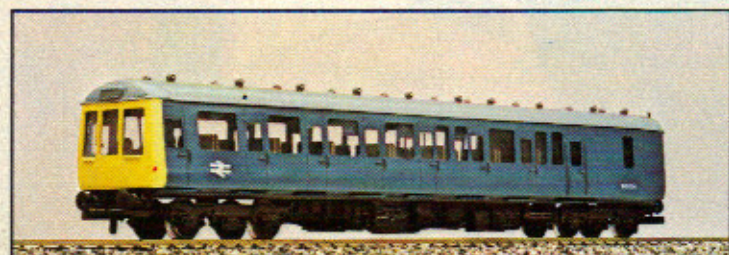
NEW

1465



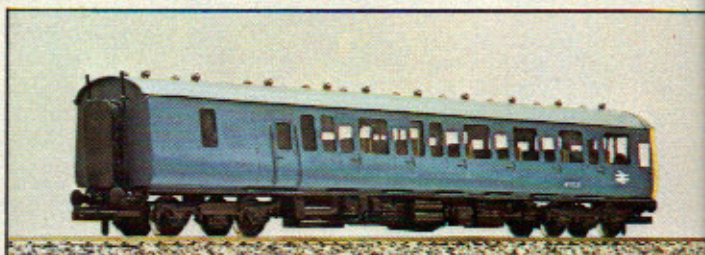
205139MG Class 117/2 DMU Motor Brake 2nd Non Powered Trailer.

NEW



205136MG Class 117/2 DMU Motor Brake 2nd 1974 Livery.

NEW



205138MG Class 117/2 DMU Motor Brake 2nd Non Powered Trailer.

NEW

DIESEL MULTIPLE UNIT

passenger movement, especially over local commuter and shopper routes. Most types look basically similar and are built on two standard length under-frames. Many combinations can be seen, including 2,3 and 4 car sets. Lima's model is of the Pressed Steel Company's Motor Brake 2nd, which has seen service in most parts of the country. Introduced in 1959, and powered by 2 BUT (Leyland) 6 cylinder 150 BHP engines. These mechanical transmission units weigh 36 tons and have an overall length of 64 ft.

The last few years has seen a continuous growth in cross country and suburban diesel multiple services. These have proved to be a popular and cost effective method of





CLASS 87

The BR Class 87 Electric Locomotive No. 87005, 'City of London,' British Rail's latest design of overhead electric

locomotives, the Class 87 Bo-Bo's were introduced in 1973 and were based on the previous Class 86/1. Their motive power is from four frame-mounted GEC 1250 h.p. traction motors producing a maximum speed of 100 mph. These pollution-free locomotives are the most sophisticated in full operation today.

1465



205125MG BR Class 87 Electric Locomotive No. 87005, "City of London", Suitable for operating with or without Catenary system.

NEW

OO SCALE PASSENGER STOCK

When you buy Lima Passenger Stock you buy the experience of coach making from the world's biggest model railway manufacturer. All Lima coaches are hand-finished to ensure the finest accuracy in lining and lettering. The liveries are produced after many months of research on original



blueprints and photographs of their real life counterparts, so that colour matching is as close to authentic as possible. And Lima Passenger Stock runs quietly and smoothly because the steel axles have special conical points to reduce friction as they operate.



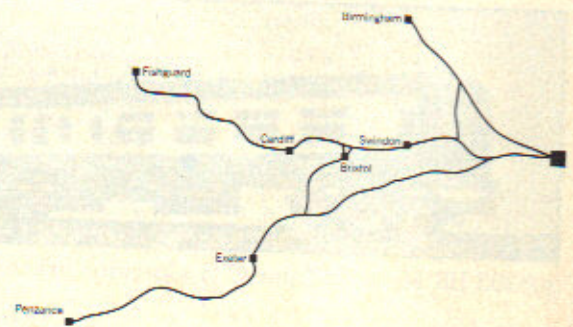


GREAT WESTERN RAILWAY

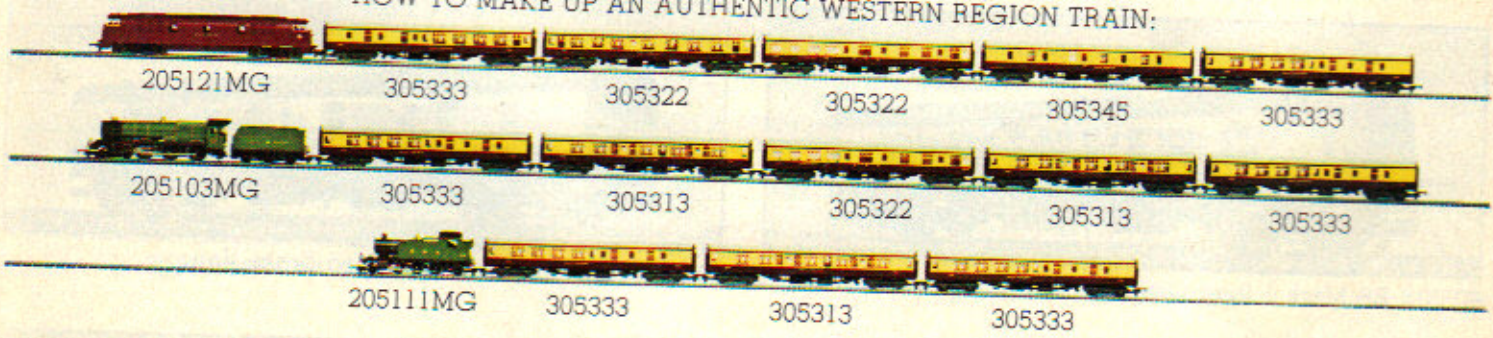


The Great Western Railway was the only name to survive the 1923 Railways Act. It combined with the Southern and Welsh railways to become responsible for the western part of England.

In broad gauge days GWR coaches were wider than other companies' stock and renowned for comfort. In 1892 GWR produced the first train with a corridor from end to end. The elegant chocolate and cream livery was replaced by chocolate brown overall in 1909 for economy. However the loss of publicity value was realised and colours reverted to the original by 1921. In 1934 the 18-ton GWR diesel railcar appeared, with seating for 69. Lima enables you to reproduce these exciting and famous trains with a comprehensive range of Mark 1 Coaches in their completely authentic Western Region Livery.



HOW TO MAKE UP AN AUTHENTIC WESTERN REGION TRAIN:



305313 Mark 1 Corridor Composite Coach. Western Region Livery.



305333 Mark 1 Corridor Brake Coach. GWR Livery.



305322 Mark 1 Restaurant Car. GWR Livery.



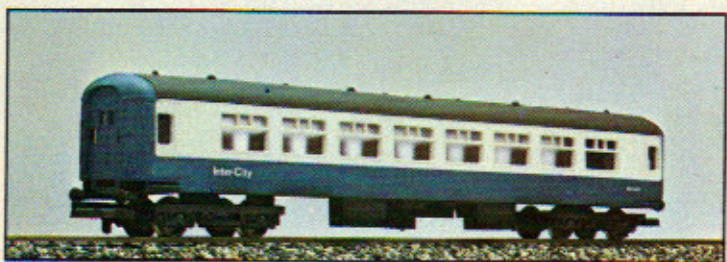
305345 Standard Gangwayed Brake Van. GWR Livery.



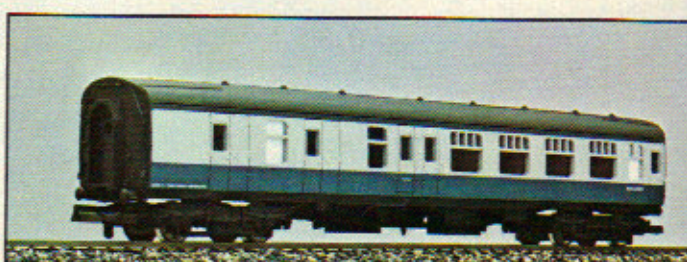
305301 BR Mark 2B Inter-City First Class Corridor Coach.



305321 BR Mark 1 Restaurant/Buffer Car.



305302 BR Mark 2B Inter-City Open Coach.



305335 BR Mark 1 Inter-City Corridor Brake Coach.



305303 BR Mark 2B Inter-City Corridor Brake Coach.



305341 BR Standard Gangwayed Brake Van 'Express Parcels'.



305315 BR Mark 1 Inter-City Corridor Composite Coach.



305343 BR Standard Gangwayed Brake Van.



INTER-CITY



The name Inter-City was first used in 1951 when a train was named "The Inter-City" for the Festival of Britain.

In 1963 the name was used again in an advertising campaign and the concept of presenting the Inter-City service began to take shape. In 1965 the first campaign was launched to present Inter-City on a national basis and the service now generates more than 8,400 million passenger miles per year.

The latest Inter-City coach design (the Mk III) in its famous blue/grey livery was introduced in 1975 - with improved bogies for 125 mph running, power operated internal doors, more seats without extra weight (for better economy), tinted double glazed windows, and improved sound insulation.

British Rail is the only European railway to provide air-conditioned coaches as standard (on its Inter-City service without extra charge to the passenger).

LONDON MIDLAND & SCOTTISH



Biggest of the new companies in 1923, the LMS served the Midlands, North West and much of Scotland with 7,800 miles of track. It led the way in the mass production of rolling stock. Designers David Clayton, David Bain and C.A. Park gave LMS its great reputation for superb carriage design, smooth riding and extreme comfort.

After nationalisation, B.R. continued to run their coaching stock in the L.M.S. maroon colours, and their new Mk 1 Coaches had all the charm and distinction of the earlier stock. Lima's Coaches faithfully re-create these liveries and are beautifully lined out, including authentic Straw-Black-Straw waist lining.

HOW TO MAKE UP AN AUTHENTIC LMS TRAIN:



305312 BR Mark 1 Corridor Composite Coach. LMS Maroon Livery.



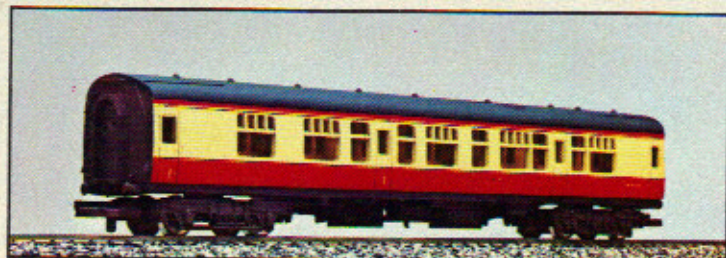
305332 BR Mark 1 Corridor Brake Coach. LMS Maroon Livery.



305323 Mark 1 Dining Car. LMS Maroon Livery.



305342 Standard Gangwayed Brake Van. LMS Maroon Livery.



305311 Mark 1 Corridor Composite Coach. Crimson and Cream Livery.



305331 BR Mark 1 Corridor Brake Coach. Crimson and Cream Livery.



305325 BR Mark 1 Restaurant Car.



305344 BR Standard Gangwayed Brake Van. Crimson and Cream Livery.

EARLY BRITISH RAIL

On January 1st 1948 nationalisation came, and British Railways was born.

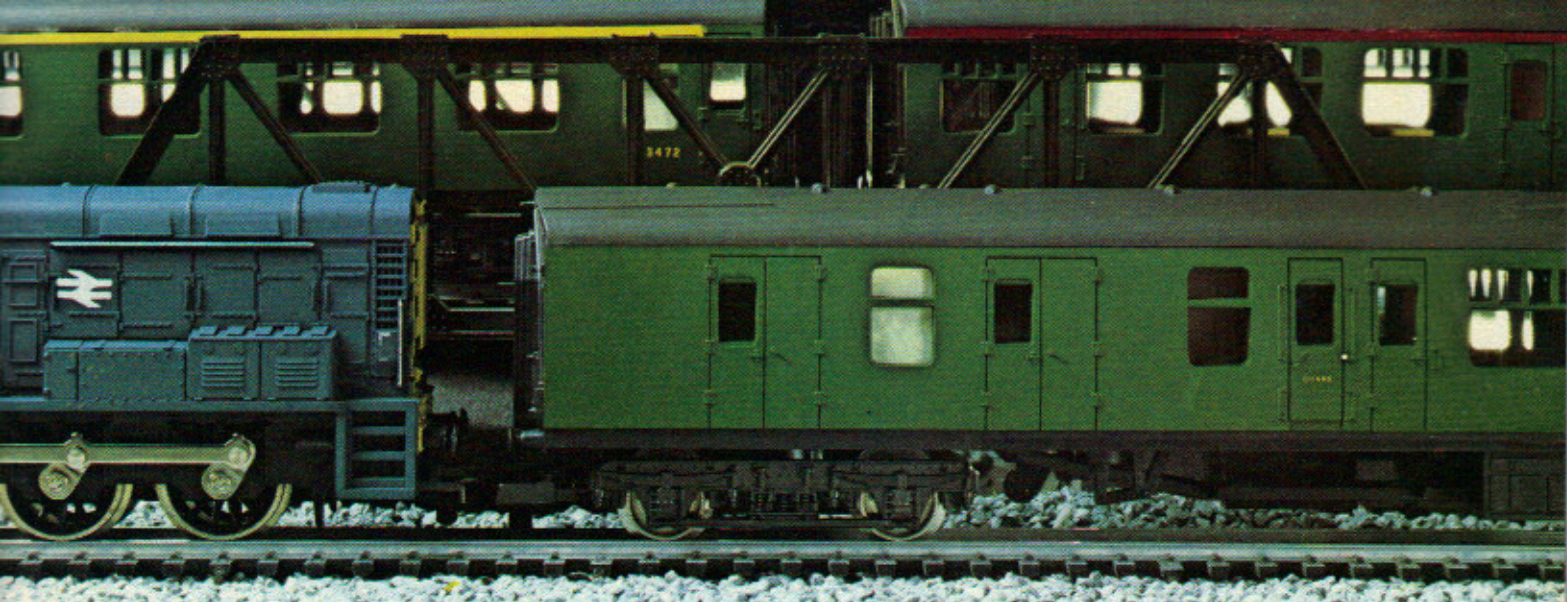
The new structure was divided into six regions. The Southern and Western regions being the old Southern Railway and the Great Western Railways; the London Midland Region corresponded to the LMS in England; the Eastern and North Eastern Regions ran on the former LNER lines in England; and the Scottish Region took over the LMS and LNER lines in Scotland.

The BR Mark I passenger coaches appeared in 1951. Livery was in Crimson and Cream - popularly known as 'Blood and Custard'. Later, the prototype XP64 became the basis for the Mark II designs with modern seating and improved bogies to provide more comfortable riding.

Possibly the most attractive of all passenger stock liveries, these B.R. Mk 1 Coaches are prime examples of Lima's ability to reproduce the old paint colours and intricate lining details.

HOW TO MAKE UP AN AUTHENTIC EARLY BR TRAIN:





SOUTHERN REGION



The Southern Region was the most enterprising of the new companies. It was formed by joining the London and South Western, London, Brighton and South Coast, and South Eastern and Chatham railways.

At nationalisation the Southern boasted a modern fleet of carriages from the design of Surrey Warner.

Lima's Collection of 1950's Mk I Coaches are ideal for the modern image modeller.



HOW TO MAKE UP AN AUTHENTIC SOUTHERN REGION TRAIN:



305314 SR Mark 1 Corridor Composite Coach.



305334 SR Mark 1 Corridor Brake Coach.



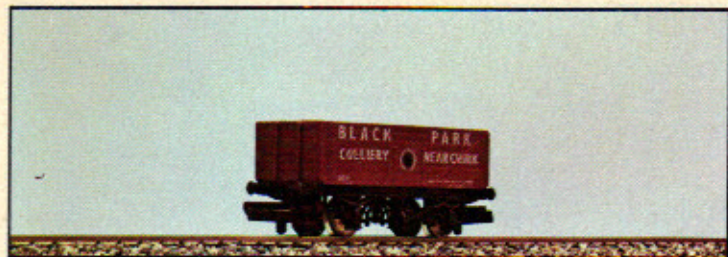
305324 SR Mark 1 Restaurant Car.



305348 SR Standard Gangwayed Brake Van.

OO SCALE FREIGHT STOCK





305612 'Black Park Colliery' 7 plank wagon.

NEW



305632 'P.W. Spencer' 7 plank wagon.



305614 'Barrow Barnsley' 7 plank wagon.

NEW



305633 'Pinxton Collieries' 7 plank wagon.



305631 'J.K. Harrison' 7 plank wagon.



305634 'Buxton Gas Dept' 7 plank wagon.



305601 'Typhoo Tea' 20 ton box van.



305608 'Castrol GTX' 20 ton box van.

NEW



305625 GWR 2 axle horse box.



305628 2 Axle Horse Box SR Livery.



305626 2 Axle Horse Box LMS Livery.



302805 'Blue Circle' twin tank cement wagon.



305638 50 ton 'Tilcon' stone hopper wagon.

NEW



305635 50 Ton stone hopper wagon 'Yeoman'.

NEW



305636 50 Ton stone hopper wagon 'A.R.C. Roadstone'.

NEW



305637 50 Ton stone hopper wagon B.R.

NEW



302715 'BP' tank wagon.



302717 'Mobil P. Gas' tank wagon.





302908 'Esso B.R.T.' bogie tank wagon.



302913 'Amoco' bogie tank wagon.



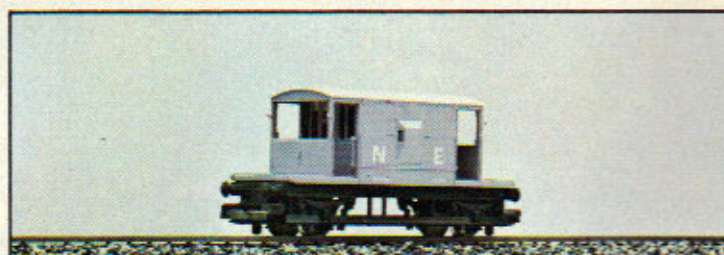
302911 'Milk' bogie tank wagon.



302909 'Total Oil' bogie tank wagon.



305620 BR 20 ton brake van.



305621 LNER 20 ton brake van.



303173 'National Coal Board' mineral wagon.



303175 BR Long Wheelbase mineral wagon.



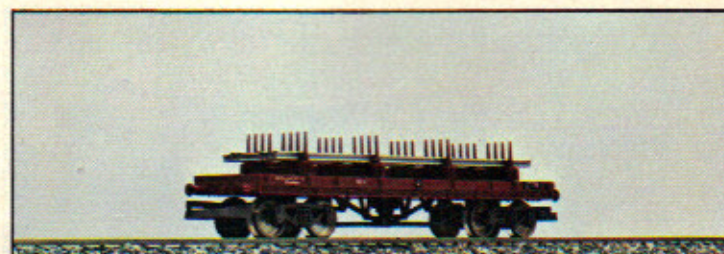
302870 40 container wagon 'A.C.L.'.



302871 'Freightliners Ltd.' container wagon.



303545 'Heinz' closed wagon.



305630 Bogie bolster wagon Bobel "B" steel load.

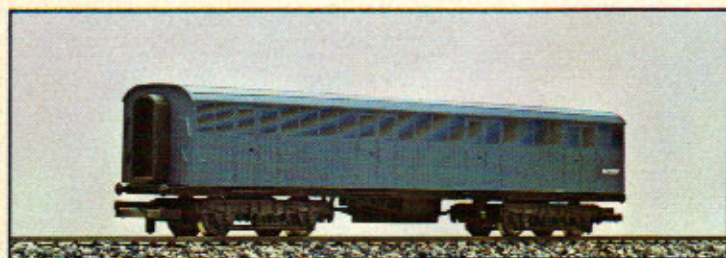
NEW



305351 GWR Bogie parcel van 'Siphon G'.



305352 GWR Bogie parcel van 'Siphon G' Palethorpes Sausages.



305353 GWR Bogie Parcel Van 'Siphon G' BR Livery.



305354 GWR Bogie parcel van 'Siphon G' 'Enparts.'



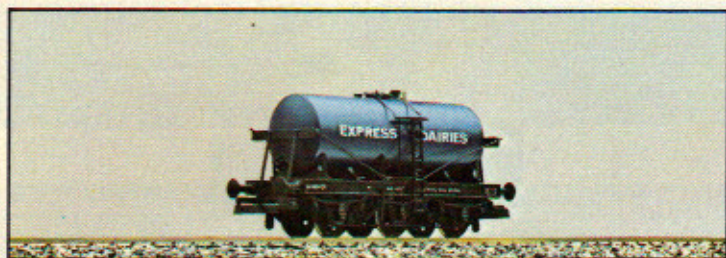
305641 GWR 3 axle Milk tank wagon 'St. Ivel'.

NEW



305642 GWR 3 axle Milk tank wagon 'I.M.S.'.

NEW



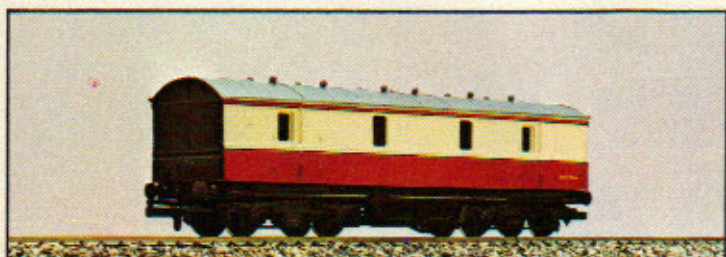
305643 GWR 3 axle Milk tank wagon 'Express Dairies'.

NEW



305358 LMS GUV bogie parcels van, maroon.

NEW



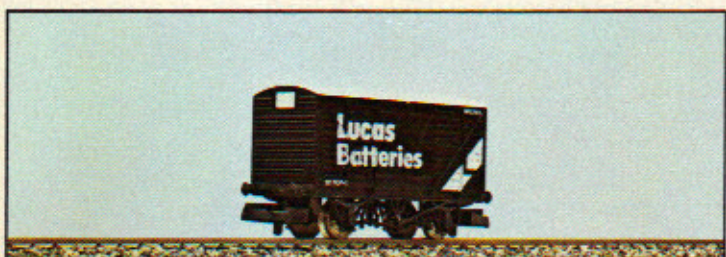
305359 LMS GUV bogie parcels van. BR Crimson/Cream.

NEW



305360 LMS GUV bogie parcels van. BR Blue.

NEW



305603 20 ton box van. 'Lucas Batteries'.

NEW



305607 20 ton box van. 'Birds Custard Powder'.

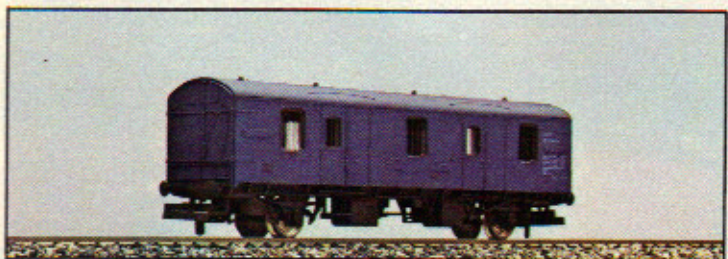
NEW



302822 'Watneys' triple cask beer wagon.



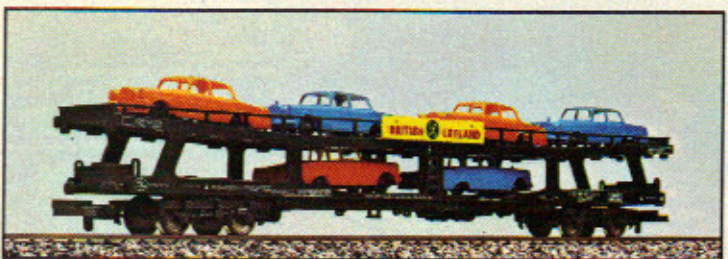
305355 CCT parcels wagon 'Tartan Arrow'.



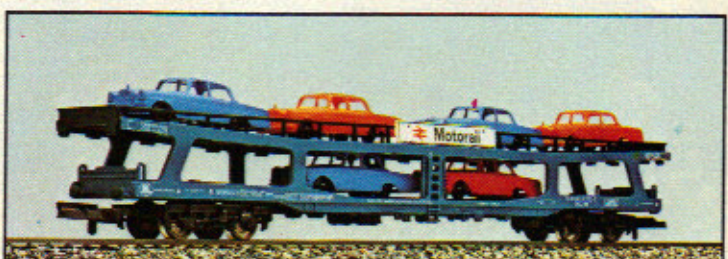
305356 CCT parcels wagon 'Rail Blue Livery'.



305357 CCT parcels wagon 'Early BR Livery'.



309057 'British Leyland' car carrier.



309053 'Motorail' car carrier.



309068 Multiple wagon with 'GEC' transformer load.



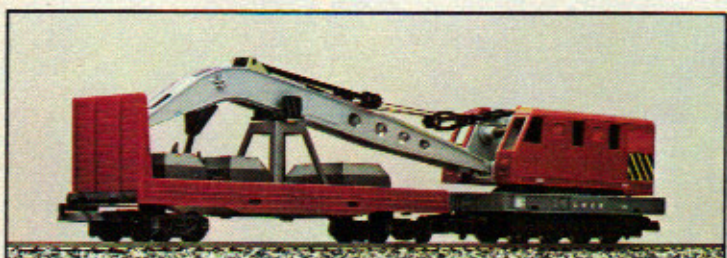
309067 'British Steel Corporation' foundry wagon.



303204 BR Rail freight van with 4 doors.



302892 'NCB' coal-hopper wagon.



309059 35 ton breakdown crane and flat car. LNER Livery.



OO SCALE ACCESSORIES

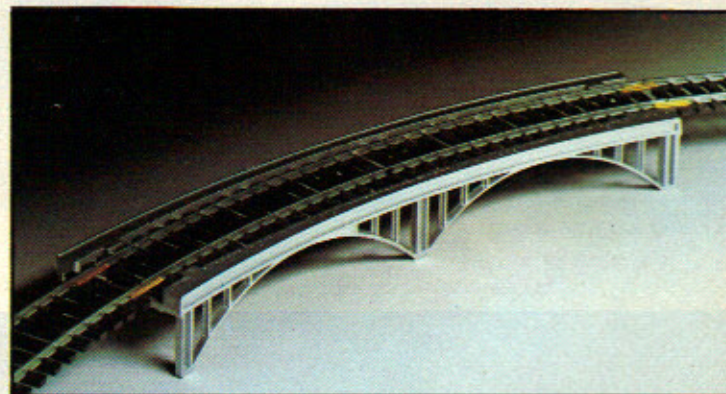


BRIDGES

One of the biggest problems facing railway modellers is the lack of space. One answer is build up another layout some 8-10 cm above the first — but it is important to remember that a locomotive can only climb certain gradients. If the incline is too steep the driving wheels will spin and the locomotive may stop, unable to reach the top.

As a general rule, if the gradient is of 3% the ramp must not exceed 3 cm of track per metre. Thus in this case, for the ramp to give a height of 9 cm the gradient must be spread along 3 metres of track.

Where short trains are used a steeper incline is possible — up to 4.5% — giving a gradient spread along 2 metres of track where a height of 9 cm is desired. Lima supply three basic sets of ramps.



600055 Banked Bridge in a Curved Stretch.

BANKED BRIDGE IN A CURVED STRETCH

If you have a small circle of track with 720 mm diameter, you can use bridge 600055 and the respective trestles to build up a viaduct with a banked stretch.

BANKED BRIDGE IN A STRAIGHT STRETCH

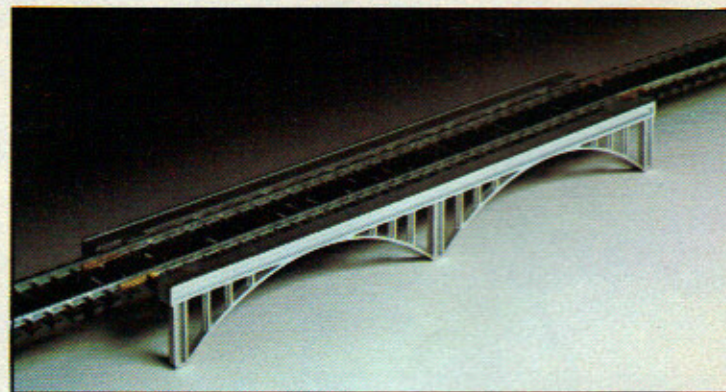
You can transform a small circle into an "oval" by adding a straight piece of viaduct and two straight pieces of track (item 403020).

BRIDGE FOR A FIGURE 8 BANKED CIRCUIT

Using a 600911 you can construct a figure "8" circuit passing over the track by means of a straight piece of viaduct (item 403020) and nine trestles of increasing height for each one of the two ramps.

CENTRAL POINT OF THE FIGURE "8"

The height measurements refer to the point where one track passes over the other. A gap of 65 mm is necessary to allow trains to run on the lower track.



600057 Banked Bridge in a Straight Stretch.

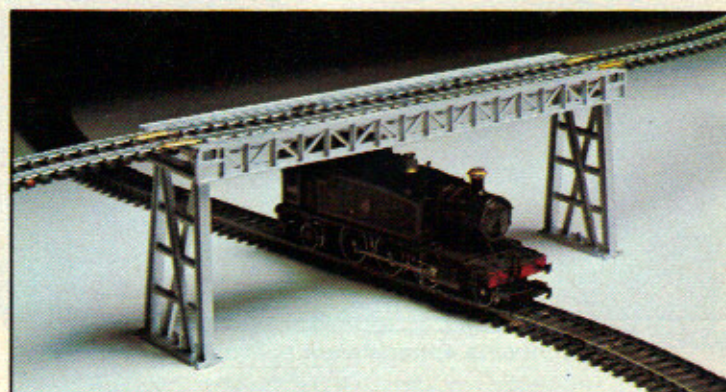
GRADUAL INCLINE

Use item 600911. Every Lima locomotive can climb such an incline, even when loaded with a normal complement of wagons or coaches.

The bridge in item 600055 gives a track height of 2.8 cm maximum. The circle can be enlarged by adding two or more sections of straight track (item 403020).

The bridges and piers of item 600911 give a track height of 8.6 cm and allows a train to pass under the top tracks. There are nine piers for each ramp, limiting the gradient to 4%.

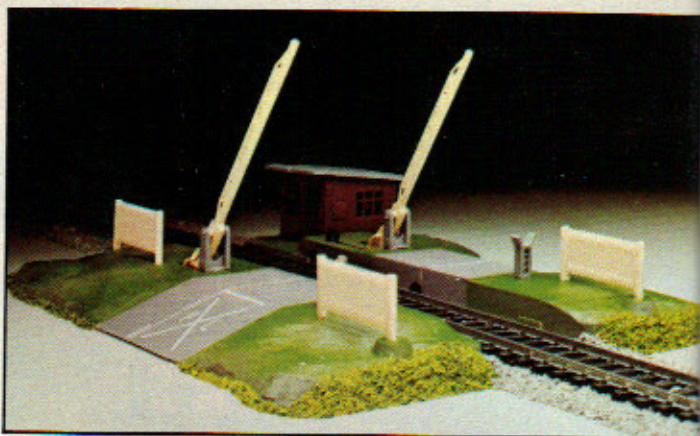
Please note that if you are using an electric locomotive with a pantograph, the pantograph must be lowered to avoid collision with bridge.



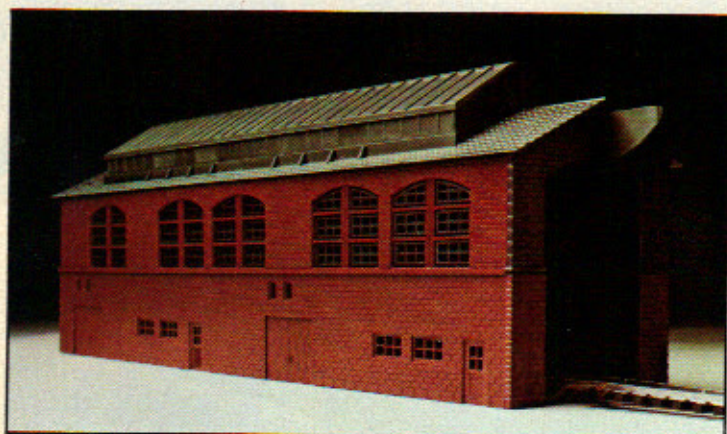
600911 Bridge for a Fig. 8 Banked Circuit.



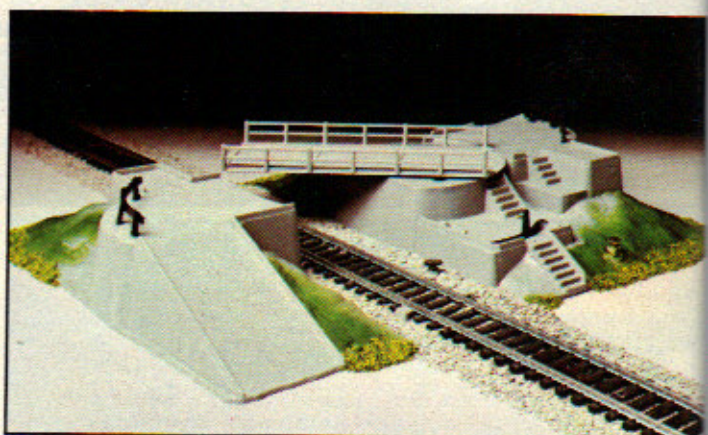
602080 De-Luxe Tunnel featuring Special Scenic Finish.



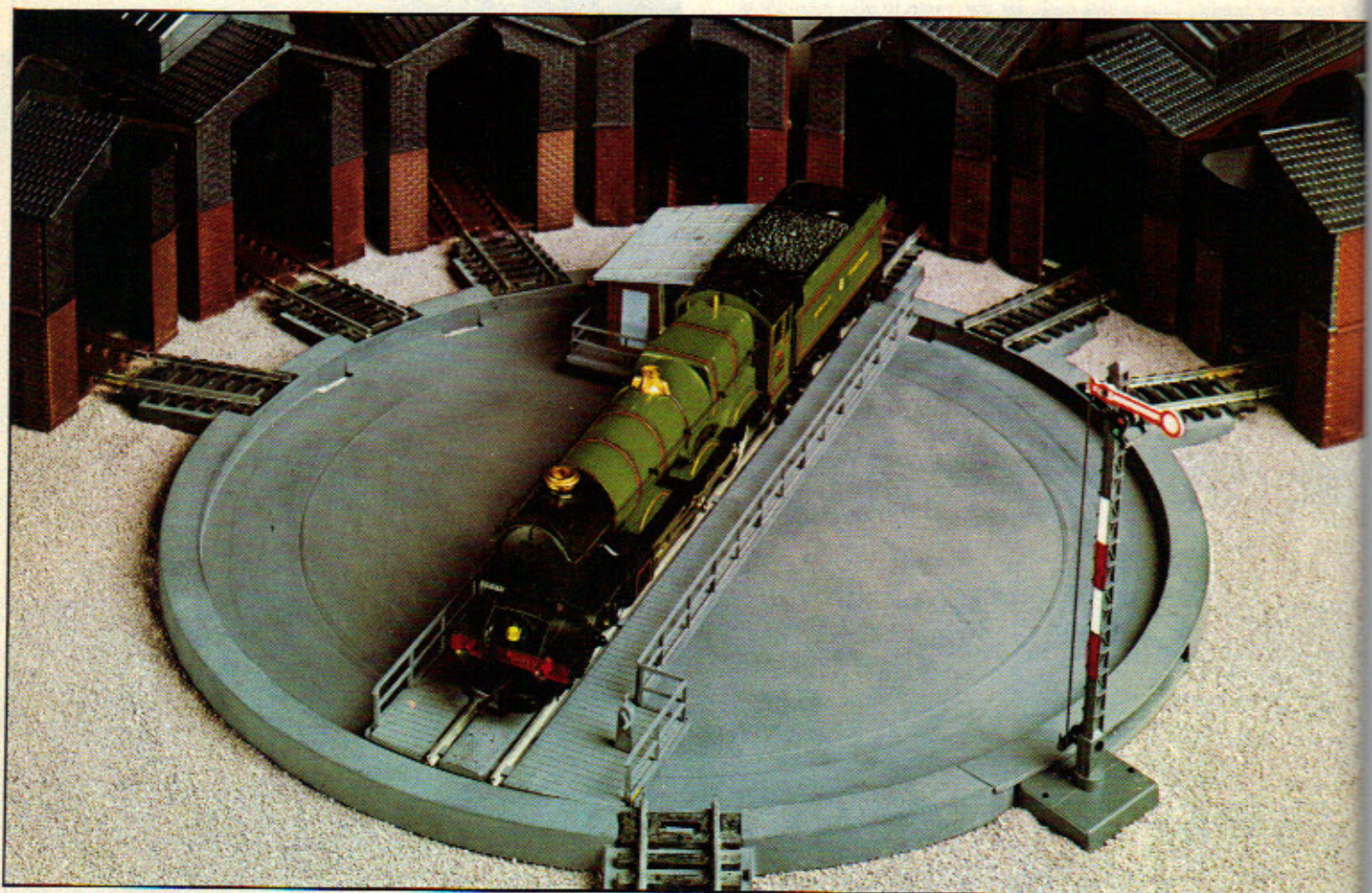
600021 Automatic Level Crossing.



600955 Engine Shed.



600052 Mechanical Swing Bridge with Auto Train Stop.



600954 Turntable.



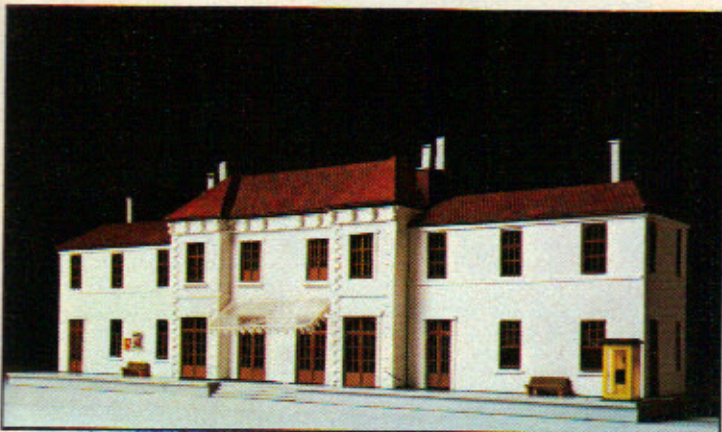
600960 Freightliner Terminal, allows transfer of container road vehicles to and from special rail transporter.



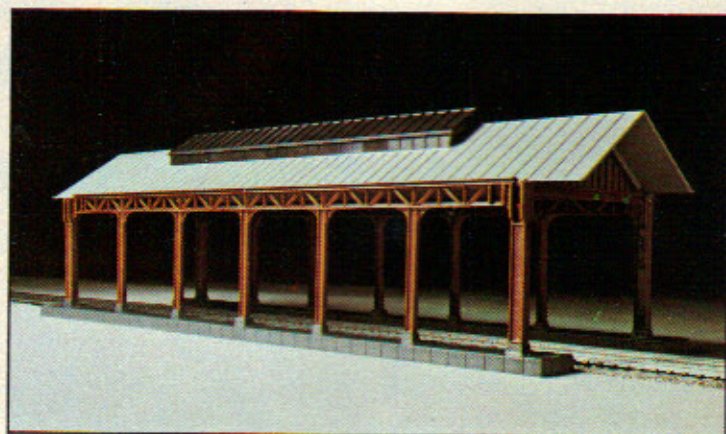
600830 (4 assorted). 600831 (4 assorted). 600832 (4 assorted). Scale containers for track side or transportation.



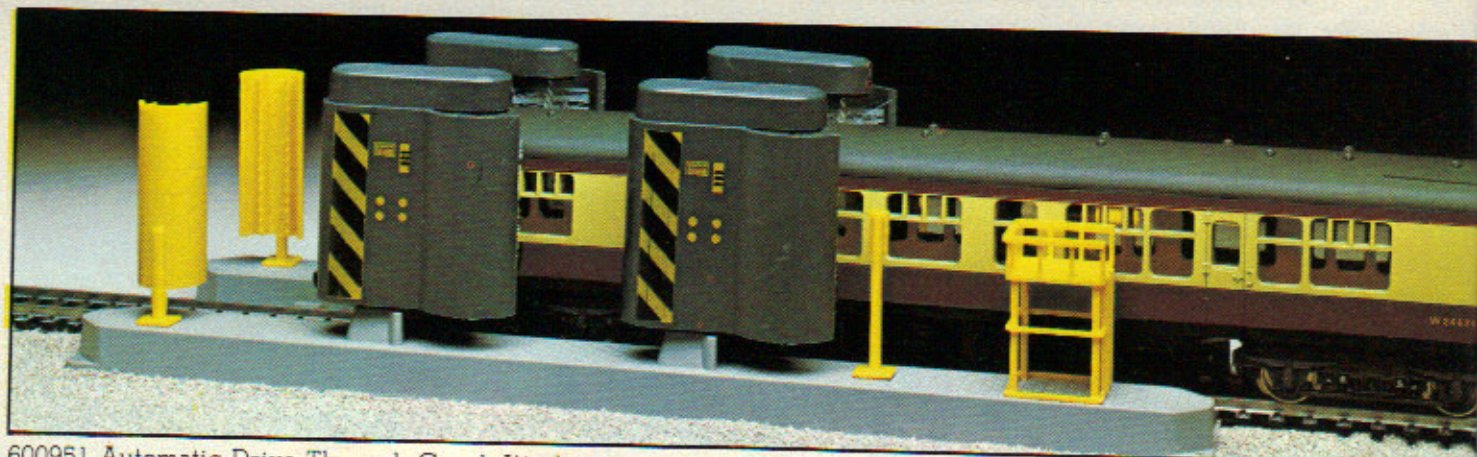
600990 Container unloading crane lorry.



600033 Main Terminal Station Building. For use with Canopy 600031 if required.



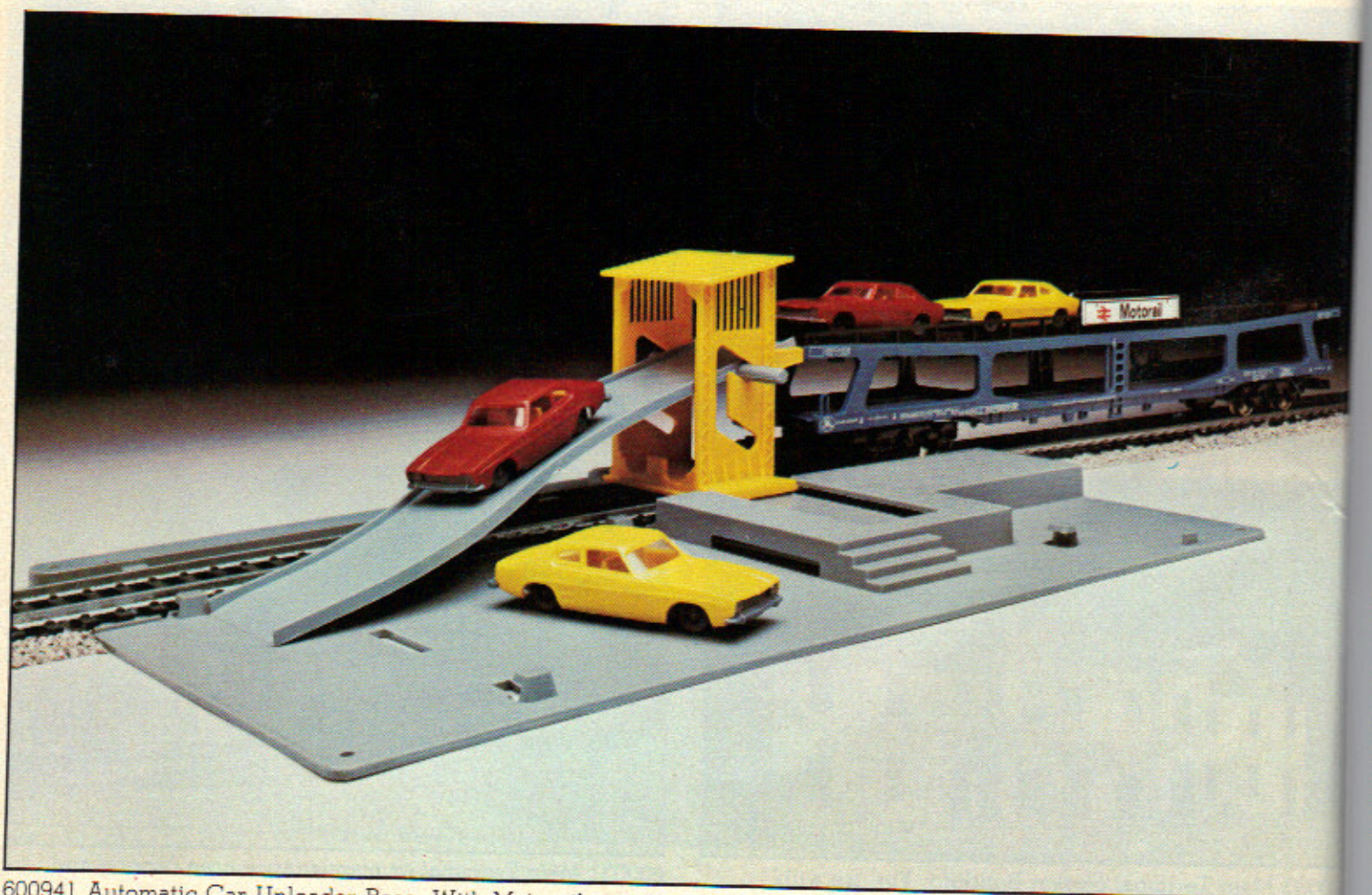
600031 Main Terminal or maintenance area canopy and Platforms.



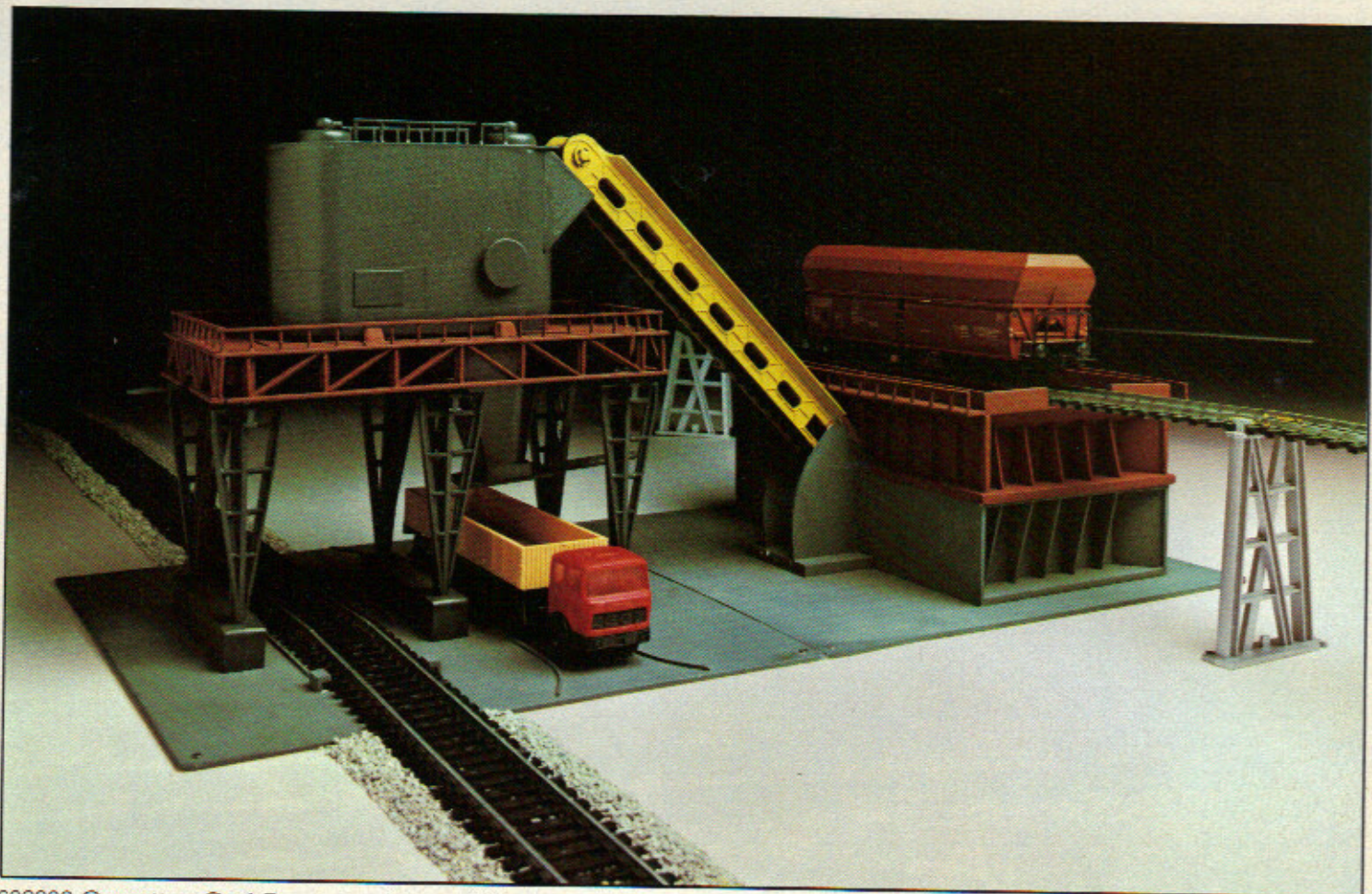
600951 Automatic Drive-Through Coach Wash.



600963 Container Terminal and Unloading Siding. With special rail to siding lorry transporter, terminus and one road vehicle.



600941 Automatic Car Unloader Base. With Motorail car carrier and four cars.



602892 Operating Coal Depot transfers coal between NCB Hopper Wagon, storage sites and two road vehicles.

NEW

600801 Atlantic Container Lorry.

600807 Dunlop Container Lorry.

600805 Seatrain Container Lorry.

600802 Boat Transporter.

600806 Circus Animal Transporter.



600822 Ford Capri. (Two car pack).

600823 Fiat 131 (Two car pack).



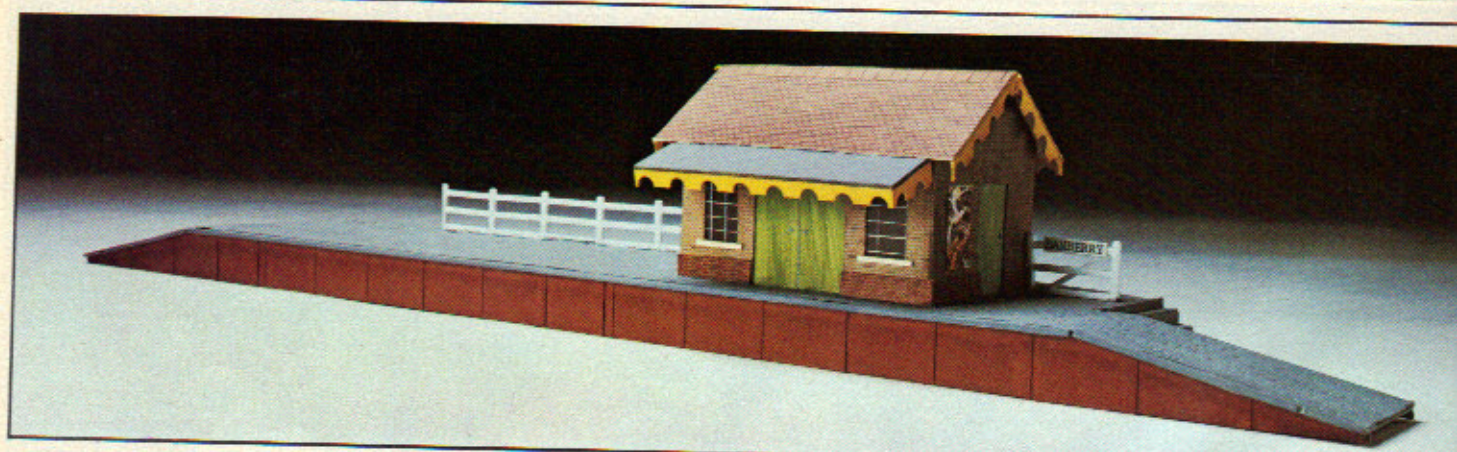
600820 Mercedes. (Two car pack).



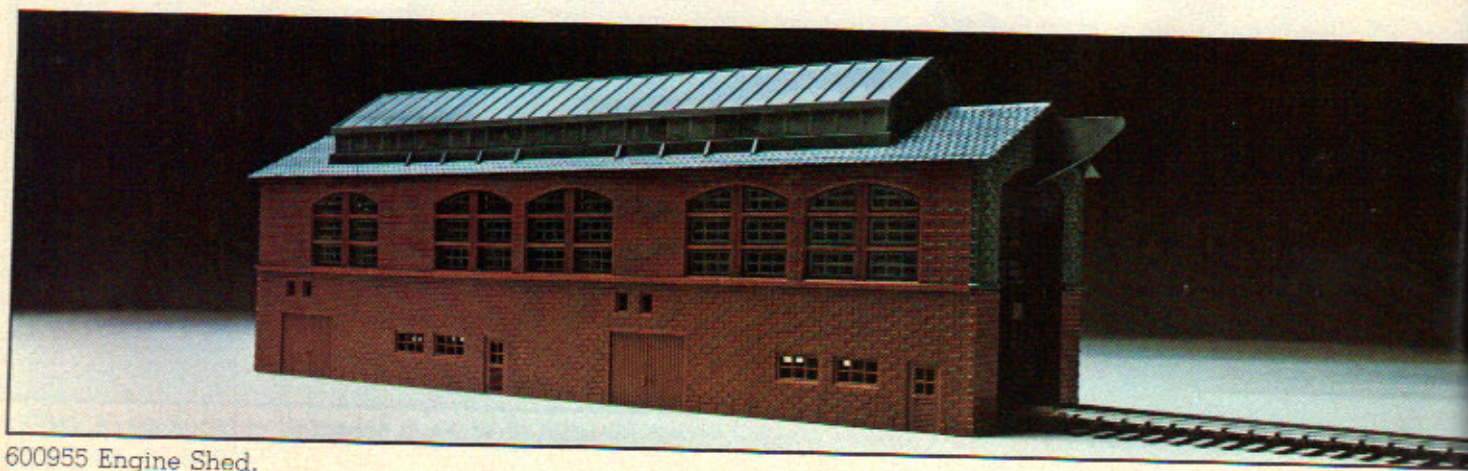
600804 Shell Petrol Tanker.

600803 Builders Merchant Lorry.

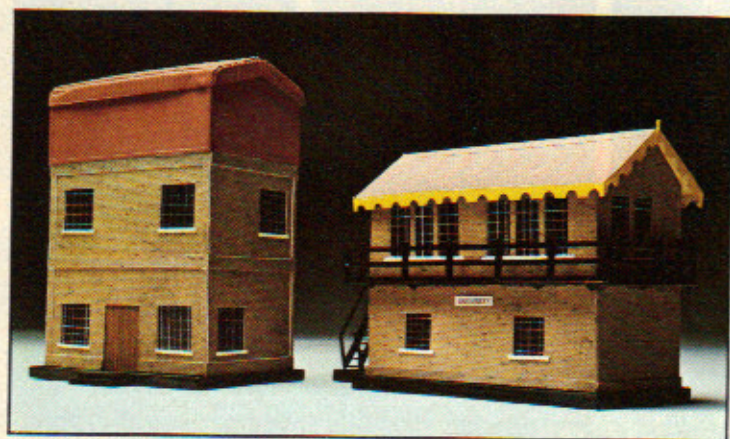
BUILDINGS



600034 Station.



600955 Engine Shed.



600037 Water tower. **NEW** 600032 Signal Box.

NEW



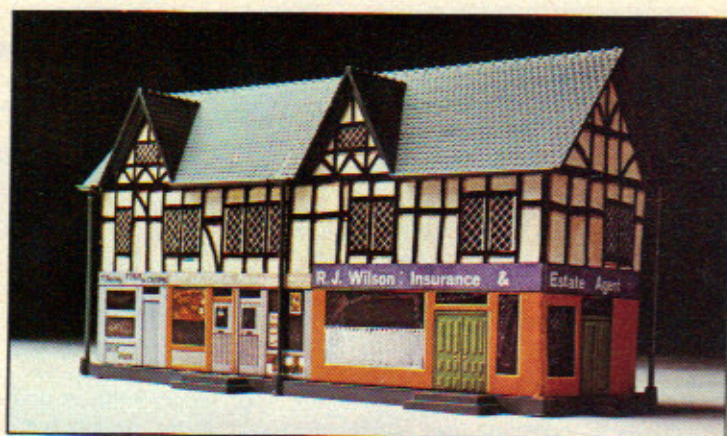
600068 Barclay's Bank provincial office.

600067 Detached Tudor style house.



600069 "The King's Head" public house.

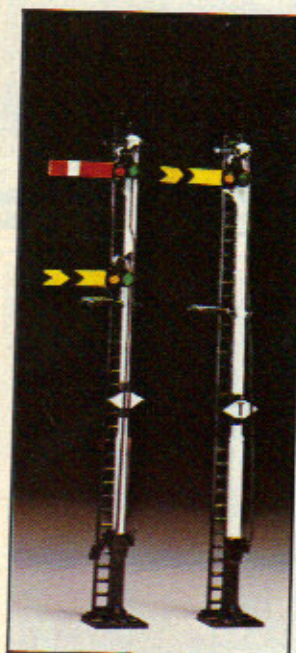
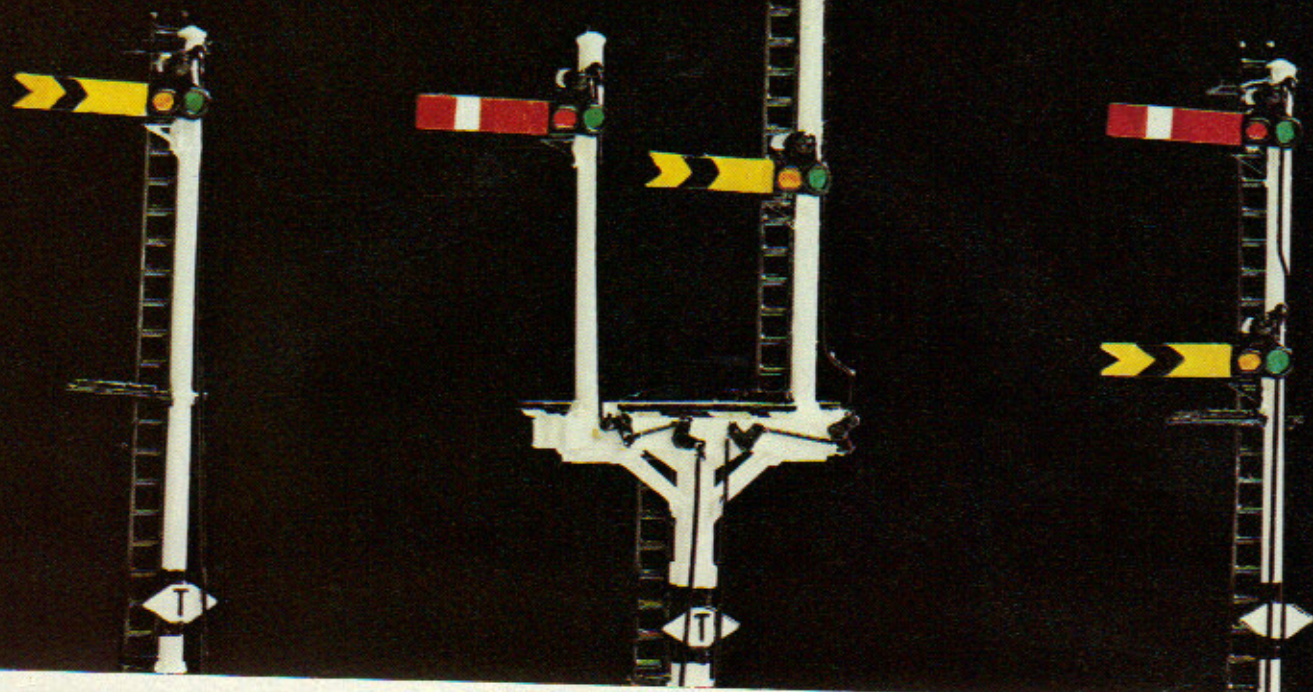
NEW



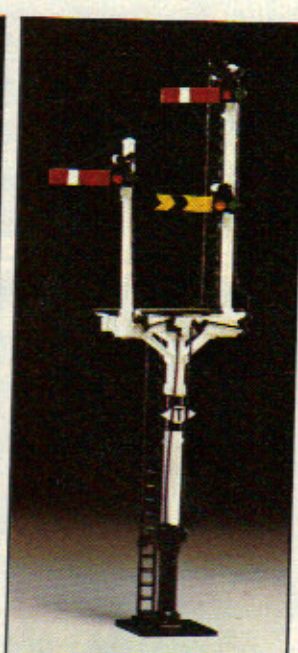
600070 Village Stores.

NEW

SIGNALS



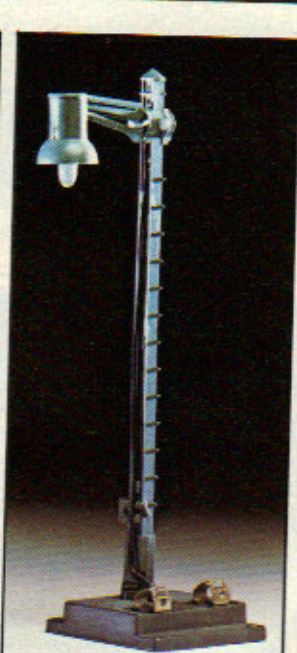
600035 LMS/BR Upper Quadrant Signal, Home + Home/Distant. **NEW**



600036 LMS/BR Upper Quadrant Junction + Signal. **NEW**



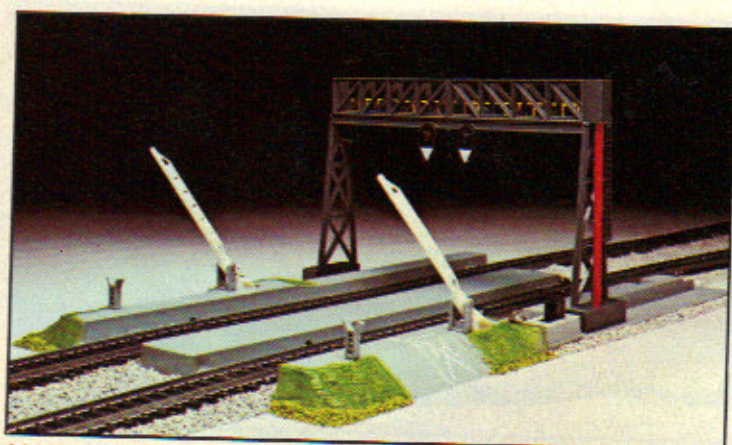
600029 Signal with two lights.



600026 Yard lamp with bulb and wiring.



600027 Double yard lamp with bulb and wiring.



600025 Overhead Signal Gantry with operating Colour Signals for stopping train to allow Level Crossing Action.



600046 Station with signal. Automatically stops the train at the station when signal is switched to red.

POWER CONTROLLERS



For indoor use only. Protected by automatic cut-outs. Conforms to British Standard BS 4435.

The power controller is basically a piece of equipment which takes current from the mains and converts it to the appropriate voltage, A.C. or D.C., to feed the various locomotives and accessories of a model railway system.

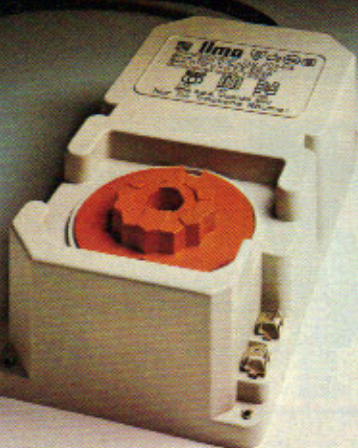
Lima manufacture two different controllers to cover the needs of most applications. Each one protected from any possible short-circuit or overload by means of fuses or automatic cut-outs, giving complete safety of operation. And conforms to British Standard 4435.

502060 Electronic Train Controller

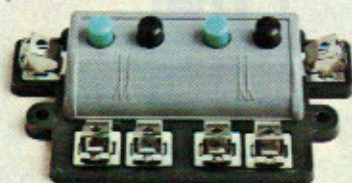
Lima's new Electronic Train Controller has the very latest in electronic circuitry for train control, and uncontrolled AC output for trackside accessories.

Power Unit Class II. Type 502060. Input primary 220/240V 50/60 Hz AC only. Output I, 0-12 V. DC = 7.5 VA. Output II 14 V AC 7 VA.

NEW



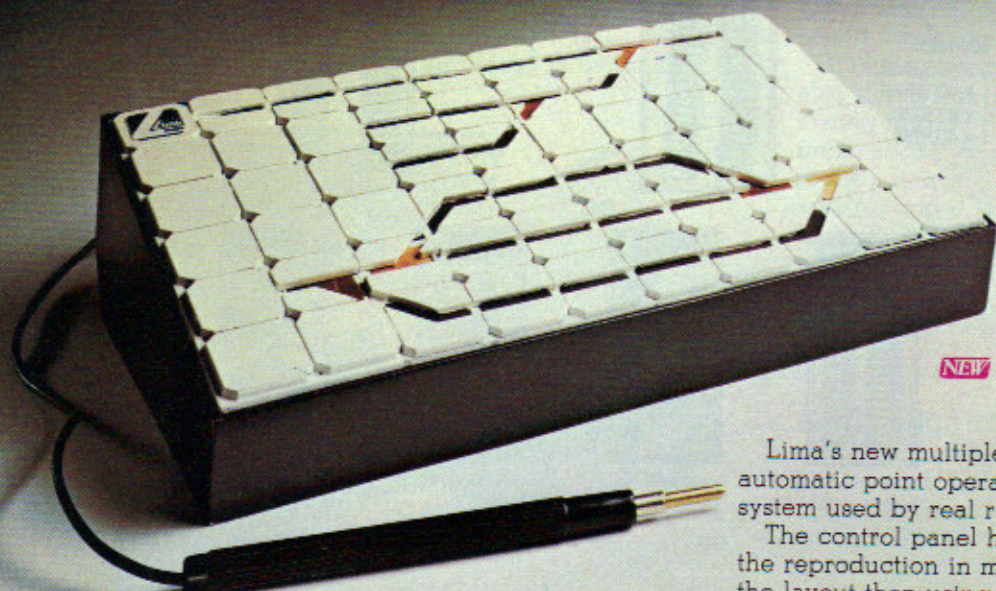
502054 Transformer. Power 3.6VA. Input 220V AC. Output 0-12V DC. Designed to operate one train or DC accessories.



503065 Control Box. Suitable for operating up to 2 accessories (electric points, etc.).



503066 Junction box.



600910 Automatic Point Control Panel.

600909 Electronic integrated circuit automatic point control panel with LED light system.

600906 Individual point control unit.

600907 Individual point control unit with LED light.

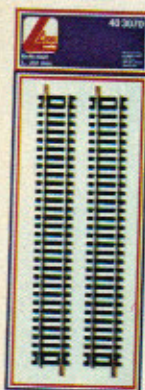
600908 Panel track sections.

NEW

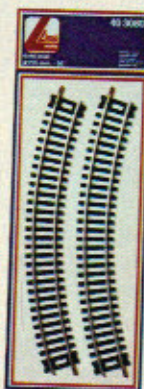
Lima's new multiple point control panel allows fast automatic point operation and is designed from the actual system used by real railways.

The control panel has changeable sections which allow the reproduction in miniature of the main track sections of the layout then using a special electronic pointer the train can be guided along the chosen section of tracks.

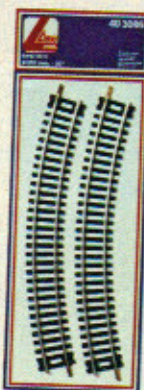
STEEL TRACK



403070
6 pieces straight track (222 mm) 403020.



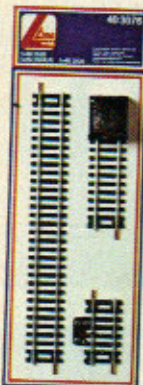
403080
6 pieces curved track (diameter 720 mm) 403030, 36°.



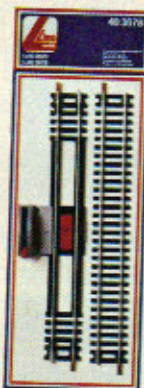
403086
6 pieces curved track (diameter) 862 mm. 403011 30°



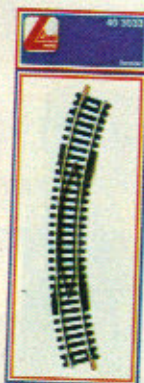
403075
1 curved track with power clip 403030C.
1 straight tracks with power clip 403024.
1. 55,5 mm.



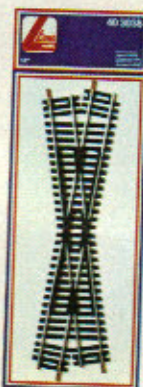
403076
1 straight track 403020.
1 straight track with buffer stop 403025.
1 straight isolating track 403024R.



403078
1 straight track (222 mm) 403020.
1 hand-operated uncoupler 403028.



403033
Rerailer.



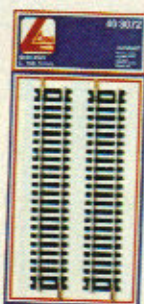
403038
Crossing 18° right hand.
403039
Crossing 18° left hand.



403041
Crossing 36°.



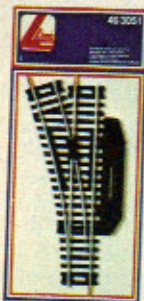
403087
6 x 403012 curved Ø 862 mm 22°, 1/2.



403072
6 x 403023 straight standard l. 166,5 mm.



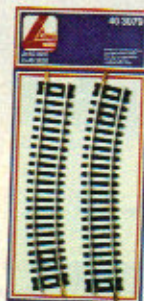
403050
Right hand point, hand operated.
403050E
Right hand point, electrically operated.



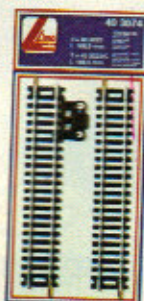
403051
Left hand point, hand operated.
403051E
Left hand point, electrically operated.



403048
1 x 403050,
1 x 403051,
1 x 403036,
1 x 403035.
403048E
1 x 403050E,
1 x 403051E,
1 x 403036,
1 x 403035.



403079
2 x 403035 (right compensating track).
2 x 403036 (left compensating track).



403074
1 x 403023C
3 x 403023



403077
4 pieces straight track l. 55,5 mm. 403022.
2 pieces curved track Ø 720 mm. 403032
insulated fishplates 600015.



403026
Variable length track.



403061
5 pieces curved track 403031 Ø 720 mm. 18°



403071
5 pieces straight track (111 mm) 403021.



3 x 600875
Motor springs and brushes



3 x 600877
Insulating fishplates



3 x 600870
4 axles



3 x 600876
24 metal rail joiners



403017 double length curve 45° 2nd radius.



403011 curved track (Dia. 862 mm). 30°.



403012 2nd radius, curved track (Dia. 862 mm). 22.5° 1/2.



403030 curved track (Dia. 720 mm). 36°.



403030C curved track with power clip. 36°.



403033 reailer.



403031 curved track (Dia. 720 mm). 18°.



403032 curved track (dia. 720 mm). 9°.



403027 double length straight 333 mm.



403020 straight track 222 mm.



403023 standard straight track 166,5 mm.



403023C standard straight track with power clip 166,5 mm.



403021 straight track 111 mm.



403022 straight track 55,5 mm.



600002 Railer.



403024 straight with power clip 55,5 mm.



403024R straight isolating track 55,5 mm.



403025 straight with buffer stop 111 mm.



403026 extendable track 111 to 166,5 mm.



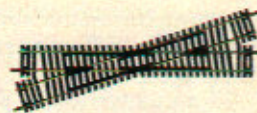
403028 Wagon uncoupler 222 mm.



403035 compensating left track.



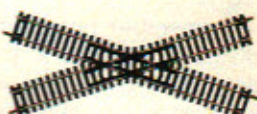
403036 compensating right track.



403038 right diamond crossing (18°).



403039 left diamond crossing (18°).



403041 diamond crossing (36°).



403050 right-hand point (manual).

403050E right-hand point (electric).



403051 left-hand point (manual).

403051E left-hand point (electric).



403042 flexible track 90 cm.

NICKEL SILVER TRACK

THE NEW SUPER TRACK

New Super Track - in Nickel Silver - has a number of distinct advantages over any other type of track - both in technical specification and in performance.

To begin with, Nickel Silver Track achieves a degree of precision and uniformity of modelling that is just not found in other tracks. (The only reason this is possible is because in addition to nickel, a special metal alloy is also used in making the track.) It also has a very high degree of elasticity which gives it a greater resistance to stress and strain than other tracks.

New Nickel Silver Track can be purchased individually,



or in multiples in gold presentation boxes. The complete range of track is shown on the next page.

A BETTER CONDUCTOR

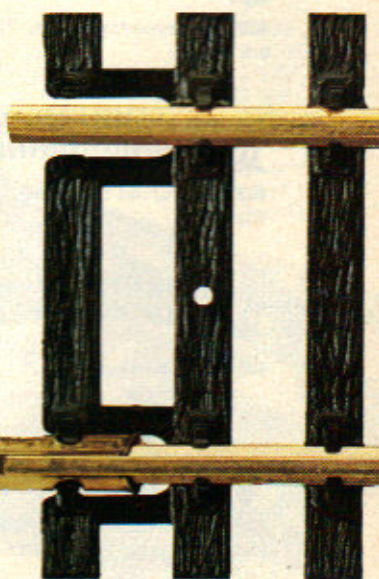
Because nickel has a high degree of electrical conductivity, it ensures even distribution of power all round the layout.

It terms of appearance it also stands out. Its long lasting bright finish adds realism to any layout - and it can be easily wiped clean with a rag and spirit.

RESISTANCE TO CORROSION

It's completely rust-proof. What's more, since its appearance and performance are impervious to damage - either by atmospheric factors or grease - you can depend on Nickel Silver Track to have a very long life.

Lima Nickel Silver Track is also available in a flexible version with a standard length of 900 mm. This type of



track, as the name suggests, can be "bent" and adapted to curves of a different radius to those available in regular track section.

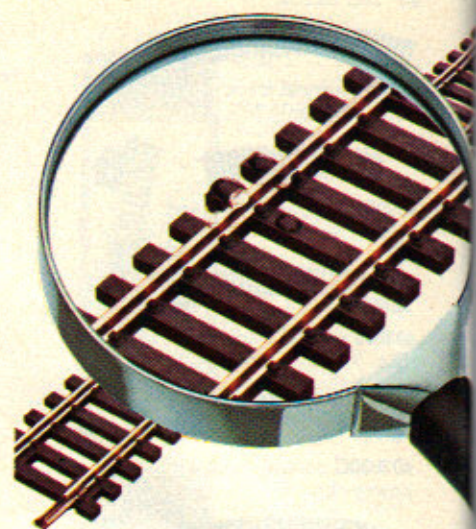
This characteristic is especially useful for the more difficult circuits, with many curves, and provides a particularly realistic effect, as well as eliminating difficult joints.

Flexible track can be adapted to any desired length simply by cutting it with an ordinary small metal saw, being careful, of course, to trim off sharp corners or pieces of waste material.

And thanks to its flexibility, this type of track can be simply shaped by hand with no need to use any special tools.

Remember however, to bear in mind the correct distance between track centres when using two or more parallel tracks. This will avoid your trains touching one another when passing.

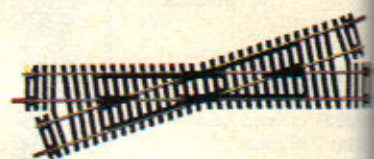
At a time when more and more hobbyists are demanding perfection, it's good to know that here at last is a track that comes closest to it - new Super Track!



403917 double length curve 45°
2nd radius.



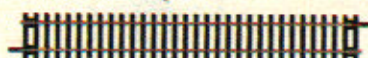
403927 double length straight
333 mm.



403938 right diamond crossing
(18°).



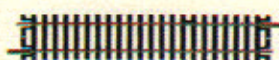
403911 curved track (Dia. 862
mm). 30°.



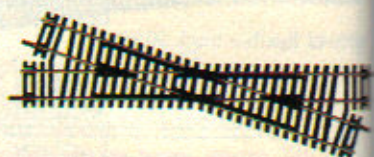
403920 straight track 222 mm.



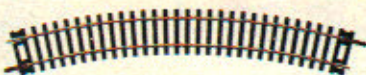
403912 2nd radius, curved track
(Dia. 862 mm). 22.5°, 1/2.



403923 standard straight track
166,5 mm.



403939 left diamond crossing (18°).



403930 curved track (Dia. 720
mm). 36°.



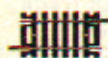
403923C standard straight track
with power clip 166,5 mm.



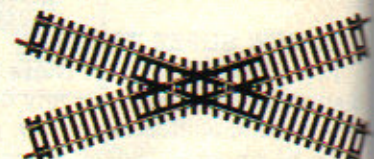
403930C curved track with power
clip. 36°.



403921 straight
track 111 mm.



403922 straight
track 55,5 mm.



403941 diamond crossing (36°).



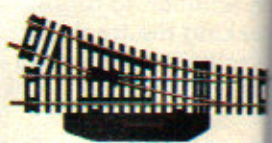
403933 rerailer.



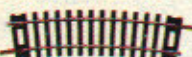
403924 straight with
power clip 55,5 mm.



403924R straight
isolating track 55,5 mm.



403950 right-hand point (manual).



403931 curved track
(Dia. 720 mm). 18°.



403932 curved track
(dia. 720 mm). 9°.



403925 straight with buffer stop
111 mm.

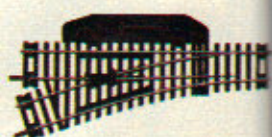
403950E right-hand point (electric).



403935 compensating left track.



403926 extendable track 111 to
166,5 mm.



403951 left-hand point (manual).

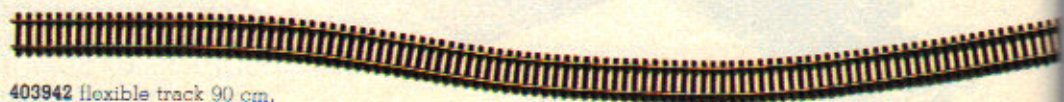


403936 compensating right track.



403928 Wagon uncoupler 222 mm.

403951E left-hand point (electric).



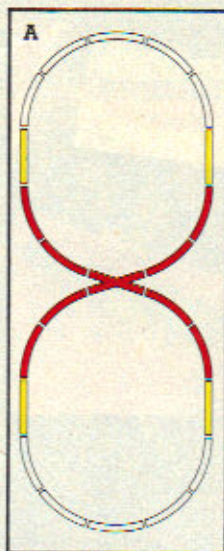
403942 flexible track 90 cm.

TRACK EXTENSION PACKS

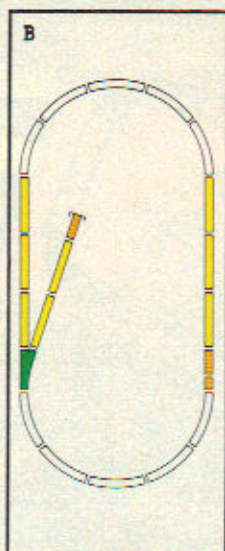
If you have purchased a simple Lima set, perhaps containing only a circle or an oval of track, it's a good idea to consider at the same time the range of Lima track extension packs. In this way you are able to instantly turn your simple layout into an exciting system with designs suitable for passenger terminal goods yards, signal gantries and much more. These packs contain all the necessary pieces of track to add to your original train set to build it up into a much more complete system.

Additionally, our new scenic layouts, shown below, allow you to transform your existing train convoy or set into an exciting system.

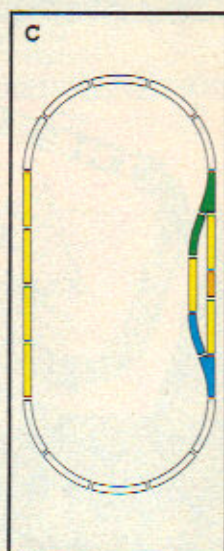
This layout is built by adding the track packs A+B+C to your existing circle.



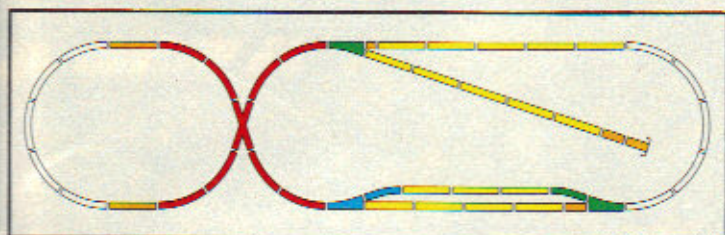
404051 8 pieces curved track (Dia. 720 mm) 403030, 4 pieces straight track (220 mm) 403020, 1 piece diamond crossing (36°) 403041.



404052 8 pieces straight track (2020 mm) 403020, 1 piece 1/2 straight track (110 mm) 403021, 2 pieces 1/4 straight track 403022, 1 piece 1/2 straight track with buffer stop 403025, 1 piece right-hand point (manual) 403050.



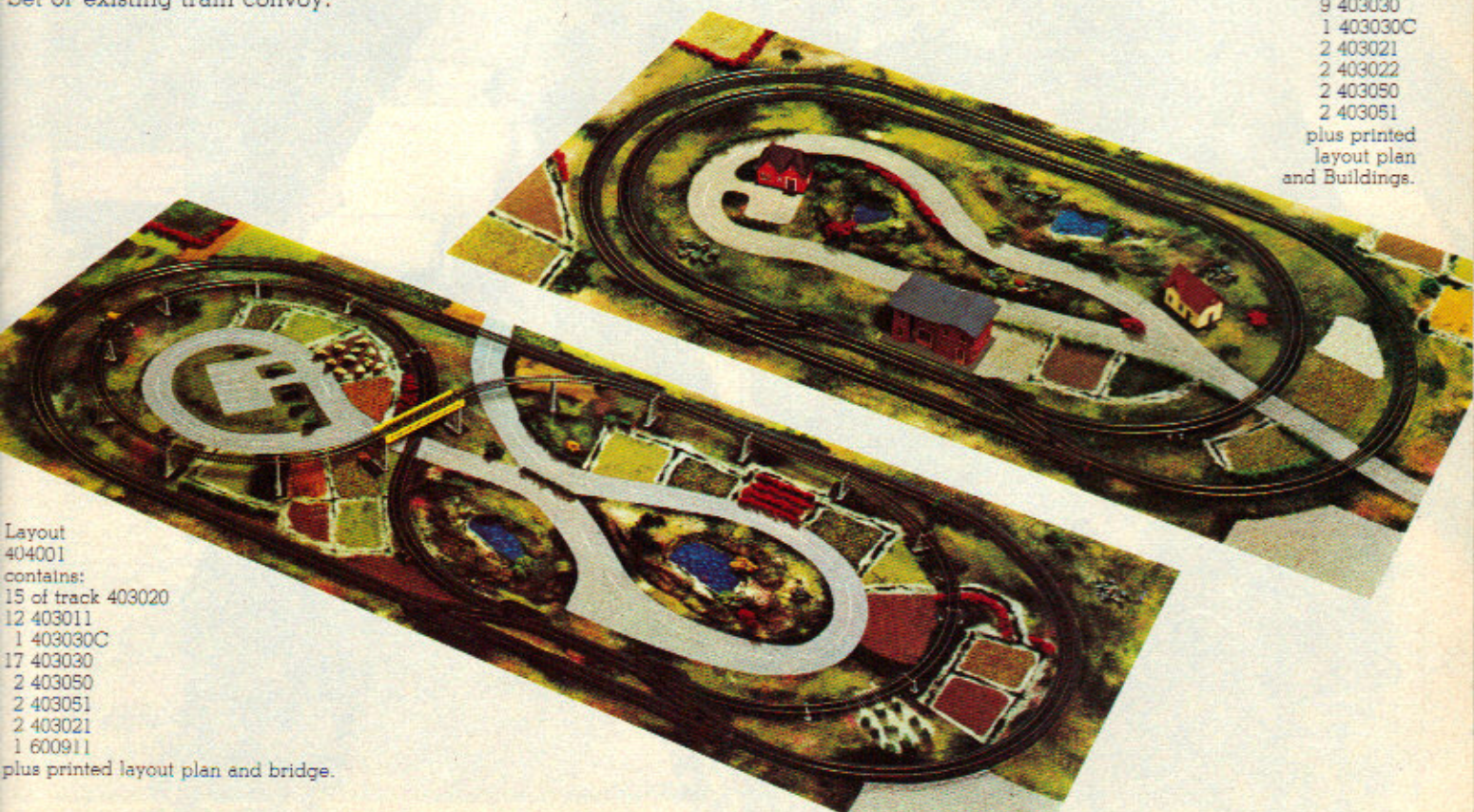
404057 7 pieces straight track (220 mm) 403020, 1 piece 1/2 straight track (110 mm) 403020, 1 piece right-hand point (manual) 403050, 1 piece left hand point.



COMPLETE LAYOUTS

Here is a complete scenic layout to add to your Lima Train Set or existing train convoy.

Layout 404002 contains:
 10 403020
 12 403011
 9 403030
 1 403030C
 2 403021
 2 403022
 2 403050
 2 403051
 plus printed layout plan and Buildings.



Layout 404001 contains:
 15 of track 403020
 12 403011
 1 403030C
 17 403030
 2 403050
 2 403051
 2 403021
 1 600911
 plus printed layout plan and bridge.