

*International Edition*

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for railroad enthusiasts  
in the scale 1:220  
and Prototype

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# Trainini

German Magazine for Z Gauge



Special Trains “German Wine Route”

Final Chapter of the Station Diorama  
Successful with the “Rubber Railway”

## Introduction

Dear Readers,

Time races past us, only Corona seems to remain. Autumn has reached us and with it our summer excursions come to an end. But then a new hobby season begins.

Just a few days ago I read that in these times of social distancing, hiking could accelerate its upward trend in outdoor activities enormously.

My family and I have not closed our minds to this either. Being out in the fresh air is good, fun and provides many new impressions. If you walk through nature with open eyes, you will not only discover rare animals or plants, but also return home full of ideas and zest for action.

There are so many beautiful things that need to be discovered, memorized in the brain and later reproduced on a small scale. Let nature enchant and inspire you, take a walk or a hike through the soon to be yellow and red shining tree landscapes!

In this way, many ideas have been developed, which can be found on our diorama "Himmelreich". However, only little has remained to be done on the surface since the last edition; instead, we are now getting down to business in the "Underworld."

We also took the opportunity to gain some initial experience with a CAD program and 3D printing - in other words, to design ourselves, not just to buy. With the help of this technology, we also created a bus, provided by the German Federal Railways, which plays an important role today. It was not only the best-selling model of its generation, but also played an important role in the German Federal Railways.

The special trains of the German Wine Route also receive recognition in original and miniature. Their history goes back many years, two generations of specially designed train cars were in service.

Both have now become available almost simultaneously on a scale of 1:220 and are writing a chapter of railroad history in miniature – perhaps soon on your model railroad layout? Let our title theme inspire you and take you on a journey.

This year's anniversary "100 years Deutsche Reichsbahn" ("100 years of German Empire Railroad") seemed to be almost forgotten in Z gauge. Before the autumn new products are announced, with them also, two conversions of DRG models, we visited the DB museum (German Railway museum) in Nuremberg, and looked at the special exhibition on the topic.

The rest of this issue consists of many news announcements, an aircraft presentation and suitable book recommendations for this month's main focus areas. And so, also on behalf of my colleagues, I wish you, once again, much pleasure in reading this edition!

Sin-Z-erely,

Holger Späing



**Holger Späing**  
Chefredakteur

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We thank Manfred Britz, Andreas Schmidt and the Eisenbahnstiftung for historical photos

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### Cover photo:

The class 50 was apparently one of the machines that was most often used for the special wine route trains, as in this case. Here 50 1581, which still bears its old road number in summer 1968, pulls the cars of the first set through the Pfalz (Palatinate).

## The special trains “German Wine Route” Rolling Wine Cellars in Service

*The special trains to the German Wine Route had more than 30 years of history in the area of the former Federal Railway Directorate in Karlsruhe. We use an announced Märklin novelty and two delivered special models for a look at the prototypes and the possible applications on the layout at home. After all, this is an interesting topic that has received little attention before.*

The “German Wine Route” is one of the oldest tourist routes in Germany. Over a length of 85 km, it runs through the wine-growing regions of the Palatinate, starting at the “German Wine Gate” in Schweigen-Rechtenbach. Its end point is the “House of the German Wine Route” in Bockenheim on the edge of the Rheinhessen wine growing region.

The Deutsche Bundesbahn (German Federal Railways) had been using special trains since the 1950s, which were aimed at wine-growing regions and bore the name “German Wine Route” as their train name. In the individual cars, passengers were encouraged to taste wine.



The “Rolling Wine Cellar,” classified as type WG4yg with the road number 320 022 Ffm, was probably one of the most unusual railway vehicles when it was photographed in colour in 1957. Apart from the silver paint, it was rather inconspicuous on the outside, but inside it was furnished in the style of a wine cellar. Photo: Reinhold Palm, Eisenbahnstiftung

From a 1944 MC4i type makeshift wagon with an external lozenge framework, a former “Länderschlafwagen”, (country sleeping car) a party wagon with the inscription “Der rollende Weinkeller” (the rolling wine cellar) was created for this purpose. As WG4yg 320 022 Ffm it was employed by the BD Frankfurt (Main), but in the sixties, it seemed out of date and had to be replaced.



So the way led to a new special train, which for the first time also carried the lettering “German Wine Route” on the long sides. In 1967, the DB converted a total of eight three-axle B3yg 761 cars for this purpose, and gave them with a special paint scheme. Despite the apparent similarity, the chosen paint scheme had nothing to do with the later colour concept of 1974/75.



When 218 366-3 is on its way with the special train “Deutsche Weinstraße” in Bundenthal on 9 August 1980 (photo above), the rebuilt coaches have just under three years of service before they are replaced. When the locomotive was photographed once more in Hinterweidenthal in the evening of the same day while shunting the train set (photo below), two of the four-axle cars can be seen further back (behind the third pair of converted cars). Photos: Manfred Britz

The chosen colours RAL 1001 beige for the window hinge and RAL 5013 cobalt blue for the other side surfaces came from the Rhine gold of the years 1962 to 1965. The colour distribution was also identical with the exception of an omitted set-off line between blue and frame colour (RAL 9005 deep black).



In Mörlenbach on 20 July 1988, 218 477-8 proves that not all the coaches in the train carried the striking lettering. Photo: Andreas Schmidt

For technical reasons, the four units were coupled in pairs and used as “lifts,” the less praiseworthy name in the vernacular. Märklin announced the first pair of cars (cars 1 and 2 of a continuous numbering system) with the spring new products for 2020 and announced that this small series would be continued if it was popular with the Zetties.

The complete formation of this special train consisted of eight cars which were all differently named according to regional expressions for the term wine bar — called vat car (speakers at German carnival speak in a vat), wine harbour car (designed like an harbour), wine-tasting car, bar car, booth car and Schubkärchler car (a setup of tables and benches, where any one can join). The car numbers of the cars were as follows: 87415 Kar (for Märklin car no. 2), 87416 Kar (for Märklin car no. 1), 87579 Kar, 87580 Kar, 87769 Kar, 87770 Kar, 87960 Kar and 87961 Kar.

The train “German Wine Route” belonged to the BD Karlsruhe with its home station Ludwigshafen. From there the respective operations took place.

Apparently these special trains were well received, because the Bundesbahn supplied them with four more cars one after the other later on, following conversions: These were four-axle express train coaches of pre-war design, some of which also had the “Deutsche Weinstraße” logo on the long sides, here even on both sides. They were classified as types WGYe 831 and 839.

The paint scheme of these four supplementary cars cannot be verified with certainty: The first two cars, the WGYe 831 with road number 50 80 89-11 701-6 and the WGYe with road number 839 50 80 89-11 702-4 (each with lettering) are said to have followed the three-axle cars in the chosen colours.



On the other hand, it is claimed that the other two specimens of the type WGye 831 (road numbers 50 80 89-53 703-1 and 50 80 89-53 705-6), both without the Weinstrasse lettering, were painted differently in RAL 5020 ocean blue and RAL 1014 ivory. Colour photographs with recognisable differences to the neighbouring wagon allow drawing such a conclusion.



The 50 series was a typical model for the three-axle conversion car set in service since 1967. 050 964-6 of Bw Lehrte was still in service with the special train near Harriehausen on 27 March 1976. Photo: Dr. Uwe Knoblauch, Eisenbahnstiftung

The question of whether all of the cars were always used together could not be clarified reliably and conclusively from the pictures known to us. On the basis of contemporary statements, however, it can, rather, be assumed here that the train length was determined individually according to the number of expected passengers.

After 16 years of service, however, the glory was over in 1983: The coaches with the special design appeared out of date, among other things, because their maximum speed was only 100 km/h, they had lost their function, and were parked in Ludwigshafen.

### Modern successors and train formations

As early as 1984, a successor was already in service, which had been assembled from older 26.4-metre passenger coaches. All coaches were painted in RAL 5020 Ocean Blue and RAL 1014 Ivory and some of them had a side inscription "Deutsche Weinstrasse" (now written with "ss" instead of "ß").

In this case two former couchette cars Bcm of the US Transport Corps and six superfluous half-dinner cars (1 x BRbumh 281 / 5 x BRyl 446) were converted. The new eight-car train consisted of company cars (WGm 842.0), bar cars (WGm 842.2), handmade cars (WGm 842.3) and salon cars (WGm 842.1 / WGm 842.4).

The 1zu220-Shop has had two cars from this special train converted and printed as special models by Märklin. These are the WGm 842.4, which was available in two copies from the prototype, with the car no. 50 80 89-43 914-7 (Item no. 98172) and the unique Bar/Büttenwagen WGm 842.1 with the car no. 51 80 89-80 903-3 (98182).

The prototypes of the special train remained in service until 1995, when they, too, were finally taken out of service. This time, however, modern successors were no longer procured or modified. It is interesting to note that the special trains sometimes also included regular seating coaches (Bm 234 or Bm 239), or other party coaches.



218 384-6 of the Kaiserslautern railway station) is on the move in the Rhine valley near Boppard on 9 July 1982 with all coaches (4 pairs of conversion coaches and 4 coaches of old construction) of the special train "German Wine Route." Photo: Wolfgang Bügel, Eisenbahnstiftung

The two special models can thus be extended to form a scale model train by models of the Bm 234 (item no. 8721 or from item no. 87211). The 87210 company car should not be a problem either.

But which model series are recommended for covering the special train "Deutsche Weinstraße"? There are different statements and partly also pictures available. Photographs have been taken of both steam and diesel trains, but for the electric traction we have to rely on testimonies of witnesses.

Of course, a steam locomotive is only suitable for the first special train, which was still made up of the three-axle pairs. When the successor train was put into service, this type of traction had long since ended.

Proof of this is the three-domed 50 1446 with a cab tender of the Saarbrücken depot, which carried its old signs on 30 November 1975. On 18 May 1973, however, the 023 063-1 is said to have been used to pull the special train 31217 "German Wine Route". It was pulling two of the pairs of cars and other cars that could not be identified.



Both carriages can be reproduced with models of Märklin and Bahls Modelleisenbahnen. It is easy to reproduce the special train as it was on its way on August 21, 1975: 218 380-4 had it on the hook here. There were many models of this series in the Märklin program, and there are always new ones. Possible are Bundesbahn versions in purple red or ocean blue ivory.

No less interesting is the compilation of all four pairs of coaches and all old passenger coaches, which were captured in Rüdelsheim in the afternoon of May 24, 1981. It would be an additional thought-provoking impulse for Märklin to finally produce the four-axle passenger coach, which also had many applications in the standard paint scheme.

In this case, the 216 series was pre-stressed, which was redesigned by Märklin less than ten years ago, and was already offered in the two possible paint finishes. It would have been a credible locomotive for the more modern successor cars as well.



When 218 477 with D 14762 returns to Weinheim on the evening of 20 July 1988, the eye falls over the entire train: Carriages 4 and 5 in the train set bear the lettering "Deutsche Weinstrasse", written with two "S" in the middle of the word. Photo: Andreas Schmidt

This also applies to the multi-purpose diesel locomotive of class 212, an extremely popular model of gauge Z. Whether in ocean blue ivory or one of the many purple-red variants, it cuts a fine figure in front of the special trains of both generations. For the old red 212 168-9, such a use is also illustrated.

Also for the second generation of the train there are photo proofs with 218 366-3 (old red; see page 5) and the ocean blue-ivory painted 218 477-8 (see pages 6 and 9) and 218 481-0, which have been painted ocean blue-ivory since delivery. It should be noted that series 212, 216 and 218, also appeared in orient red paint from 1987 on, and, therefore, can be included as well.

We should also not leave unmentioned references from an internet discussion, which referred to an E 18 as a train locomotive for both summer and winter operation. According to the railway enthusiasts who

wrote, they said that they played records on this train at the time. Therefore, we can almost certainly rule out a mistake.

However, in view of the fact that the last specimens of this series are now being taken out of service, this should be a very short time window for the modern carriages. Therefore, only the only ocean blue and ivory coloured version is offered, so far, as a model for Z gauge.

Older colour variants carried the numbering that was valid before 1968, and would, therefore, only be conceivable in principle for the first train generation in an equally narrow time window. However, we have no evidence of such a use.

## A look at the models

Jörg Erkel, managing director of the 1zu220 shop, had been keeping an eye on the UIC type X coaches of the second special train “Deutsche Weinstraße” for quite some time. Many discussions took place in this regard, which were particularly focused on whether such coaches with special printing were meaningful.

After first tests, how the special trains were running, it was clear that such a train could be reproduced credibly. Discussions with Märklin followed, because the required basic cars are not listed in the basic advertising car offer of the market leader.



The car pair 87 415 Kar and 87416 Kar by Märklin (item no. 87073) has also been delivered in the meantime and bears the lettering “Deutsche Weinstraße”.

When results were also achieved there, the process was set in motion which led to the two new products (98172 & 98182) which are the main focus of this article. The Märklin pair of cars from the first special train (87073) was also delivered during the creation of this article.

Jörg Erkel's specification for the special design by Märklin was that his summerhouse car WGm 842.4 (98172) and the bar/wine tasting car 842.1 (98182) should match the latest editions of the ocean-blue ivory 26.4 metre carriages.



In terms of design, they should therefore be as closely aligned with the model as the catalogue models 87210 and 87211 are. For the painting of the frame and car body, including the front sides as well as the extremely fine printing, this also fits.



Externally, the WGM 842.4 (98172; Photo above) and the WGM 842.1 (98182; photo below) differ only in their car numbers. The effect of the different carriages is achieved by setting them together with neutrally designed cars at different positions of the special train.

The tail lights, for example, have a black edging and the colour of the handlebars, handles and rubber seals on the doors have been contrasted. The bogies have not been sprayed in the former standard colour black either, but grey-brown using RAL8019.

The type and serial numbers as well as other company labelling have been applied finely and correctly. As usual with Märklin, they are correct in size and also examined under a magnifier. We can also find the home station Ludwigshafen Hbf in the addresses, as well as the maximum speed of 160 km/h in the UIC grid or the examination date 1.9.82 from the AW Karlsruhe, abbreviated with "K."

But contrary to the wishes of the customer, there are also differences to the reference models, which some customers have noticed and which lead to questions: Märklin had RAL 9006 white aluminium applied as the roof colour, but this does not correspond to the relevant DB colour concept nor does it match the cars of the latest edition. These cars have roofs in the correct colour RAL 7022 umbra grey.

The tail lights, for example, have a black edging and the colour of the handlebars; handles and rubber seals on the doors have been contrasted. Even the bogies are not marked in a different way, as are the frames of the window inserts:

The latest catalogue items were given window frames in the colour of the coach body (ivory) and black embossing in the door area, which corresponds to the frameless rubber seals of later years of use. The two special models were all embossed with a gold anodised finish, which was more typical for passenger coaches in old colours (chrome oxide green).

The frames of the window inserts are also different: The latest catalogue items were given window frames in the colour of the car body (ivory) and black embossing in the door area, which corresponds to the frameless rubber seals of later years of use. The two special models were all embossed with a gold anodised finish, which was more typical for coaches in old colours (chrome oxide green)

So it seems almost astonishing that nobody at Märklin seems to have noticed the difference in time. But we don't want to talk too much about it, and instead check and see if the status quo can't be usefully incorporated into the model railway.

Surely this was not intended, but Märklin has provided the second-hand market with a powerful model here: The two Weinstrasse models for the 1zu220 shop are state-of-the-art in terms of paint and printing, but the chosen colours are a perfect match for the oldest cars.



As Märklin has delivered the two special models for the 1zu220 shop with the same roof colour as their catalogue models from the seventies and eighties, they can be combined well with the 8721 cars which can be bought cheaply on the second-hand market. We have done the same, removed class numbers and non-smoking signs in a prototypical way and preloaded a series 216.

This way, the train can be lengthened to its prototypical length with the approximately 40-year-old models, which were once offered under item number 8721 and can be purchased used at very reasonable prices.

If you take it very seriously, remove the class designation and signs for non-smoking and smoking areas at the ends, the special train for the Wine Route is ready. If you want to remove some colour, you can also take the ends of the car, and pull the beige window band around the corner.

continues on page 14





In the product description and also in the Nuremberg trade fair discussion, Märklin indicated that the missing pairs of cars of the first Weinstraßen special train would also follow in the next few years. We are very much hoping for this, as it will result in a very attractive train set, which we want to recreate with different coverings.

V 100 2263 still bears the old addresses in summer 1968, when she was allowed to pull the special train coaches, which were only in service for one year (photo above). 50 1581 was repainted by railway enthusiasts in the mid-seventies with its old signs for its service pulling the "Deutsche Weinstraße", which looked good behind it (photo below).



Here, we accept benevolently that the roof colour of all cars in the train formation is not correct. However, the umbra grey of the prototype appeared to fade after a short time, probably as a result of massive UV radiation and weather influences. It then appeared light grey and indeed looked quite similar to the white aluminium that the German Federal Railways had previously used.

So there is no reason why the roofs should not be left in the delivery condition. It is conceivable, however, that their gloss level could be further reduced by using ultra-matt clear varnish, for example, from Bergswerk, thus providing an additional weathering effect. Those who choose to use paint here may also consider applying traces of draining rainwater or adhering dirt before the clear lacquer sealant.

But what do customers who want to add the 87210 and 87211 cars to their train, which were only delivered this year and have a different, umbra grey roof?

These models do not require any adaptation work on the part of the customer, unless the class numbers are also to be removed from the two 2nd class cars. We therefore start with the two special wine route cars of the 1zu220-shop.



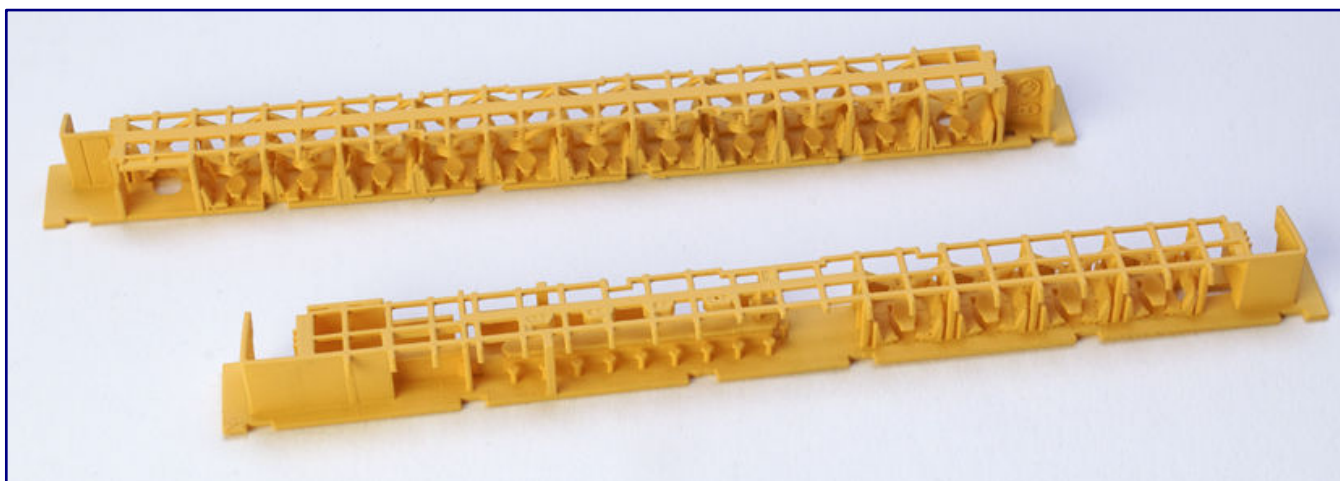
Following eyewitness reports, we also use the class 118 in front of the special train "Deutsche Weinstraße." We have combined the two special models with the passenger coaches from the 87211 package, but in this case it is recommended to adapt the roof to the current supplementary package for the passenger coach by repainting it in umbra grey or by exchanging it with an older pop colour coach 8721, just as it can be seen here.

On the one hand, a permanent approach is to adapt the roofs to the catalogue models and prototypes by repainting them ourselves. Silk matt paint in the colour RAL 7022 umbra grey can be found among others at Oesling Modellbau. We would clearly recommend a spray application which promises an even, and, above all, thin application.

Those who shy away from this have another option: Under article number 8721, i.e., the same number that Märklin later used for the ocean blue and ivory coloured cars, a pop colour car was already to be found in the range in 1972.

This was also offered in some editions with an umbra grey roof that corresponded to the model. Today these cars are no longer printed in a contemporary way, and have long since been replaced by finely designed successors.

This has further depressed the prices of used goods for suitable models. So without any great effort two copies have been purchased and are available as dispensers for the two new models 98172 and 98182. A return is just as easily possible.



We have already painted the interiors for both cars, developed by Torsten Scheithauer and now co-distributed by the 1zu220 shop, in the basic colour "neutral yellow" to make the details more visible. On the underside, the designer has left logo references to both carriages, but has also made it easier to identify them correctly by marking "Deutsche Weinstrasse – Laubenwagen" (for the 98172; photo above) and "Deutsche Weinstrasse - Barwagen". The direct comparison obviously shows the different as well as elaborately designed equipment (photo below).

With this trick we make a virtue out of necessity and increase the possibilities of use and combination for our new acquisitions. And we are sure that Märklin did not deliberately intend this!

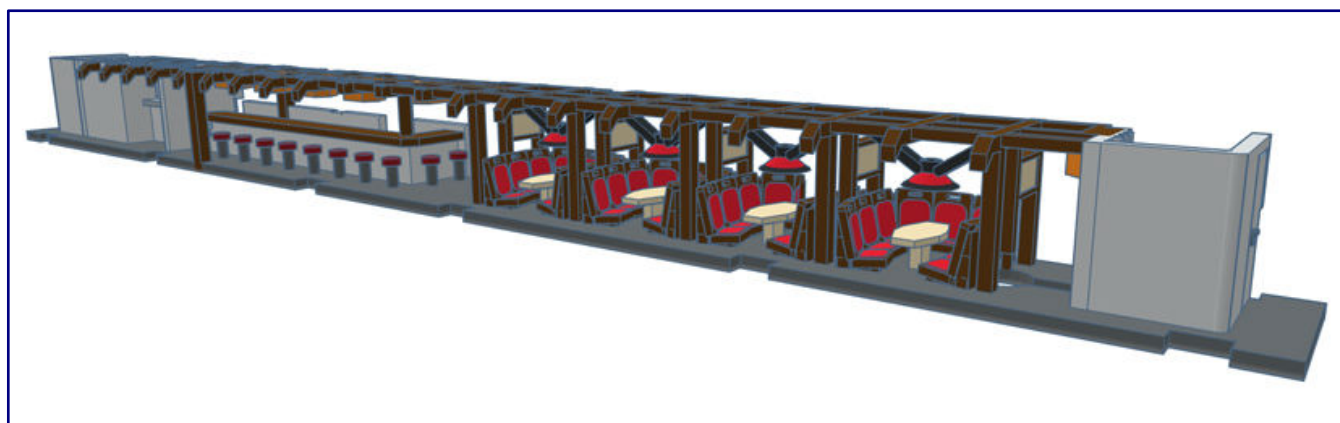
## Additional option "Interior fittings"

As the bar/wine tasting and observation cars had a very distinctive and unique interior design, Jörg Erkel did not want to do without them for the 1zu220 shop special models. The trigger was an active hint from Torsten Scheithauer, who had constructed an interior for both cars and knew how to tell about the appealing design.

Since he loves to do alterations and also has design experience in CAD programs, the two quickly agreed that Torsten Scheithauer would supply adapted equipment for the two special models; we have already been able to present some of his creations in **Trainini®**.

Since little photographic material or other suitable documents are known, the young tinkerer had to delve very far into the past to find suitable documents that would allow him to stay close to the originals.

He finally found models in two model railway magazines that had dealt with the models 25 and 37 years ago. He orientated himself on sketches and the really rare interior shots.



This CAD colour representation of the bar car equipment should serve as a suggestion for your own colouring. Whether the tiny parts are to be set off so elaborately and finely from each other is, of course, up to each individual. Illustration: Torsten Scheithauer.

Fortunately, he was able to use colour photographs which also reproduce the colour combination of the models quite accurately. He has already coloured his 3D images from the CAD programme, accordingly, to illustrate this.

We would like to take up his findings and recommend the following colours, which come very close to this impression:

Basic colour (and tables)	Neutral Yellow Primer (Badger SNR-206; Spray application)
Shelves and cupboards	RAL 7011 Iron grey silk matt (Oesling Modellbau)
Stool and seats	RAL 3004 Purple red silk (Oesling Modellbau)
Observation car braces and seats	Leather brown matt (Revell 84)

It is a fact that the two models with an inner life gain considerably. Assigning both devices to the respective wagons is easy, because the corresponding Märklin article number is included.

The 3D-printed interiors can also be ordered from the 1zu220 shop, so there is no double postage. These parts are produced by the printing service provider Shapeways.

Torsten Scheithauer, by the way, also had in mind to install an interior lighting. Although there is no ready-made solution for this, there are already centring aids for small drill holes on the upper sides of the observation car struts.

If they are drilled out, enamelled copper wires can be pulled through and SMD light-emitting diodes can be installed. The inclined Zetties should also install wheel contacts, suitable series resistors and buffer capacitors.





Finally, we have arranged the arbour and bar/wine tasting car directly behind each other in order to be able to convey the resulting impression to our readers. This time the rolling wine cellar is covered by the 212 224-0.

This form of interior lighting, which is closely based on the original, makes sense, of course, especially when combining the two cars with the latest models from Märklin, as they are comparably equipped inside.

However, there is also a clear opportunity here to make a significant leap forward in terms of flicker-free and voltage safety to what the market leader has delivered as a high-volume solution and has not met with our approval...

**Exclusive distribution of the special Wine Route models:**  
<https://www.1zu220-shop.de>

**Rolling stock manufacturers (train locomotives):**  
<http://www.bahls-modelleisenbahnen.de>  
<https://www.maerklin.de>

**Sources for necessary accessories:**  
<https://www.bergswerk.de>  
<https://www.oesling-modellbau.com>  
<https://www.revell.de>

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The concept of NoBa-Modelle

## Standard Work for Mobility

*3D printing increasingly deserves a more focused look, and so we too will gradually introduce more models created using this technique. Today, we are turning to a fairly new manufacturer, NoBa Modelle. But this is not true of the model: the Mercedes-Benz O 305 is a classic in German bus history.*

Again and again we have a look to the right and left of the model railway tracks. After all, nothing works on our layout without miniature figures, buildings, vegetation, and even cars. The biggest competitor of the railroad plays an important role even on the small scale.



As part of a route festival, historic buses were also put back into service between Frankenberg and Korbach on 12-13 September 2015. This Mercedes-Benz O 305 is already one of the more recent models and also wears the later colour scheme of the German Federal Railways. Photo: GeorgDerTraveler (CC BY-SA 4.0)

Today, we would like to present a model that has closed an important gap in the Z-gauge assortment and, also, seems to be particularly suited to introduce the possibilities of 3D printing at this point.

This technology, which is still quite young for the field of model railroading, is actually an “old hat,” but enormously versatile and complex. In the field of hobby applications it only entered the market about ten years ago.

The term 3D printing covers all manufacturing methods that use a printer to build a three-dimensional model layer by layer in an additive manner from scratch on a defined work area.

A wide variety of materials are used, both in terms of their chemical composition, and the way they are fed to the printer. The way in which the material is processed and cured also varies greatly.

Stereolithography technology, which is used to create a hand sample from CAD data, already has a long tradition in large-scale production. Printing with filament threads to be melted at the printer nozzle and printing with liquid resin, a synthetic resin that is cured with the help of UV light, are widely used in the hobby sector today.



The MAN SÜ 240 is also a VÖV (German Association of Public Transport Companies) standard bus. This preserved example, which was used at the same event as its Mercedes counterpart on the previous page, belongs to the Museum Railroad Hamm. It bears the historic Federal German Railways' bus colors and contemporary markings as we have chosen them for our model. Photo: GeorgDerTraveler (CC BY-SA 4.0)

Both manufacturing methods have their advantages and disadvantages, which is why they are not equally suitable for all tasks. NoBa Modelle, from which the product presented below originates, offer both printing processes, which is why the customer can obtain a comparative overview here.

We are a little proud to have delivered the idea ourselves in this special case. When we once pointed out the lack of models of the VÖV (German Association of Public Transport Companies) standard bus, Norbert Heller took up this issue immediately, constructed a model of the Mercedes-Benz implementation according to the VÖV guidelines, and informed us immediately about the result.



Nevertheless, it remains surprising that a vehicle that was built by a total of four different bus manufacturers (Büssing, Daimler-Benz, MAN and Magirus) between 1969 and 1989, that shaped local public transport like no other bus, and that can cover the entire IV/V era, was completely ignored by all suppliers for over forty years. That's why we take a brief look at its history.

## The way to the standard bus

Until the 1960s, many manufacturers competed with their buses for the favour of long-distance and local transport companies. The few companies still known today were joined by companies such as Krupp, Henschel and Kässbohrer, as well as body manufacturers, who purchased engines and chassis and built their own bodies on them. A well-known name here is, for example, Emmelmann.



This Mercedes-Benz O 305, which was photographed in Heppenheim on September 26, 2005 and is still active as a school bus, is part of the original design to which we also want to adapt our model. In comparison to the example on page 19, differences can be seen above all in the smaller windshield, the resulting deviations in the front and the indicators mounted on edge. Photo: LosHawlos (CC BY-SA 3.0)

The solutions offered were correspondingly versatile in terms of motorization, capacities and external dimensions, as well as in such things as door systems and widths. In the past, bus trailers were common, but after they were banned, a tendency towards articulated buses became apparent. The resulting variety of types increasingly caused problems for the companies.

In order to obtain vehicles of the same type for uniform and definable transport tasks, which were specifically tailored to these tasks and were thus in principle interchangeable, the Verband öffentlicher Verkehrsbetriebe (VÖV) (Association of Public Transport Companies) drew up comprehensive specifications.

For about three decades it was to be the benchmark for the vehicles used in regular urban and intercity services. From now on, all parties involved were to find the same conditions across brands and independent of manufacturers. This was a decisive step towards rationalizing the stocking of spare parts and the employment of skilled maintenance and repair personnel.

The standard defined in 1966 thus unified the body of the bus, its interior and the electrical system. Expert opinions were obtained from various institutes to determine the floor height, driver's seat, and glare-free windscreen.

As early as 1967, the first prototypes for the SL 1 (standard public service bus 1) were presented, and series production began in 1968. Although Daimler-Benz was also able to show a prototype as early as 1967, this company did not follow with series production until 1969.

But the somewhat later start did not stand in the way of the model's success. In the end, the Mercedes-Benz O 305 was the best-selling product of all SL-1 standard buses. Its series production extended over almost two decades until 1987. It offered passengers 41 seats and 61 standing spaces.

The VÖV front was formative for it and the brands of the other three companies involved. The front, like the rear, looked almost completely identical, apart from the respective manufacturer's markings, which is why different variants can be produced from one model. This will also play a role in our model.



**The Gummibahn ("rubber track train") must not be missing on the modeller's layout. That is why we have chosen the Mercedes-Benz O 305 from NoBa Modelle, the most widespread representative of vehicles with a uniform front, design and rear.**

1972 saw the first modifications to the O 305 on the smooth side panels and front and rear roof edges. A new windscreen was also a striking feature, with a curvature to the sides – the previous one was straight and split in the middle in this respect. New engines forced a slight increase in length to 11,110 mm (standard value: 11,000 mm).



In addition, a drive axle with planetary drive, developed in cooperation with MAN, was now used as the rear axle. It produced a strikingly singing sound that perhaps some readers will remember.

## Designing of the model

As explained at the beginning, our reference to the lack of the VÖV standard bus as the characteristic means of local transport throughout Germany (and even abroad) for decades fell on fertile ground at NoBa Modelle. Norbert Heller, the designer of the model, took care of the design.

For the in-house 3D print he drew the Mercedes-Benz O 305 local transport bus, which was part of everyday life, especially in the south of Germany. In the northern half of the Federal Republic of Germany, the examples from MAN and Büssing were more visible.

The bus is offered with a white body made of filament print (art. no. 6313) and clear resin (6313R). The range also includes versions with open doors, which are intended for stationary scenes at bus stops.



The public transport bus is available both as resin (art. no. 6313R) and filament print model (6313; in the picture). The latter variant requires more grinding work and painting preparations on the body. We have therefore given preference to the resin model for this project.

With both printing techniques, the patterns of the individual layers of material can be seen. While this is, as expected, quite obvious with the much more cost-effective filament printing and makes manual reworking seem reasonable, it can be largely ignored with the resin model.

So we chose this for our project and were immediately pleased with the smooth surface, which reveals the model's characteristics well. According to NoBa Modelle, the bus replicates the 1974 model, but probably without the curved windscreen.

After looking at various photographs of the prototype, however, we believe that the arrangement of the headlights shown here can only be attributed to a foreign body on a Daimler chassis.

That's why we decided early on to make changes to the front section, which would also enable our readers to adapt the vehicle to the designs of Büssing, MAN or Magirus. This has a special appeal because it allows individuality and adaptation to regional conditions.

The NoBa Modelle of the public service bus are each delivered in six parts that make painting and design easier: body (white or transparent), floor assembly (grey) and four wheel inserts (black).



Anyone who soaks their 3D print models in pure isopropyl alcohol for five minutes before colouring them is probably well advised. The simple alcohol not only dissolves adhering grease, but also residues of supporting material or unhardened resin. Our bus undergoes the procedure together with other vehicles that are in parallel work.

Depending on the order variant, the bodywork is printed using one of the two available printing processes, the remaining parts are always printed using filaments. This combination was chosen because it does not affect the appearance, especially since the view into the interior is restricted in the model anyway.

For colouring, which mainly concerns the bodywork but also seems to be useful on rims and seats, the manufacturer recommends acrylic paints, such as Aqua Color from Revell.

However, before using a spray gun or brush, we always recommend cleaning to improve the adherence of colours on surfaces. In addition to removing grease deposits (from the pores of the fingers), it also removes possible resin residues that have not fully hardened.

For this purpose, the raw parts are to be soaked in isopropyl alcohol (96 % vol.) for about five minutes. The (pure) simple alcohol can be purchased in pharmacies in containers of up to one litre and shows excellent fat dissolving properties.

After the dipping bath and the subsequent drying, it is then ready for painting. For this we use suitable model images, which tell us, for example, that the rims of most buses were also painted the same colour as the car body.



## Designed as a bus for the Bundesbahn

Since we want to design a bus from the German Federal Railways for the early Era IV, the colour RAL 3004 purple red is shown here. The silky-matt gloss of Oesling Modellbau (81003004) is available in our stock. It is applied to the rims with a fine hair brush.

This is also used for the designing of the interior. In this case, determining a suitable colour shade proved to be much more difficult, because interior photographs are rarely found.



After the first coating, some unevenness and defects still come to light, which must be sandpapered before the next coating process.

But finally we found pictorial evidence of brown imitation leather upholstery in a MAN counterpart, similar to that used by the DB in conversion and middle entry cars, and chose "Lederbraun" from Revell (84). The cost conscious Deutsche Bundesbahn (German Federal Railways) would probably not expect any deviations in Mercedes buses.

Further thoughts on design were directed at the entrance areas and the driver's seat including the dashboard. Here, a dull black (Revell 8 or 36108) was designated. So the interior of the bus was almost ready for installation. Because of the quite large windows, however, the driver and other passengers should also be considered.

From the large Preiser package with unpainted figures (88500), we selected suitable blanks of sitting and standing persons and painted them, as appropriate. It is important not to choose too dark colours and to create a contrast to the seats. This way the figures stand out better in the unlit interior.

Before painting them, they may need to be cut to size if the feet do not fit into the floor area – later on this will not be visible. Also the legs of the standing passenger in our example had to be shortened a bit to avoid conflict with the ceiling.



At the front the main and fog lights are too high, so the warding file has to be applied (photo above). The previous fog lights stay in place and are moved into the bumper with the help of fine hand drill holes. Meanwhile the chassis with the interior is already painted (photo below). Also, the little Preiser figures have already taken their place.

A commercially available Polystyrol adhesive such as Uhu Plast Spezial will do a good job here. An all-purpose glue (Uhu Kraft) ensures a secure fixing on the seats. At the end of this procedure the wheel inserts can also be glued to the floor assembly.

The next step is the bodywork, which, as expected, requires the greatest effort. Since the surfaces already make a good impression, we do not apply a spray filler, but paint it immediately in RAL 3004 purple red (Oesling Modellbau) by spray application.

Continues on page 28





Z-Doktor Modellbau saw itself challenged and has drawn and printed new Mercedes stars, which only need to be removed from the supporting structure and painted in chrome (photo above). We have reproduced the vehicle glazing with Micro Kristal Klear from Microscale, the glass surfaces of headlights, rear lights and destination indicators are given the necessary shine with brush applied clear varnish from Revell.

We are generally satisfied with the result, but some jobs definitely deserve some minor rework: Sometimes there are stripes of the print pattern that can be slightly sanded, and on the roof there is a small hump that was not previously visible.

Only now did we begin to adjust the front end to better match the appearance of the Mercedes-Benz O 305 in its factory design. To do this, the fog lights had to disappear in the front bumper, their previous replicas then mimicked the regular vehicle headlights.

The two specimens above had to disappear, which is quickly done with some sandpaper on a suitable flat tool or a needle file. However, it was almost inevitable that the company logo would also be inadvertently worn away in between.



In addition to the rear lights, the front and rear indicators must, also, be colour-contrasted. For this purpose we apply RAL 2011 deep orange, the so-called municipal orange, with a micro-brush brush.

This is exactly what we consciously accepted and without further ado planned an etched part as a replacement, which would certainly have attracted attention. Rather surprisingly the “Z-Doctor” Björn Plutka came into play here, who is in a good exchange with Barbara and Norbert Heller, the duo of NoBa Modelle, as well as with us.

He saw it as a challenge and proof of performance for 3D printing to create the three-spoke Mercedes stars as a printed part using resin. Less than 24 hours passed after a phone call, when macro photographs of the finished results were already available: The experiment was a success.

Thus our demonstration object received a new star on the front, which was printed individually, painted in chrome (Vallejo 77707; Metal Colour “Chrome”) and mounted separately. But here we have now skipped some intermediate steps: First, the new fog lights were worked in with an HSS spiral drill in an ultra-fine hand drill tool, then, a second coat of paint in purple red was applied to the bodywork.



Details were then elaborated manually. These included the white setting off of the destination display boxes with RAL 9003 signal white from Oesling Modellbau (81009003), the round lights at the rear for tail light (Revell 36330), and indicators (Oesling Modellbau 81002011), and the glossy chrome coloured layout of the exterior mirrors and headlights on the bus (Vallejo 77707).

Near the front doors, the Deutsche Bundesbahn (German Federal Railways) as the owner marked its buses with the company logo. The matching "Ege biscuits" (the logo of the Deutsche Bundesbahn resemble a Bahlsen biscuit and was designed by Eduard Ege) in signal yellow could be taken from sheet 220-2210 of Modellbahndecals Nothaft. They were applied with the help of softener and adhesive primer, as described many times before.

After 24 hours drying time, a silk-matt clear coat was applied for sealing, using remnants of model master clear coat. Since these are no longer sold through Falter due to changed EU labelling requirements, we recommend the new clear lacquers from Bergswerk, available in different gloss levels, as a contemporary alternative.



We combine the chassis and body with a detachable variant: we use Fixogum from Marabu. Should the bus be converted to the Z-Car system again or a figure inside fall over, access is still possible.

However, some areas of the model are marked by glassy shine, which should not be missing on the model. So we grabbed a hair brush size 5/0 and painted the target indicators and headlight areas of the car with glossy acrylic clear varnish (Revell Aqua Color 36101).

So only the window areas themselves were missing. Here we needed a clear adhesive lacquer. Since it has proven itself time and again, we chose Micro Kristal Klear (MI-9) from the US manufacturer Microscale. It is currently sold by various suppliers, such as Peter Post Tools.

The paste, which is white in its liquid state, is applied with a hair brush or toothpick into one corner of the window and then pulled diagonally to the opposite side. During this process, the liquid must brush against all window edges so that the film spreads evenly.

That's how we did it too. But we also have a hint for large window areas where the slight lensing of this process could interfere: A piece of tape could be applied over the outer surface of the pane, to which the clear varnish would also adhere, but which would form a flat surface after drying.

However, its adhesive strength should be so low that the pane is not torn off when you pull it off. Here, we have had first good experience with the masking tape from Tamiya.



After the reconstruction, the front of the bus looks much more coherent and the passengers and the driver can be seen well through the large windows, but unfortunately only partially from this perspective. The work has undoubtedly paid off.

After the drying of the “window inserts” our vehicle body was then completely finished. The last task was to assemble the body and floor assembly. There is actually nothing to be said against a permanent adhesive bond, but a later access possibility also provides a great additional possibility.

Whether it is the further gluing of figures, the replacement of a damaged windscreen, or the subsequent installation of a chassis for the Z-Car system, we did not want to exclude the possibility of (temporary) separation of the two bus parts.

Therefore, we have used Fixogum from Marabu, a removable product. Applied selectively and only on one side, it offers both parts sufficient hold without creating an inseparable connection. If something of the adhesive should be pressed down and be visible when putting on the structure: just rub it off!



We have thus successfully completed another project and have been able to close a really painful gap in the range of Z-gauge accessories. NoBa Modelle deserve great praise for this as a manufacturer and we are grateful for the crafting fun.



Our Mercedes-Benz O 305 is finished and can finally go into operation. But they are not meant to replace infrequently used trains on secondary lines permanently!

Since we still have a second specimen from the filament print, we can continue it at the next opportunity and put another model of the by far most common bus into service. This one, however, will certainly go on the road in a neutral colour for any passenger traffic company.

**Manufacturer of the model:**

<https://www.noba-modelle.de>

**Sources for necessary accessories:**

<https://www.z-doktor.de>

**Materials:**

<https://acrylicosvallejo.com>

<https://www.bergswerk.de>

<https://www.marabu-creative.com>

<http://microscale.com>

<https://www.modellbahndecals.de>

<https://www.oesling-modellbau.com>

<http://www.peter-post-werkzeuge.de>

<https://www.preiserfiguren.de>

<https://www.revell.de>

<https://www.tamiya.de>

<https://www.uhu.de>

**Discount possibility on purchase \*:**

<https://www.modellbaukompass.de>

\* In the free text of the order, mention the keyword **Trainini**. The discount will then be deducted subsequently

The Scottish Princess

## An aircraft gone astray?

*This time we have chosen a special specimen for the aircraft enthusiasts among the Zetties, which was not only convincingly realised by Herpa, but also has a special history. Its basic type Vickers Viscount also wrote aviation history and was able to hold its own at airports for a long time.*

Herpa has delivered an interesting aircraft model this month, which at first glance seems to have something wrong with it: What does an airline active on long-haul routes to overseas destinations like the former BOAC do with a short- and medium-range aircraft like the Vickers Viscount 700?

We would like to explain exactly this connection with a brief history outline before we take a look at the new model. As aviation enthusiasts know, the British Overseas Airways Corporation (BOAC) is a predecessor of the well-known and renowned British Airways.



In this design the Vickers Viscount 700 was in service with Cambrian Airlines, photographed in Bristol. Two aircraft were later leased to BOAC, one of which, was a template for the new Herpa model. Photo: Adrian Pingstone (in the public domain)

And its history begins with the merger of four airlines to form Imperial Airways on 31 March 1924, which offered intercontinental flights. Eleven years later, four British airlines operating in Europe merged to form British Airways. However, this merger had little to do with the company as it is today, as its name was to be revoked for the time being.



In 1939, the two companies were nationalised by law and merged into the British Overseas Airways Corporation (BOAC), and in August 1946, intra-European air traffic was separated and made independent under British European Airways (BEA). BOAC continued to operate intercontinental services.

Still relevant for the model to be presented is a reference to the takeover of Cambrian Airways by BEA in 1967, which gave it access to further regional connections, but initially left Cambrian (and Northeast Airlines) formally independent.



The Vickers Viscount 700 in the BOAC design (item no. 570817) picks up on the former feeder traffic to the hubs of this long-haul airline.

Today's British Airways was created on 1 September 1972 through the merger of BOAC and BEA, but it was not until 1 April 1974 that it began operating under this name. Some two years later, the two subsidiaries Cambrian Airways and Northeast Airlines were merged into British Airways.

BOAC temporarily operated two Vickers Viscount 700s belonging to the V.701 variant, registered under the designators G-AMOG and G-AMON. The two aircraft joined the BOAC fleet on 1 April 1972 and 3 June 1973 and were leased to Cambrian Airways.

They were painted in full BOAC livery and operated on the Belfast - Prestwick route and the Prestwick - Edinburgh feeder service. Both served as feeder flights for the BOAC's transatlantic routes, which answers the initial question in our article.

Before air transport was liberalised, BOAC was not allowed to compete with the state-owned BEA. So it did not intend to do so, it was only interested in increasing the load factor of its long-haul flights from the Prestwick hub.

## A Scottish Princess

The pattern for the Herpa model with the identification G-AMON was delivered to the BEA on March 11, 1954, where it was christened "Thomas Cavendish". Between 1960 and 1962, a conversion with a high-cabin with increased seating capacity (60/63 seating) was carried out. It also received an additional cabin window on the right-hand side and passenger stairs still integrated at the front.

On 28 December 1962 the aircraft was sold to Cambrian Airways, where it remained in service until its demise. When it was leased to BOAC on 3 June 1973, it was given the livery of its new owner and the nickname "Scottish Princess".



The name "Scottish Princess" was written in gold on the hull. The typical features include the old-style side cockpit window with horizontal struts and the additional circular window at the front of the cabin.

As of July 31st, 1973, BOAC was renamed "British Airways (Overseas Division)" as a result of the legally enforced re-merger. The aircraft shown today has now been repainted with the new BA livery.

On 31st March 1976 the lease expired and the aircraft was taken out of service in Cardiff and returned to the former Cambrian. The owner was incorporated into the British Airways Board on 1 April 1976, and the returned aircraft was thus re-registered as British Airways.

However, as early as 10 May 1976, she was definitively withdrawn from service and removed from the register. After the removal of parts, the remains of the aircraft were used for ground training before it was scrapped in 1979.

After being involved in two air accidents in the 1960s (each without injuries or deaths) and repaired on both occasions, G-AMON recorded 32,071 flying hours and 27,804 landings.



## First turboprop aircraft

The Vickers Viscount was built as a civil airliner by the British Vickers-Armstrongs (Aircraft) Ltd. between 1948 and 1964. Designed to carry up to 75 passengers (800 version) and powered by four Rolls-Royce Dart PTL engines, it achieved a maximum cruise speed of 584 km/h.

The Vickers Viscount was the world's first commercial aircraft powered by turboprop engines. It ushered in a new era in aviation, which is still ongoing for short and medium range aircraft.

Its maiden flight took place on 16 July 1948 and marked the beginning of a successful career: by 1964 the manufacturer had delivered a total of 443 aircraft to more than 50 airlines. This type was popular because of its quiet and vibration-free engine compared to the piston-engined aircraft still common at that time. The large cabin windows also met with approval from the public.



The Vickers Viscount was the world's first commercial aircraft to be powered by a turboprop, heralding the end of piston engine propulsion. But its typical shape is also striking, especially in the area of the cockpit, which from this perspective is even somewhat reminiscent of the later jumbo jets.

The Vickers Viscount 700 is with 287 pieces the most important series of this design. The decision to build this version, which is larger than the first model and can carry up to 53 passengers, was taken when a more powerful engine, the Dart-505 (D.Ra.3), was available.

Sometimes confusing are the many version designations of the Vickers Viscount. However, they almost always refer to only one of the many different interior configurations, because technically there were only three versions in the 700 series. The aircraft designed for 47 passengers according to the BEA standard were given the designation Viscount 701 (V.701), which also included the prototype of the Herpa model.

Since the mid-eighties of the last century, no additional Vickers Viscount aircraft have been in service with airlines. However, some aircraft were able to survive as business jets for a long time, but even this era is long gone.

## The new Herpa Modell

The limited edition of the Vickers Viscount 700 (art. no. 570817), now released by Herpa and used by BOAC, is not a new item in form, but it is an extremely interesting model.

### Maße und Daten zur Vickers Viscount 700:

	Prototype	1:200	1:220	Modell
Length	24,91 m	124,6 mm	113,2 mm	123,7 mm
Wingspan	28,55 m	142,8 mm	129,8 mm	143,0 mm
Height	8,15 m	40,8 mm	37,0 mm	43,7 mm
Max. Take-off weight	27.216 kg *	---	---	156 g
Cruising speed	ca. 444 km/h			
Engines	4 x Rolls Royce Dart 505 (D.Ra.3)			
Propeller	Four Blades			
First flight	28. August 1950 **			

\* maximum take-off weight depending on the respective engine equipment

\*\* Date refers to the version 700 built in series

The template is the former reserve scheme for the feeder services mentioned in the model section of this article.

It was re-registered under the name G-AMON and was christened "British Princess", which the model also bears in gold-coloured capital letters on both sides of the fuselage in relatively large type.

When correctly and strictly reproduced in the environment of a model railway layout, the period of use is limited to the years 1973 to 1976.

It ends before the floatation or return to Cambrian Airways with the change of colouring of the model. According to the NEM standards, this period falls into Era IV.

In the past Herpa has already produced some models of the Vickers Viscount 700 (first and most important series version) and 800 (stretched version) in scale 1:200.

Like these, the latest edition is made entirely of metal and its weight makes this clear. The rubber tyres are probably the only attachment parts that are made of a different material. For the landing gear parts and propeller blades we did not check this, but because of the quite filigree construction, plastic injection moulding would be, at least, conceivable here.



The model not only openly displays her christened name: Many details have also been taken into account and reproduced by pad printing, including the side access door in a very striking shape.



By today's standards the Vickers Viscount in both versions is a rather small aircraft, which makes it easier for the model railroader to accommodate an airport section in a corner of the layout. It is worth mentioning that airports can be very eye-catching due to the ground fire of runways and taxiways.

A look at our table of measurements illustrates what is written and also proves a high degree of scale accuracy in the important main measurements, only the height measured over the vertical tail shows a slight outlier. However, since the proportions seem harmonious, even this can be neglected.

If the evaluation is strict, all the aircraft in the Wings range are a little too large, but this is not even noticeable to the observer's eye, which "measures" via reference points, because suitable means of comparison that would be sufficiently striking are lacking. Model cars and figures on a scale of 1:220 do not reveal the difference.



And this is how the BOAC machine with its shiny chrome wings appears to the observer when viewed from above.

The Vickers Viscount 700 is a very detailed model: The typical features, which ensure a high recognition value, have been worked out well. In addition to a rather elliptical cabin cross-section, these are above all the rather conspicuously offset pilot's cockpit.

But we also count the elongated shape of the turboprop engines with their outlets and the rear landing gear, which is in a common main body with engines 2 and 3, the inner two on the right and left wings, in each case.

There the outlets were located further forward than on the outer two, so as not to get in the way of the retractable landing gear. This too has been reproduced correctly on the model.

Separate antennas are mounted on the upper and lower sides of the fuselage, the former being extremely filigree. Herpa traditionally emphasises further details not by engravings, but by elaborate printing, which makes it possible to align the model, as closely and individually as possible, to the actual prototype.

One of these features is the additional cabin window on the right-hand side (in the front area), which only a few machines of this type showed. The rearmost window of the cockpit also corresponds to the original version (which has been retained here until the very end), which can be easily recognised by comparing different photographs of the original.



The oblique view from the rear reveals some details of the main chassis, but also shows the unmistakable silhouette of the prototype. Also the canopy, which is slightly set off from the fuselage, can be partly guessed from this perspective.

We can safely include operational markings for emergency exits or registration as well as the airline's own addresses as standard. This includes the prints for the side position lights, the flashing light on the vertical tail indicating an intention to take off, and other components of aircraft lighting.

All of them are to be found on the model in an elaborate, fine and convincing manner. They have been printed just as cleanly as the paintwork has been applied in the correct model colours. The bare wings, which sparkle in sunlight, are particularly attractive.

In the past, and in some cases still today, English airlines have consistently opted for very conservative, but dignified and elegant colour concepts. This is also evident here in the elegant dark blue, which is particularly appealing in contrast to the white background colour of the fuselage.

The gold-coloured inscriptions for registration and christened names, as well as the company logo on the vertical tail, look particularly elegant in this context. This almost obscures the fact that the Vickers Viscount was so popular with passengers because of its large panorama windows in the cabin.



Of course, Herpa also reproduced this correctly. The entrance doors also show the equally striking and typical shape of a large ellipse for this aircraft type, which is somewhat reminiscent of the shape of an egg.

All in all, a great classic and a true success model of British aircraft construction has been convincingly and attractively transformed into a model. Certainly the Vickers Viscount was not one of the particularly elegant looking types, because it seems to be quite high and therefore compact.



Most buyers will certainly look at their model extensively from this direction. The Vickers Viscount 700, however, cuts a fine figure from every perspective with its dignified, conservative paint scheme – typically, English.

Yet, this is what makes it so special, because so much is said today about recognition values. With its own lines and independence, without denying the design language and contemporary taste of its creators, the Vickers Viscount is not only a personality among aircraft in the 700 version – it has set standards in technical terms anyway.

Manufacturer of the aircraft model:  
<https://www.herpa.de>

## Station Diorama “Himmelreich” (Part 4)

### Working behind the Scenes

*In the previous part of our series, we created a landscape almost from scratch on top of a wooden box. Only a few finishing touches remain to be done on the scenery before we continue our efforts behind stage. The technical work inside the baseboard box is just as important for the success of the diorama, because, without it, the platform and the station would remain dark and trains would be unable to run.*

Working on the landscape is probably the phase in a diorama or layout construction which produces the most visible and tangible progress. And as we saw in part 3 of this small series, our “Himmelreich” (Kingdom of Heaven) diorama has changed dramatically in appearance, and our readers can, hopefully, better imagine now the finished result will appear.

For us, however, the provisional end of the landscape work was also an occasion to take a step back and have a self-critical look at how much plan and reality correspond to each other. So before we could enter the final lap of this build, we considered it necessary to change the position of a group of figures on the diorama: On the path leading away from the station square we had placed a field hare from Trafofuchs and a fox from Creativ-Modellbau Klingenhöfer.



“Where fox and hares say good night to each other”, is an old German proverb for “in the middle of nowhere” and one which the little figures in this scene, towards the front and right of the image, allude to.

Here, hunter and prey stood or sat opposite within each other’s’ sight. The scene was meant to allude to the German proverb of fox and hare bidding each other good night (used for describing a place in the middle of nowhere), and to evoke the idyllic peace around this little Black Forest village.



While the fox stood out well on the path, the brown hare remained well camouflaged against the ground; the scene, thus, did not have the imagined effect on the observer, as we found out when testing this on others. A new location therefore had to be found, one that was more suitable and still remained close to the wheat field, where the rabbit is at home.

We finally found a better place in the left area of the diorama on the cobbled country road, which has sufficient contrast to make both figures stand out more clearly.



Here is the same scene again from a different perspective and close up. The hare from Trafofuchs (left) and the fox from Creativ-Modellbau Klingenhöfer (right) in a tense encounter: What is about to happen here?

Changing the position of the two animal figures is no problem at all, given that we had attached them in an act of wise foresight with temporary glue from Noch. All we need now is a long pair of tweezers, and done!

And now on to the next step which is to draw lines on the station square: Here we need to clearly demarcate the roadway from the area of the loading ramp, pedestrian areas and the shoulder. In addition, parking bays for cars should be marked.

An etched nickel silver stencil (Item No. 10252) from Rolf's Laedchen, which was developed a few years ago at our suggestion, will help us here. It contains directional arrows as well as solid and dashed lines in narrow and wide versions.

The etched part can be bent and broken, thus creating two handy parts that we can place in the intended places. The area to be marked is covered with masking tape from Tamiya on one or both sides, so that the colour does not smear, when the stencil is lifted off.

Continues on page 43





With the help of a bristle brush and a stencil, we dab on the white paint for the various road markings. In order to keep straight borders when lifting off the stencil, we have been using Tamiya masking tape of different widths.



After placing and pressing the stencil into the intended position, we dab the lines with RAL 9003 signal white acrylic paint from Oesling Modellbau (81009003) with the help of a bristle brush. Bit by bit, we work our way through the area, giving the paint enough time to dry. Otherwise, when applying new masks, we may blur what we have done so far. Good model making requires time and patience – even Rome was not built in a day.

## While the paint dries

While the paint is drying, we can turn to other things on our to-do list, namely works to be done on the track right in front of the station building. What's still missing there is a little detail for the platform crossing: wooden planks in the track bed which are supposed guide hanging coupling irons safely over the crossing, so that they don't get caught and tear off.

Anyone who has carefully observed track crossings in the past will have noticed these guiding aids, and we certainly wanted to reproduce them in the model. We build them from small pieces of veneer wood, which are glued in place with a drop of express wood glue from Bindulin. Afterwards we add the right tint to the light-coloured wood by dabbing on some matt-brown Tamiya paint (XF-10).



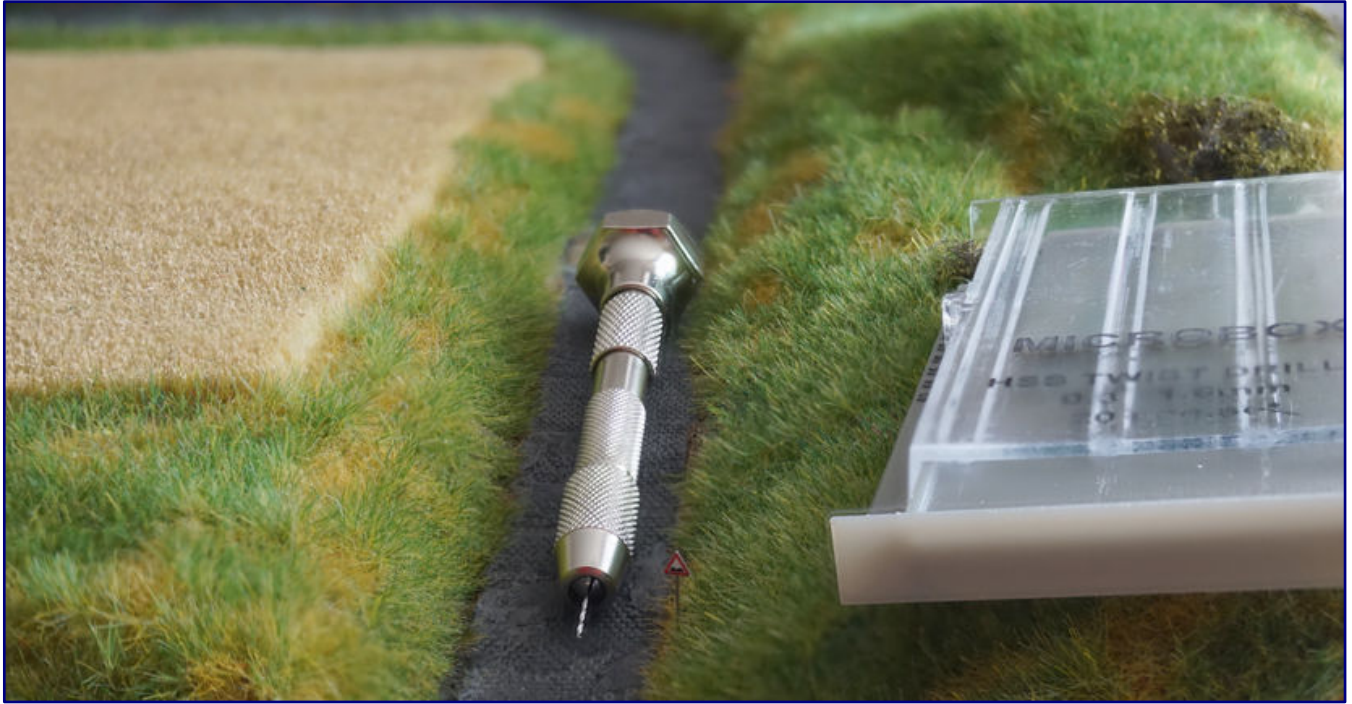
Small strips of veneer wood are used to reproduce wooden planks, which were used to safely guide hanging couplings across the crossing (see enlarged detail). A bit of Tamiya paint matt brown (XF-10) gives the wood a prototypical colour.

After that it is time to regulate traffic on the station access road. True to scale traffic signs are available from HOS-Modellbahntechnik. We have ordered signs from their regular range, but also requested the design of two new signs: The first is a sign saying “DB-Anlage” (German Federal Railway Facility) which was used by the Deutsche Bundesbahn (German Federal Railways) marked the transition from public road space to their areas.

The second is a historic bus stop sign, which has long since disappeared. It once marked bus stops and has to stand on both sides of the station. Heinz O. Schramm researched how the prototypes appeared, and even implemented two slightly different versions for the model.



In addition, we added a no parking sign in its old version (white background and a crossed-out P) and placed it on the side of the station building. The opposite side with the parking bays is decorated with the blue parking sign.



The traffic signs from HOS-Modellbahntechnik are simply put into small holes that have been drilled with a pin vice and a HSS spiral drill bit (both Faller) (top). The finished scene at the station access road looks very realistic, also, thanks to a suitable background.



On the cobblestone section of the road, we warn drivers of road damage (potholes) as well as the sharp bend and set a speed limit of 30 km/h. All of the signs are to be anchored safely in their designated spots.

For this purpose, a small hole with a diameter of 0.35 to 0.4 mm is sufficient in each case. A pin vice (170522) and HSS drill bits (170523) from Faller are used for this work. Afterwards a little bit of wood glue is sufficient to ensure a permanent hold in the drill hole. The glue can be applied with a fine tipped glue applicator (from Modellbaukompass) or with the tip of a toothpick.

Now, is also the time for gluing the Himmelreich station building into position, as it is no longer expected that we will have to lift or move it to gain access to narrow areas.

Nevertheless, we would like to attach the building to the diorama in a non-permanent way, in particular, if the need for repairs should arise at a later stage. Our glue of choice in such cases is Fixogum from Marabu, which we also use to attach those figures which have repeatedly tested our patience by falling over.



To prevent the station building from moving during the electrical works and causing damage to figures or signs, we now have to glue it into position. We use Fixogum from Marabu, a flexible rubber cement which allows for a non-permanent connection.

Fixogum has similar properties to Noch's temporary glue: Applied on one surface only, the rubber-like compound remains removable. Adhesive residues can be rubbed off just as easily. With the help of a wooden spatula, we coat the cardboard base plate and replace the building. Then we press it lightly from time to time until it no longer lifts: done!

This brings us to the end of the scenic part of the diorama build. From now on, the showpiece can be used for any type of photo shoots, for which we need a suitable background.

If we later place the diorama into a lit presentational picture frame box, as mentioned at the beginning of this four part series, such a backdrop must be sufficiently long and glued onto a solid base. It also can be installed with some distance from the landscape in order to avoid shadows. It therefore would also have to be rounded near the corners. But for the time being, these are just general recommendations.

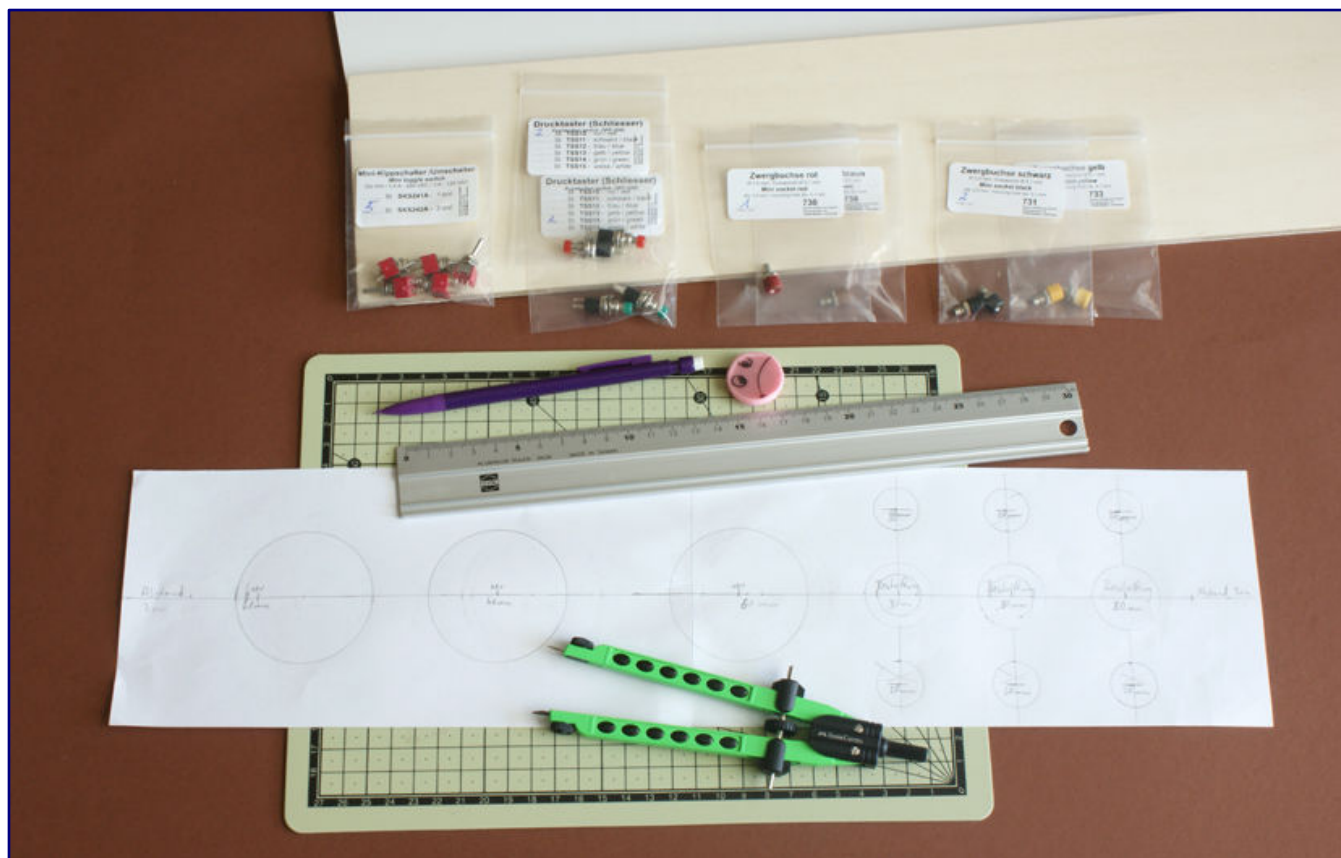
For the time being, we just use a suitable background printed on paper and temporarily unroll and attach it to a hard board. This gives us the flexibility to work with different backgrounds, and to also use them for photographing other showpieces.

For this diorama, we have decided to use Faller's model railway background "Schwarzwald-Baar" (180514) which consists of four parts, each 97 cm long. So with a diorama width of only 66 cm., we are fine with using only a quarter of the package contents.

## Electrical controls

For some model railroaders a horror, for us a joy: Working on the electrics of a layout is more than tedious duty for us. Of course, it does require some basic understanding of current, electrical power, and voltage, but most model railroaders should have this. And those who don't can learn it; studying some visual guidance is enough.

Some time ago, when we ran a yearlong series of special articles on digital technology, we explained the basics of electric current using the water model. This allows us to quickly clarify what is meant by the different units, and where potential problems lurk.





The keyword “digital” is also of importance for us in the context of this project. We would like to keep open the possibility of operating the diorama in either analogue or digital mode, and to use it for staging many models from the 48-year history of the Z gauge, as well as, rolling stock that has been converted to the latest technology.

And this has an influence on our control unit, which we want to integrate into the back of the diorama. Protected by the wooden base box, we want to install switches and push buttons for operating three track circuits, and two light circuits, as well as, the two semaphore signals.

As this is all to be run on external power supply, we are not going to integrate transformers. Instead, we will provide sockets for the track current (controllable or digital voltage), and supply voltages of 10 and 16 volts alternating current using standard model railway plugs using the usual Märklin colour scheme for Z scale wiring.

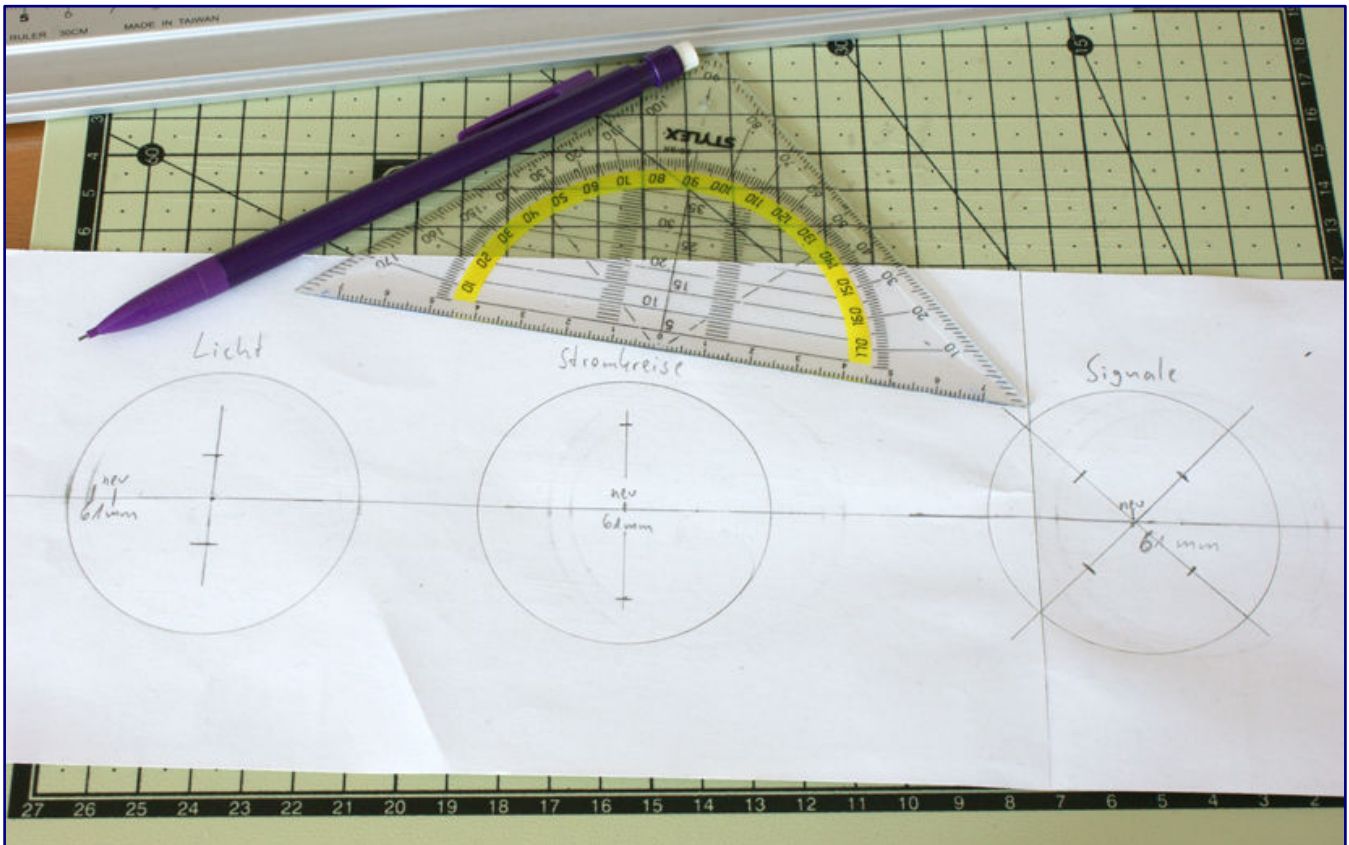


In view of the different voltage supplies of the platform light (see photo) and the house lighting compared to the semaphore signals, we have to provide a total of six electric sockets for transformer connections (see right side of photo on page 46).

The reason for using two different voltages is due to the drives of the Viessmann signals (technically identical to those of Märklin) which use the same 14 to 16 volts drives which are also used for their H0 scale signals. The platform lights (Viessmann) and street lights (from Z Norm), on the other hand, run on 10 volts.

Viessmann's floor and house lighting systems can also be supplied the lower operating voltage; the permissible AC voltage for their operation is specified in the instructions as 10 to 16 volts.

Our decision to uniformly use 10 volts for the entire lighting system allows us to control all lights later with only two switches: one for the interior of the station building and another for the exterior lights.



The traces on the paper bear witness to different stages of planning with varying distances and circle diameters. Finally, we decided on operating openings with a diameter of 61 mm. Now it is necessary to draw the position of the push buttons and switches, so that the 1:1 template can then serve as a drilling template.

On the basis of these specifications, we now start planning the controls: The diorama base will be equipped with openings for easy access. On the rear side we will mount a 3 mm thick MDF board, which will accommodate sockets, switches and buttons. The panel has a white coat on the visible side for visual appeal and a professional look.

We need the following items which we source from Donau Elektronik's product range:

- 1 x Miniature panel jack 2.6 mm red (730)
- 2 x Miniature panel jack 2.6 mm black (731)
- 2 x Miniature panel jack 2.6 mm yellow (733)
- 1 x Miniature panel jack 2.6 mm brown (738)
- 5 x Miniature toggle switch 2-poles ON-ON (SKS242A)
- 2 x Push button switch (normally closed) red (TSS102)
- 2 x Push button switch (normally closed) green (TSS14)

Since the jacks provide plug in connections on both sides, we still need the matching plugs for inside and outside in the following quantity:

- 2 x Miniature plug 2.6 mm red (710)
- 4 x Miniature plug 2.6 mm black (711)
- 4 x Miniature plug 2.6 mm yellow (713)
- 2 x Miniature plug 2.6 mm brown (718)



We finally determined the length and width of the MDF board at 12 x 50 cm and made a paper template in the same size. A little bit of thinking was now required to find the optimal arrangement of all elements in view of the available space and a comfortable handling.

As soon as this has been decided, we use a ruler, set square and compass, mark all distances and dimensions and draw circles at the defined points for the planned openings. We also draw the centres for sockets, buttons and toggle switches on the template; we will need them later.

We are limited in the diameter of the openings, as these are ultimately determined by the dimensions of the available tools. We specify 61 mm for the pushbutton and switch fields, 20 mm for the sockets and 30 mm for the markings. This allows us to drill the large holes with a hole saw, while Forstner drills are used for the two smaller ones.

But before this can be done, all items to be installed must pass a “contact test.” After all, the purpose of the whole thing is to connect all controls firmly to the diorama box, and to protect them at the same time from impact and damage during transport. During our test, we realized that the toggle switches would protrude too far to be safe, unless we created a recess that was deeper than possible with the then current side panel of the diorama base.

We now use a slide gauge to determine the maximum thickness of the mounting plate. This step is required for all elements, since they are all mounted on the same plate.



To protect the toggle switches from damage, they must be mounted into a recess. We will therefore use a 6 mm plywood panel to add depth to the back side of the diorama where the control panel will be installed. On that plywood panel we mark the centre points of the required openings with the help of a piercing tool made of a defective tweezer and a (red) Edding pen

Without a problem we can add an extra 6 mm plywood panel, which will solve our problem of having to increase the depth of the recess. So off we go to the timber dealer, carpenter or hardware store to get the necessary materials. Also on the shopping list: countersunk screws of suitable length, which are need for attaching the MDF panel from the inside.

## Drilling holes (in a thick board)

It's always good to think for a moment, before getting down to do something! The extra layer of 6 mm plywood must be given the same openings as the box; after all its purpose is to increase the thickness of the material and thereby make a deeper recess in which to install our electrical components.

So we have to measure and mark its mounting position, but on the outside. We will glue it on the inside, but not until later, because the first step is to protect the outside of the box from tearing, which can occur during drilling.

On all inner surfaces this would be uncritical, because they will be invisible. Any uneven surfaces or little holes in the visible openings, which are unavoidable when drilling into plywood, will disappear once they are smoothed with filler and sanded.



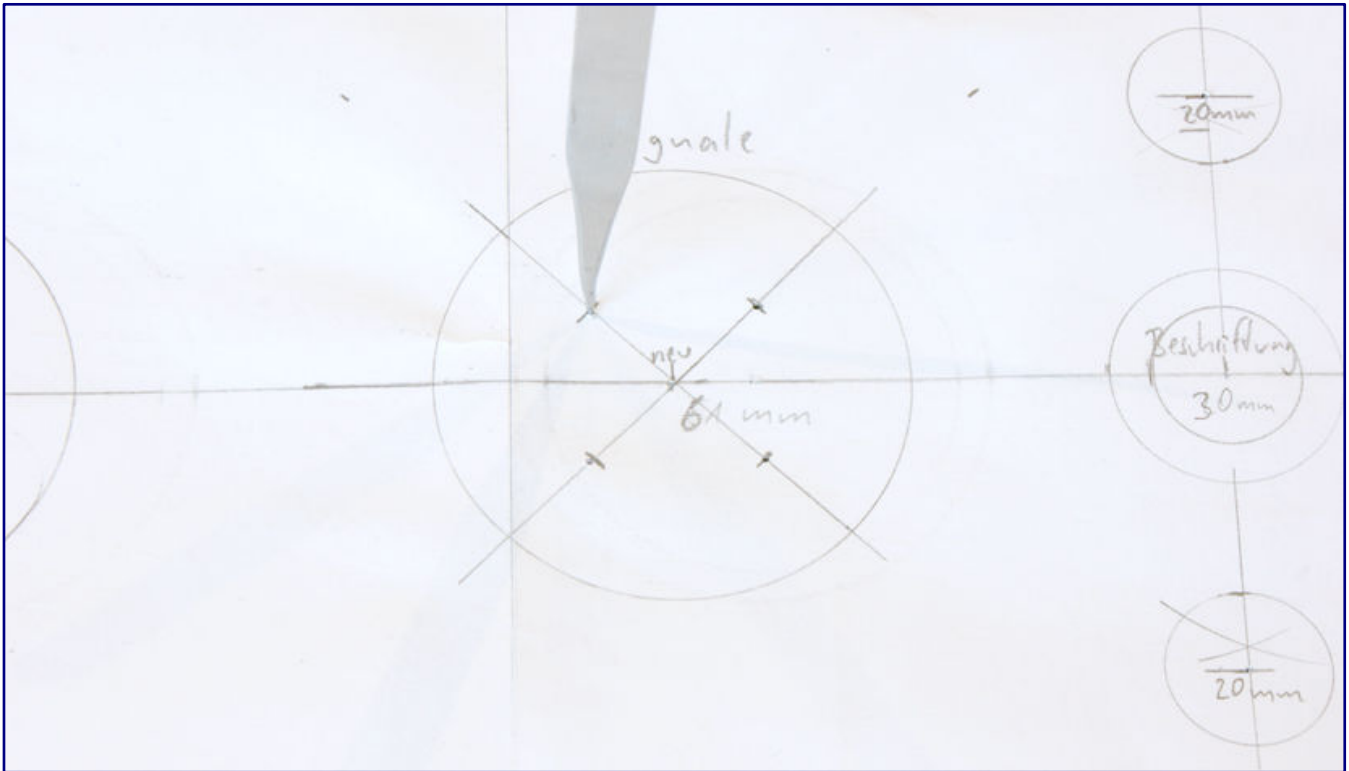
The plywood panel, later to be mounted underneath the backside of the diorama, is first placed on top, aligned and fixed with clamps. The holes are then drilled with a cordless drill, first with a hole saw, and then with Forstner drill bits of two different diameters.

Now we place the extra plywood panel on the backside of the diorama, and fix it securely with screw clamps. Then, the cordless drill is finally put to work, drilling one hole after another. This does not take long and is easy to do, since the professional tool, which is even designed as a percussion drill, works powerfully and persistently.

Once this is also done, we remove the clamps again, sand the edges of all openings by hand with some sandpaper and check the results. After removing the chips and sawdust, we then glue the board into place on the inside.

For this we use Uhu wood glue from a large jar, apply it with a brush and then apply firm pressure with clamps (and a batten in between) until the glue is dry. Afterwards, we fill and sand the surface in preparation for painting.





Transferring the drilling points is quick and easy: Place the paper template on the MDF board, align it and transfer the centres with the piercing tool (top). We then highlight the markings with an Edding 780 pen to make them clearly visible (bottom).

But before we start with that, we also work on the MDF board: Here, too, we need to drill the holes for the switches, buttons and sockets, which diameters according to the shafts as measured with a calliper.



The diameters of the holes for switches, buttons and sockets depend on the shaft dimensions of the built-in parts, which are either specified by the manufacturer or measured by ourselves.

We transfer the all drill points (including an additional ten for later screw connections to the plywood plate), from the template with the help of a piercing tool made from defective tweezers. The small holes are then marked with the fine tip of a black Edding 780 before drilling.

There was no question for us about the colour of the exterior paint: It should be dark to absorb a lot of light. That way it will attract only little attention. The second requirement is that it must be a neutral colour, leaving practically no alternative but dark grey.

We bought a can of anthracite-grey acrylic paint at the hardware store. After giving the paint a good stir, we first begin by painting all the edges, screw heads and the area of the control panel with a bristle brush that is not too wide. Care must be taken with the edges towards the landscape, because too much paint that runs, or that would be sucked in by capillary force from grass fibres, could destroy our work.

In order to be able to work on the (covered) ground without spills, we put the diorama upright. But this also means that we have to work in stages and cannot paint all four sides in one go without drying breaks.

We paint the large areas with the help of a foam roller, in principle, comparable to painting a wall. This technique allows us to spread the paint much more evenly and to apply it deep into the pores of the wood without applying it too thickly. We paint along the direction of the grain of the wood.



Of course, this is primarily a question of personal preferences: we could have also used a wide brush and sufficient coats of paint to hide the wood's texture. But, we love wood as a versatile and sturdy building material and do not want to hide it.



The diorama box is painted in dark grey. The paint is applied with a brush at the edges as well as at the border to the terrain transition (top), and with a paint roller for the rest of the surface (bottom).

While the paint dries, its surface must no longer feel sticky, before continuing – we prepare the next step. We now screw in the toggle switches, buttons, and dwarf sockets into the MDF panel, and then align their connections uniformly, and tighten the nuts.



Switches, buttons and sockets are inserted into the MDF panel and screwed tight. One can also see in the image that the ten screw holes have already been pre-drilled for fastening the panel to the rear side of the diorama. All that is missing now are labels for all the controls and the sockets which will be made with a label printer.

Inside the wooden box, we fasten the countersunk Torx head screws (4x15 mm) (which has become very popular because of their proven reliability), and screw the panel tight. All switches and buttons now get label which we make with a label printer: “Lights” marks the switches for the lighting, while track current and signals are marked with the track number.

By the way, the counting direction always starts at the station building. The miniature sockets, through which the current from the transformer is supplied, are partly already assigned by their colour code. However, black (representing grey) and yellow are found twice. The central openings (30 mm Ø) therefore, receive (from left to right) adhesive labels for “0 - 10 V=,” “10 V~” and “16 V~.”

## Wiring and switching

With the wiring now imminent, the last big step of the diorama construction is already underway. Inside the wooden box many yellow, brown and red cables protrude into the interior, and wait to be connected.

The two light connections for the semaphore signals (yellow and brown) can be connected directly to the 16V connections because there is permanent light here (the red ones for train control remain without connection). The same is true for the red cables of the track connections and the red socket, as well as, the yellow wires of the lighting units and the yellow 10V socket (phase).

However, they are all led to the socket via a distributor. Due to the lack of temporary availability of the Brawa distribution board, which we had selected for this purpose, we decided to use an alternative: Busch offers a self-adhesive copper tape (1799) in a 10 m roll, which can be cut to length with scissors.



The copper tape is suitable for currents up to 2A, so no problem for us to use it. All cables are soldered individually to it, as well as the appropriate cross section, which creates connections to the miniature sockets from there.



**Starting on the wiring of the diorama:** The wiring follows Märklin's colour coding scheme for Z scale electrics (see information box) are sourced from Brawa, as are the cable holders. The adhesive copper tape is from Busch, which can conduct currents of up to 2 A, and is used for soldered connections.

Our switches and push-buttons in the lighting circuits interrupt and close the lines for the mass of the individual consumers. In the area of the lights we form two groups again via copper tape distributors and lead one line each to the switch and behind it further to the corresponding black socket.

With the track current (red wires) and the two blue wires of the signal we have to lead the supply lines one by one from the track area to the switch or button, a distributor function can only be used between switches and sockets here.

When organising the wires, professionally speaking they are actually strands, we have chosen the following materials from the cable specialist Brawa:

## Lights and switching

- 10-m reel with a wire diameter of 0.14 mm<sup>2</sup>, grey (3107)
- 25-m reel of digital use wire with a larger diameter of 0.25 mm<sup>2</sup>, yellow (3210)

## Track current

- 25-m reel of digital use wire with a larger diameter of 0.25 mm<sup>2</sup>, red (3211)
- 25-m reel of digital use wire with a larger diameter of 0.25 mm<sup>2</sup>, brown (3212)

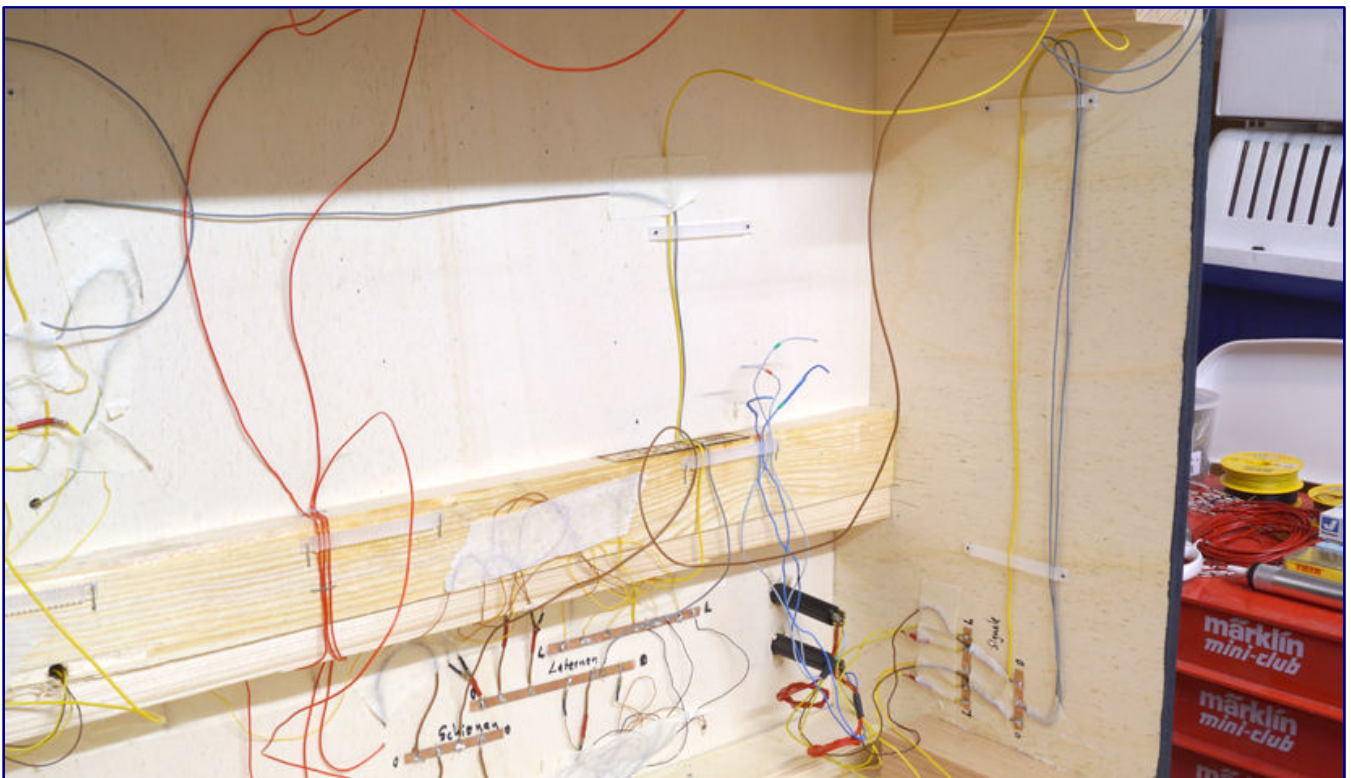
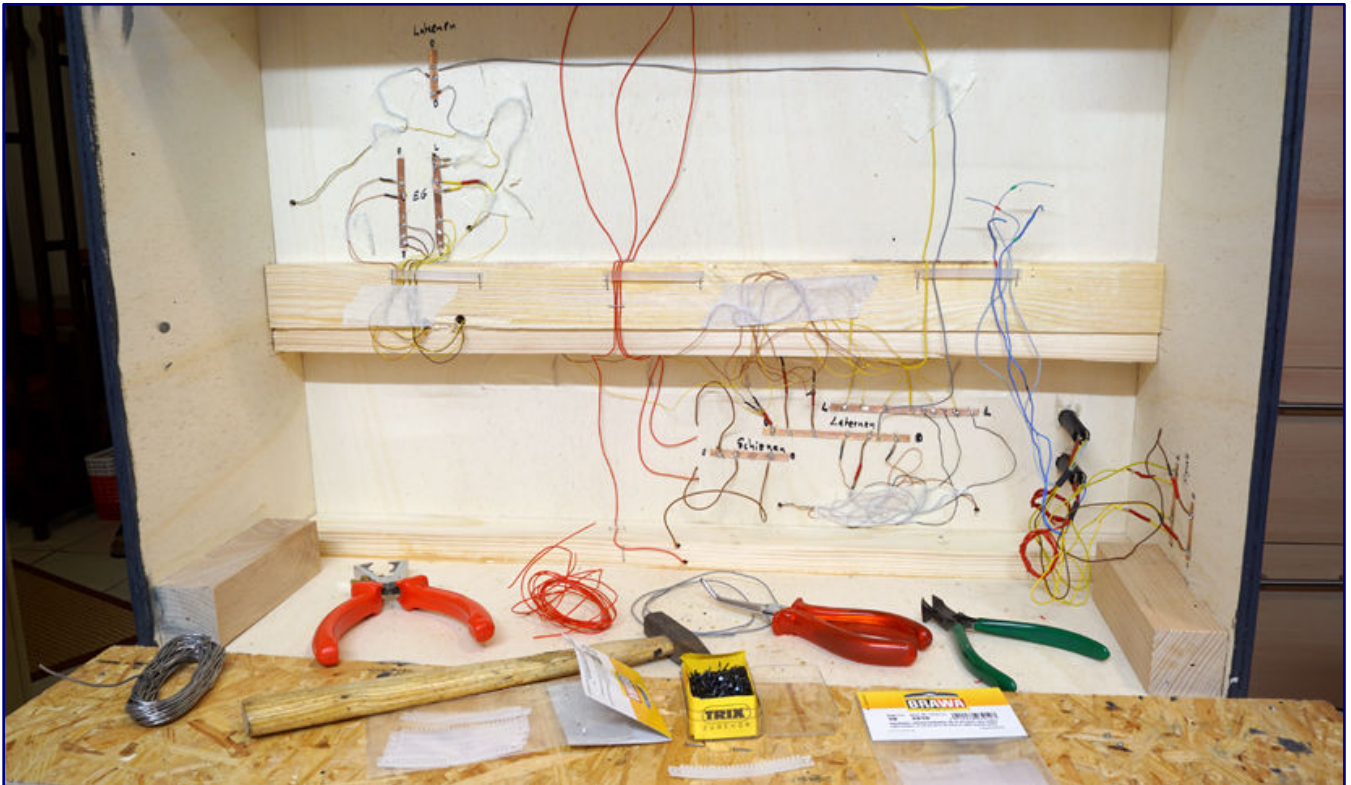
### Märklin's wire colouring scheme for scale Z

Many manufacturers have defined their own colouring scheme for electrical polarities and functions in order to facilitate the wiring of layouts.

We follow Märklin's long standing scheme for identifying polarity and functions at the outlets for Z scale controllers:

Brown	0	Ground for track
Red	B	Track current (positive pole)
Grey	0	Ground for lights and accessories
Yellow	L	Light current (phase)

Ground (GND) has a potential of zero in DC and AC circuits and makes for the negative pole of the track current.

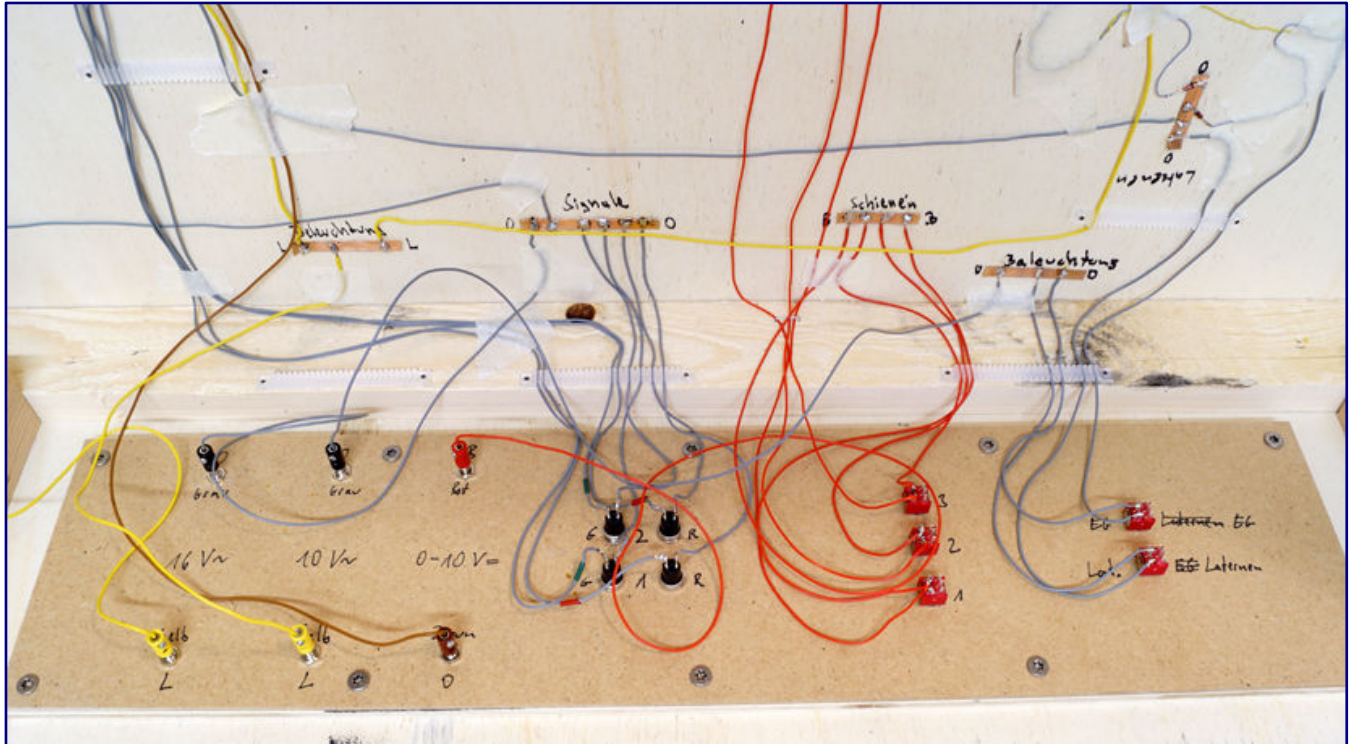


Little by little, cable holders, distributors and wires are installed (top). Maintaining order is key for not losing track of connections: for example, wires are routed only vertically and horizontally (bottom). However, for the moment things may still appear chaotic to the casual observer.

In order to be able to keep track of connections in case of malfunctions or damage, the interior of the diorama needs to be well organised. For this reason, the wires are not routed diagonally or left unattached, but rather nicely ordered and routed only vertically and horizontally. Otherwise, any future repair work, would be unnecessarily complicated. Let us only think of short circuits...



A first tool to order things was already the use of distributors, but this is only a first step. Wires can also be held in position by means of cleats or staples inserted with a stapler. But if you choose to use staples, you should always place a protective layer of material between the wire and the staple that cannot be cut through.



After wiring the control panel, the structure of cable guides (with cable holders) and distributors appears much tidier. In order to be able to clearly identify all components without a plan, we have worked as much as possible with direct labels. All switches, buttons and sockets are assigned to a voltage source or consumer. The same applies to the distributor strips (copper adhesive strips), whose polarity is also identified.

In the long run, however, cable holders are more convenient to use, for example those available from Brawa in packs of ten (3910). These are fixed with small nails or tacked on if desired, but can certainly also be fixed with a hot glue gun.

Up to 25 wires per holder can be attached permanently and securely by simply pushing the wires into the holder. With extremely thin wires for street and house lighting, however, this only works if both wires are twisted and clamped together.

If changes are to be made to the electrical system, wires can be easily removed and later reattached. In the long run, the additional costs for these wire holders compared to a self-made solutions may be worth it, especially since this solution will also protect the diorama or layout from the impacts caused by staplers or hammers.

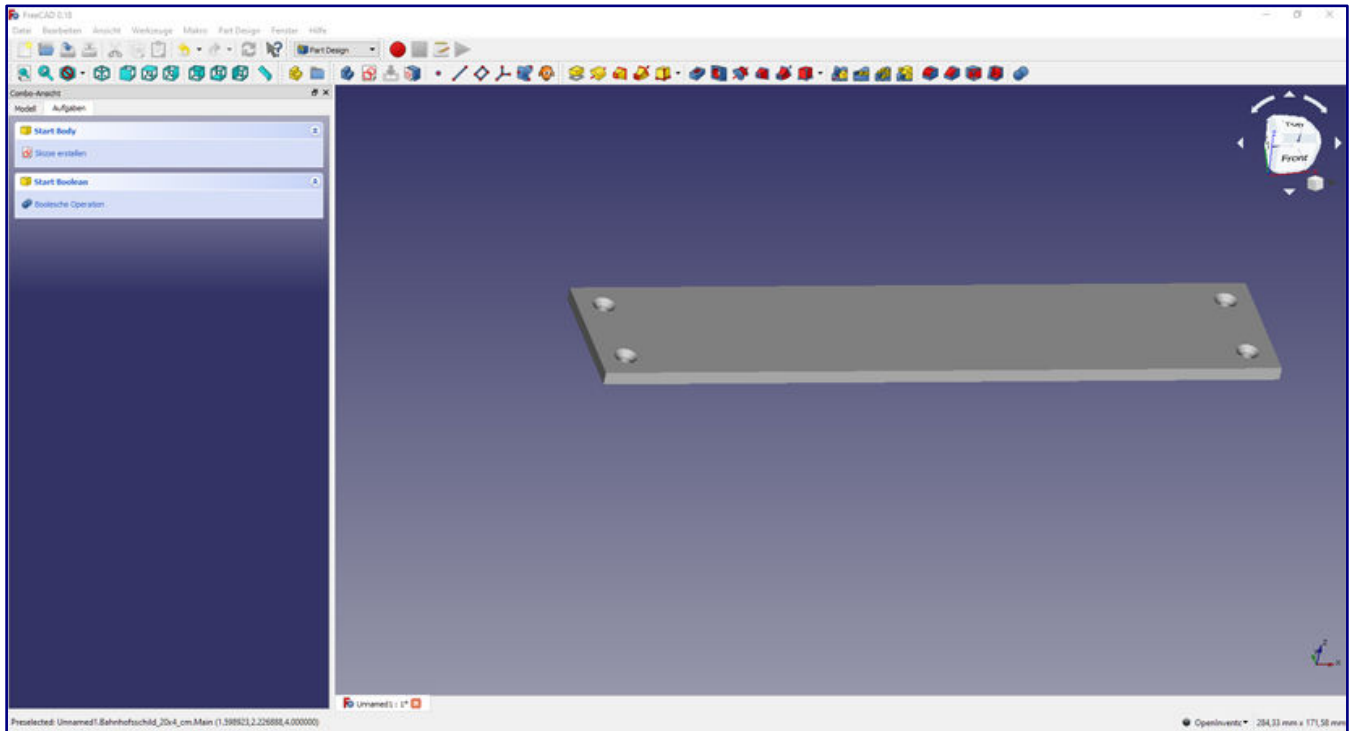
## A final challenge

Actually, the diorama would be finished at this point, but we found one last challenge. Inspired by today's possibilities of CAD design and 3D printing, and finally guided by the special issue of the "Miba" model railway magazine presented in this issue, we want to give this a first try.

This means reading through the magazine, downloading and installing FreeCAD, watching the tutorial videos and getting down to work: Creating a simple sign with a thickness of 4 mm and measuring 20 x 4

cm. At the four corners it should have screw holes for 3 mm wood screws with countersunk head. For this purpose, the edges of the upper side are to be bevelled.

For an experienced design engineer, this is child's play, but for us it is a something completely new. It helps us to understand how a construction project can be broken down into sub-elements (preferably basic geometric shapes), logical single steps, and sequences. At the same time we learn about the underlying logic of which commands have to be given to the computer.



We used FreeCAD, a free software, for our first own attempt at a 3D design. The designed object is the base of a name plate for the diorama; it measures 20 x 4 cm and is 4 mm thick. Four holes of 3 mm diameter, each with a chamfer, provide a possibility to screw it to the side of the layout base.

For more complicated models, it is recommended to create individual files for repeatedly usable components, which together form a tool kit. This would also be possible with our sign, but actually not necessary: We can split it into three parts and save work. An end piece could be drawn, saved, mirrored and saved as another file. This way we get two end pieces.

The middle piece without holes could be the third part, which could be varied in its length later. In this way, we also get a small tool kit that allows designing 4 cm high signs of almost any width.

But even this seemingly easy exercise has its pitfalls, which are due to the software and its functions in the latest version. Fortunately, we get help from Björn Plutka (Z-Doktor Modellbau) and Norbert Heller (NoBa-Modelle), who work with other software programs.

But slowly we do make progress and at the end the sign appears in the desired form on our screen. Norbert Heller, who witnessed the design process and our problems with it from close up, volunteered to print out the item for us.

As requested, the piece is printed in black FDM, because the surface structure is irrelevant for our purposes, and the technology less costly and the printing times are shorter. This also avoids painting the piece. After screwing it on to the front of the diorama, where the viewers will stand in future, we attach the actual sign to it.





#### Four steps for creating the diorama sign:

We design a station sign in the style of the former Deutsche Bundesbahn (German Federal Railroad) in our image editing programme, including traces of dirt and weathering. The sign is laser printed onto index card cardboard and cut out with a craft knife and a steel ruler. The 3D printed black base plate manufactured by NoBa models has also arrived (step 1).

We spray the surface of the cardboard sign with Noch's Spray and Fix Adhesive (61152) and the back of the sign with Uhu's "Spray Adhesive 3 in 1". Applied on one side only and after at least 20 minutes of drying time, this creates a non-permanent adhesive bond (step 2).

During the waiting time we attach the black plastic base for the sign on the viewer side of the wooden box. Four 3 x 12 mm wood screws with countersunk heads make for a strong connection, although fewer screws would have also done the job. However, it is important to use a spirit level before the screw holes are pre-drilled so that the sign looks straight even from a distance (step 3).

Finally, the cardboard label is placed, aligned and simply pressed on (step 4) - done!

It was designed with our graphic design programme and added rust and dirt marks. Black on a white background, written with a Futura font that was once specified by the Deutsche Bundesbahn (German Federal Railways) for new station signs, the name of the station and the diorama is now spelt out: "Himmelreich".

Printed on strong cardstock, cut out with the help of a steel ruler (Busch 7202) and glued to the 3D print base, our efforts finally come to a worthy end.



Everything is finished and the construction train can move on. The exit signal on the track tells the train driver of the V 36<sup>2</sup> to go ahead.

We would like to conclude this diorama building series with a few scenic and detail shots, with which we hope to be able to share our enthusiasm, and make you want to take a closer look at this showpiece at a future exhibition or trade fair. We are firmly convinced that it is worth the effort and time.

**Layout building materials:**

<https://www.bindulin.de>  
<https://www.brawa.de>  
<https://www.busch-model.info>  
  
<https://shopware.donau-elektronik.de>  
<https://www.faller.de>  
<http://www.hos-modellbahntechnik.de>  
  
<https://www.marabu-creative.com>  
<https://www.noba-modelle.de>  
  
<https://www.oesling-modellbau.com>  
<http://www.rolfs-laedchen.de>  
<https://www.tamiya.de>  
  
<http://www.trafofuchs.de>  
<https://www.uhu.de>  
<https://viessmann-modell.com>  
  
[z-norm\[at\]web.de](mailto:z-norm[at]web.de)

**Provider with possibility for a discount\*:**

<https://www.modellbaukompass.de>

\* In the free text of the order, mention the keyword **Trainini**. The discount will then be subsequently deducted.

Further scene and detail shots on pages 61 to 63





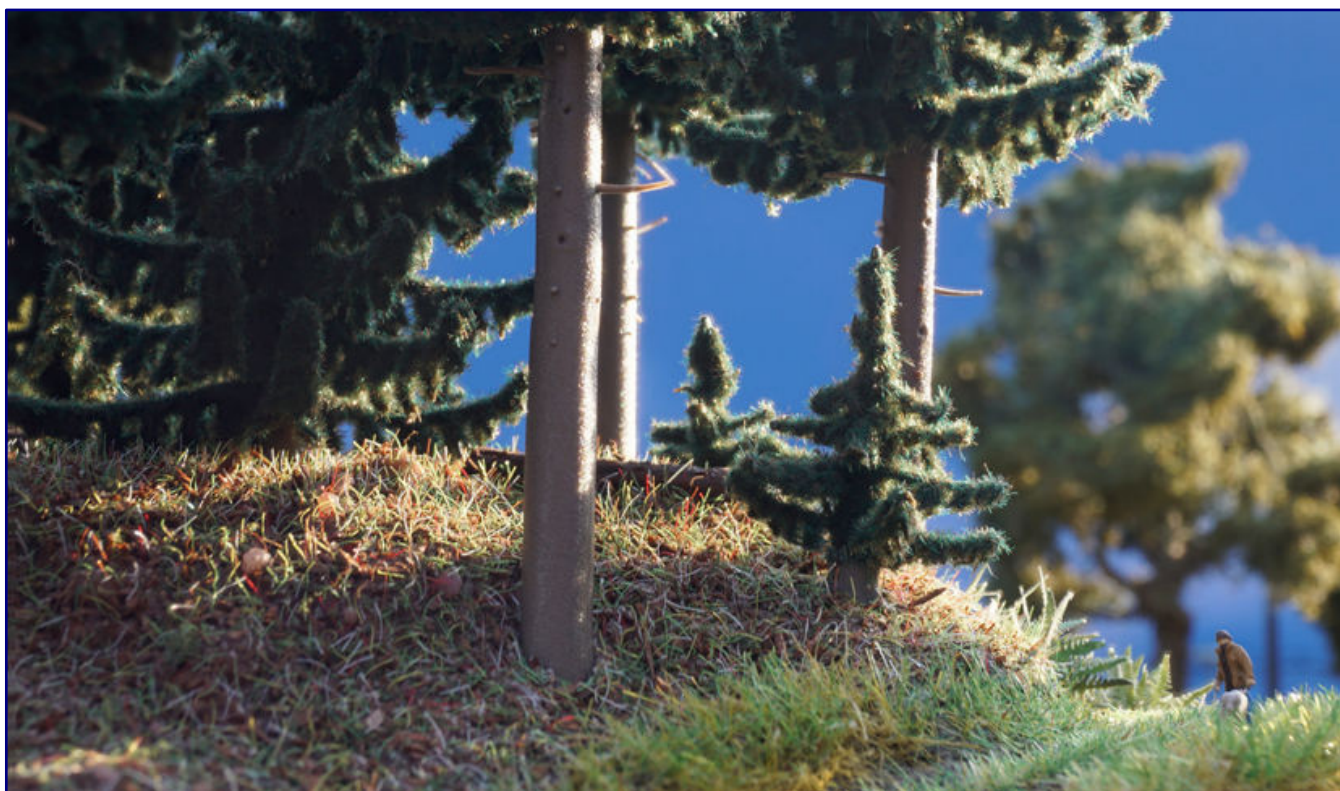
The eagle owl (see arrow markings) has a good view from his high post and looks down on the man with Labrador, who enjoys the forest walk in the early morning hours (picture above). Meanwhile at the station, bizarre figures are waiting for their train: While the lady is waiting on her mountain of suitcases, the (apparently) blind man is reading the newspaper.





The importance of a suitable background (Faller) is shown by the photo of the loading zone, parking bays and bus stop at the back of the station building (photo above). The tiny pigeons on the side of the track in front of the goods shed (see also enlarged section) become a search game for the viewer, but, the signalman in his (station) extension does not seem to mind (photo below).





The gentleman waiting for his sweetheart on the house platform must be a romantic, because who else would come to the station with a gas-filled heart balloon? Meanwhile, the railway official takes a close look at his wristwatch (photo above). On a walk through the woods, the low sun sets the bush spruce trees in the scene, particularly well. Forest soil, dead wood and ferns do the rest (photo below).



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Note for English readers: The literature section that follows is not translated into English because the original texts of the books involved are in the German language. The original German is left here for information purposes only.

## CAD und 3D-Druck für jeden Von der Pike auf gelernt

**Die CAD-Konstruktion hat bei Großserienherstellern schon seit über zehn Jahren das Zeichnen auf dem Reißbrett endgültig abgelöst. Zunehmend findet sie inzwischen auch Eingang in den Hobbybereich. Zusammen mit dem 3D-Druck tun sich deshalb völlig neue Welten auf. Ein Miba-Praxisheft erlaubt Interessierten jetzt den leichten Einstieg.**

Uwe Stehr  
3D-Druck für Modellbahner  
Konstruieren, Drucker-Typen, Praxisbeispiele  
aus der Reihe Miba-Modellbahn-Praxis (Heft 1/2020)

VGB Verlagsgruppe Bahn GmbH  
Fürstenfeldbruck 2020

Broschüre mit Klammerheftung  
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84 Seiten mit mehr als 420 farbigen Abbildungen

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Seit Jahren macht der 3D-Druck im Modellbau von sich reden. Doch für viele Modellbahner ist er immer noch ein „Buch mit sieben Siegeln“. Vielleicht kauft der eine oder andere Modelle, die mit dieser Technik hergestellt werden, aber einen Drucker daheim haben wohl die wenigsten.

Oft liegt das an der landläufigen Vorstellung, dass ein gutes Gerät sehr hohe Kosten verursacht, doch das ist seit einigen Jahren überholt. Eine weitere Herausforderung ist das Konstruieren der Modelle am heimischen Rechner, denn das setzt ein CAD-Programm und Wissen um Umgang mit diesem voraus. Dies sind Rückmeldungen, die auch wir von vielen Zetties erhalten haben.

Deshalb trifft es sich gut, dass die Miba diesem Themenkomplex ein Sonderheft der Reihe „Modellbahn-Praxis“ widmet. Der uns zuvor als Autor weitgehend bekannte Uwe Stehr hat sich der Herausforderung gestellt und die 84 Seiten mit Inhalten und vielen Bildern gefüllt.

Das Bildmaterial setzt sich hierbei aus Fotografien und vielen CAD-Darstellungen sowie Bildschirmfotos zusammen. Alles zusammen ergibt eine hervorragende Mischung, mit der die textlichen Inhalte bestens dokumentiert und begleitet werden.

Auch die Wiedergabequalität ist gewohnt gut: Alle grafischen Komponenten sind perfekt reproduziert und gelungen in Bezug auf Farbsättigung, Weißabgleich und Kontraste abgeglichen worden. So macht das Betrachten nicht nur Spaß, sondern erlaubt auch das Erkennen von Details, die im Zusammenhang der Berichte wichtig sind.



Nahtlos daran anzuknüpfen vermag auch die Struktur, die der Autor dem Heft gegeben hat: Mit einem Vorwort führt er kurz ins Thema ein, um dann zu Beginn der Sonderausgabe den 3D-Druck hinsichtlich Geschichte, Druckverfahren und Auswahl angebotener Drucker für den Heimbedarf zu erklären.

Damit hat das Werk einen recht aktuellen Bezug und wird in einigen Jahren schon wieder weit überholt sein. Sicher gilt das in Teilen auch für das zweite Kapitel der Einführung, in dem an die 3D-CAD-Konstruktion mit dem frei erhältlichen Programm FreeCAD herangeführt wird.

Aber das wird der Broschüre keinen Abbruch tun, denn dieser Teil ist insgesamt überschaubar und Erläuterungen zum Konstruieren am Rechner werden auch mit späteren Programmversionen noch längere Zeit eine grundsätzliche Aussagefähigkeit behalten und deshalb eine Hilfe für Einsteiger bleiben.

Damit ist nun auch schon die Zielgruppe des Praxishefts in den Fokus gerückt: Nicht gestandene Modellbahner mit jahrelanger Konstruktionserfahrung werden hier angesprochen, sondern diejenigen Interessierten, die bislang überhaupt nicht mit dem Thema in Kontakt gekommen sind. Wer einen Reiz verspürt, dies zu lernen und eigene Teile oder Modelle aus dem Nichts entstehen zu lassen, ist mit einem Kauf gut beraten.

Uwe Stehr führt nämlich an einfachen Beispielen vor, wie man sich mit der Materie schrittweise bekannt macht und Grundlagenwissen aufbaut. Mit weiteren Beispielen aus seiner Praxis steigert er dann den Anspruch immer weiter und lässt auch komplexere Teile oder Modelle entstehen. Interessant ist hier auch der Ansatz zu einem Baukastensystem von Teilen, die immer wieder erforderlich werden und als ganzes eingefügt werden können, sobald sie einmal gezeichnet sind.

So eröffnen sich weitere Möglichkeiten für den 3D-Druck im eigenen Heim und zeigen neue wie auch faszinierende Facetten des Eisenbahn-Modellbaus. Sicher wird diese Technik den klassischen Modellbau auch auf längere Sicht nicht verdrängen.

Wo sie ihn sinnvoll ergänzen oder bereichern kann, wird hier aber spurweitenübergreifend sehr deutlich. Wer zuvor skeptisch war, wird spätestens nach der Lektüre davon überzeugt sein. Vorgestellt und behandelt werden mit dem FDM- (Filamentzufuhr zur Druckerdüse) und dem DLP-Druck (Auftrag photosensitiver Kunstharze) ausschließlich die zwei im Hobbybereich verbreitetsten Verfahren.

Keineswegs muss es immer ein Modell sein, dass mit Hilfe von 3D-CAD und 3D-Druck entsteht: Auch Werkzeuge baut der Autor und berücksichtigt auch die Option, dass am heimischen Ausgabegerät nur ein Urmodell oder Muster entsteht, das als Zwischenschritt zu einem Metallussteil dient.

Bedürfnissen der Zielgruppe gerecht wird auch der Abschluss der Ausgabe. In Tabellenform zählt eine komplette Seite die Bezugsquellen für Programme, Drucker, Verbrauchsmaterial und fertige STL-Dateien auf. Die Miba reiht sich aber auch selbst ein, indem die im Heft vorgestellten Vorführstücke ebenfalls zum Laden als STL-Dateien (und möglichen Weiterbearbeiten) bereitgestellt werden.

Schon lange haben wir kein Praxisheft mehr in der Hand gehabt, dass so gelungen wie in diesem Fall für absolute Laien an ein neues Thema heranführt und tatsächlich erste Gehversuche und das Sammeln eigener Erfahrungen ermöglicht.

Das kann besonders mit Blick auf die rasant wachsende Bedeutung des 3D-Drucks und mit ihm auch das eigene 3D-Konstruieren mit CAD-Programmen nicht hoch genug eingeschätzt werden. Deshalb nominieren wir diesen Miba-Modellbahn-Praxisband auch für die Neuerscheinungen des Jahres 2020 in der Kategorie Literatur.

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## Lkw-Klassiker neu aufgelegt **Bewährtes kommt wieder**

*Gutes bleibt, sagt der Volksmund. Wo dieser Ausspruch nicht passt, da kommt Bewährtes zumindest wieder. Das haben wir doch schon häufiger feststellen dürfen und gilt auch im Falle des nun vorgestellten Buches. Mit Werner Oswald stammt es von einem Autor, der ebenfalls aus dieser Sichtweise zu bewerten ist.*

Werner Oswald  
Mercedes-Benz  
Lastwagen & Omnibusse 1896-1986

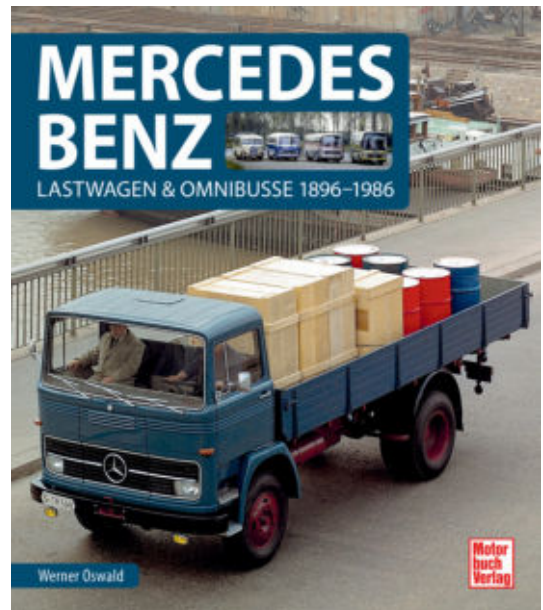
Motorbuch Verlag  
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Gebundenes Buch  
Format 27,0 x 23,5 cm  
592 Seiten mit 1.143 teilweise farbigen Abbildungen

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Buchautor Werner Oswald war eine Institution in der deutschen Motorpresse, von dem auch wir schon zwei beim Motorbuch-Verlag erschienene Titel zur deutschen Pkw-Geschichte vorgestellt haben. Doch diese „dicken Wälzer“ bilden nur einen Teil seines Schaffens.



1920 geboren und 1996 verstorben, schrieb der Ingenieur und langjährige Autotester ab 1965 eine ganze Reihe von akribisch recherchierten Büchern, die sich wohl allesamt gut verkauften. Sein geradezu legendärer Ruf und hoher Bekanntheitsgrad in der Autoszene gründete sich vor allem auf diese Titel.

Sein wohl bekanntestes Werk sind die „Deutschen Autos“, eben jene Bände, die wir zwei Abschnitte zuvor schon erwähnten. Das vorliegende Werk scheint perfekt daran anzuschließen, wirft es doch einen ähnlichen Blick auf die Geschichte deutscher Lastwagen.

Wäre da nicht der deutliche Hinweis des Titels, dass sich das Buch nur auf eine einzige Marke beschränkt. Schnell wird also deutlich, wie viel Automobilgeschichte hier fehlen wird und doch überrascht der enorme Umfang. Keine Frage ist es also, dass ein Nachschlagewerk vor uns liegt, das wir noch viele Male bemühen werden.

Aber ganz korrekt ist die Einschränkung „Mercedes-Benz“ auch nicht. Das wird umso deutlicher, wenn wir bedenken, dass der zeitliche Abriss bereits im Jahr 1896 – also zehn Jahre nach Erfinden des Automobils – beginnt. Damals waren Daimler und Benz noch selbstständige Unternehmen ohne jeden Bezug und die Marke Mercedes-Benz gab es noch gar nicht.

Blicken wir in Richtung Ende des Zeitstrahls 1986, stellen wir nicht nur fest, wie viel Entwicklung auch in den folgenden 34 Jahren danach stattgefunden hat, sondern stolpern sicher auch über die bewegte Geschichte der Daimler-Benz AG bis dahin.

1900 erblickte das erste Fahrzeug unter der Bezeichnung Mercedes-Benz das Licht der Welt, was sich schnell zum Synonym für Fahrzeuge mit dem dreistrahligem Stern entwickeln sollte. 1926 fusionierten Daimler und Benz, bald darauf konzentrierten sie ihre Nutzfahrzeug-Fertigung in verschiedenen Werken.

Dies waren vor allem Mannheim und Gaggenau, womit wir gerade auch den legendären Unimog streifen. Als sie zu klein wurden, ging 1965 in Wörth ein neues Werk in Betrieb. Nach dem Zweiten Weltkrieg kam mit dem L 319 auch eine völlig neue Nutzfahrzeugklasse auf die Straßen, die ebenso in dieses Buch gehört.

Eine Erweiterung des Angebots brachte auch die Übernahme von Hanomag-Henschel, mit dem ein Kleintransporter unter dem Stern auflief, der noch auf die Marke Tempo zurückging, die zuvor von Rheinstahl-Hanomag geschluckt worden war. Mit dieser Übernahme waren auch die Überreste von Borgward und der früheren Lkw-Marke Henschel im Konzern.

Das Buch spannt einen großen Bogen, den in neunzig Jahren Nutzfahrzeuggeschichte sind viele Entwicklungen zu berücksichtigen, die hier Eingang finden mussten. Dies ist weitaus mehr als nur der Wandel von einer Kutsche ohne Pferde zu einem schweren Lastenträger für unterschiedlichste Aufgaben!

So führt der Weg von Holz als Grundbaustoff zu Leiterraahmen aus Stahl und selbsttragenden Konstruktionen bei Omnibussen, von unterschiedlichen Motorenkonzepten zum immer weiter entwickelten Dieselmotor oder auch von Kutschenrädern zur Luftbereifung.

Werner Oswald beließ es aber nicht bei einer reiner Typenaufzählung und Wiedergabe ihrer prägenden Merkmale und tabellarischer Angabe der technischen Daten. Er erzählt die Geschichte von zwei Automobilherstellern, ihren Werken, der Fusion und weiteren Übernahmen inklusive der düsteren Jahre des Krieges.

So machen auch militärische Fahrzeuge, aber auch andere Spezialisten für Feuerwehr, Entsorgungsbetriebe und viele weitere Spezialaufgaben einen entscheidenden Teil dieses Buches aus. Erstmals erschienen ist es 1986, was auch den zeitlichen Schnitt erklärt, doch bis heute hat es nichts an seinem inhaltlichen Wert verloren.

Für den Modellbahner mit Interesse auch abseits der Schiene ist es ein äußerst brauchbares Nachschlagewerk. Dabei spielt es keine Rolle, ob es um einen korrekten Einsatz von Modellen und deren historisches Einordnen geht oder Anregungen fürs eigene Gestalten gefragt sind.

Diese Neuauflage erschien, weil das Originalwerk schon lange vergriffen ist, aber auch ein wenig in die Jahre gekommen war. Nun erhielt es ein größeres Format, eine zeitgerechte Gestaltung und viele neue Bilder, von denen uns einige aber aus anderen Titeln bekannt waren. Wer Freude an einem Werk wie diesem hat, sollte die Gelegenheit also nutzen.

Angesprochen hat uns auf jeden Fall die gelungene Bildauswahl, die gewiss nicht einfach war, wenn wir bis 1896 zurückblicken. Was wichtig war, taucht dennoch in diesem Band auf und das auch in ansehnlicher Wiedergabequalität. Da spielt es fast keine Rolle, ob es ein verblichenes Schwarz-Weiß-Foto aus den Pionierjahren der Fotografie ist oder ein durchrestauriertes Fahrzeug neu abgelichtet wurde.

Alles ist gut zu erkennen und im Bild zu bewerten, Lücken sind uns auch keine aufgefallen. Einzig wenige Abschnitte hätten es verdient gehabt, etwas ausführlicher dargestellt zu werden. Ein Beispiel dafür wäre die enorme Entwicklung der Omnibusse vom Leiterraahmen mit Frontmotor unter langer Haube zum Frontlenker mit Heckmotor. Dazu gehört ja immerhin auch das Erfolgsmodell O 305, das wir in dieser Ausgabe auch im Modell würdigen.

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<https://www.motorbuch.de>  
<https://www.motorbuch-versand.de>



Special exhibition in the DB Museum

## 100 Years of the Deutsche Reichsbahn

*Almost unnoticed by Zetties, this year marks the 100th anniversary of the foundation of the Deutsche Reichsbahn. But even if the time between 1920 and 1945 is hardly ever loved in the model, it is worth taking a look at the history of the company. In Nuremberg, it will even come alive again through 31 October 2020. We have taken a look at the special exhibition.*

The year 2020 is one that also brings with it great anniversaries. The historically most important of them, in gauge Z, has not even been worth a note: in 1920, one hundred years ago, the ailing state railways were merged into the Deutsche Reichseisenbahnen (German State Railways) by imperial law.

This was the birth of the Deutsche Reichsbahn, as the new company was soon called and under which it reappeared as a state authority from 1937. On April 1, 1924, it was transformed into a private sector legal form, the Deutsche Reichsbahn-Gesellschaft (DRG), in accordance with the Dawes Plan, and pledged to the victors of the First World War.



E 44 001, one of the prototypes for the German Reichsbahn's highest-numbered electric locomotive series, as the most modern design of electric traction, could not be missing in this special exhibition.

Especially in the period from 1920 to the end of the war in 1945, the company experienced a very eventful history, full of ups and downs, peppered with glamorous appearances and dark chapters.



In the new vehicle hall, exhibits in a showcase inform about the work of the DLA Darmstadt. Hermann Maey, Carl Bellingrodt and their comrades-in-arms once set out to permanently record the entire vehicle fleet of the Reichsbahn with standardised portrait photos for the German Locomotive Photo Archive.

The most exciting years were marked by extremely uncertain times: almost impossible reparations, occupation of the Ruhr, inflation and revolts, but also the “golden twenties” and finally the world economic crisis in 1929, which put an abrupt end to all hopes.

After Germany had capitulated in 1918, the railway system was in ruins: an almost confusing fleet of different types of rolling stock, often in small numbers and in poorly maintained condition.

This was followed by the delivery of usable rolling stock to the victorious powers in large quantities, naturally with priority given to new and modern material.

The investments seemed immense to fill the holes torn by the war and its direct consequences.

The national railways did not seem to be able to cope with this task and so it was finally possible to implement what had already been striven for in vain in the Empire: a uniform and nationwide railway administration.



All around the E 44 001, floor markers for all recording perspectives defined by the DLA were embedded, which visitors – like here the gentleman in the white shirt – could use.



However, the young Reichsbahn was faced with great challenges: It had to take up the fragmented vehicle fleet, evaluate it according to uniform criteria, categorise and name it in order to make it manageable, and finally a standardisation should provide a noticeable rationalisation.

Initially, this work was aimed at a unified numbering system (series designations), the unification and standardisation of important components for the economical stocking of spare parts and the reproduction of proven locomotive types, in order to make modern and efficient vehicles an important carrier for transport services.

While in the neighbouring European countries that had emerged victorious from the war, increasing the performance of steam locomotives was considered a development goal, the DRG was committed to the greatest possible standardisation and exchangeability of parts and entire components. This striving finally led to the so-called unit steam locomotives.

Their weak point was that everything had to be subordinated to standardisation and cost-effective operation. Thus compound locomotives were completely taboo, and for about ten years triple engines were also.



The former fire victim 50 622 now is shown again in an externally restored condition. For the special exhibition it represents the era of the standard steam locomotives, as the most successful construction.

The stubborn adherence to meanwhile outdated construction principles and the ignoring of technical knowledge finally led to the long tube boiler, whose efficiency and performance left a lot to be desired.

A farce in its history is that the Deutsche Reichsbahn was also assigned responsibility for the construction of Reichsautobahnen. It therefore had to build up its own competition and finance it.

However, the revival of car traffic also let creativity bubble: Inventions such as the light express trains (Leig), the “rolling siding” (Culemeyer train car transporter [for roads]), experiments with turbines and higher boiler pressure, the development of various internal combustion engines, the Rail Zeppelin or small locomotives, as well as progress in electric traction all bear witness to the quest for future competitiveness.

When the first round anniversary of 100 years of railway in Germany was approaching in 1935, the balance of power in Germany had already changed.

The Deutsche Reichsbahn was in the process of building a network of express railcars geared to Berlin, which was recognised worldwide. The E 44 showed the way to a modern, bogie-el-locomotive without running axles in standard design. The brand new E 18 won a prize for its extremely successful design.

“King Steam” was at the zenith of its history and entered the history books with the world record of the streamlined experimental locomotive 05 002 over 200.4 km/h.

But the glory was soon over. In 1937 the DRG became a state-owned enterprise again and was soon included in the preparations for war. The focus shifted to the transport of heavy loads instead of high-speed.

At the latest with the beginning of the war, the darkest chapter of the Reichsbahn began: it not only had to transport soldiers, ammunition and war material to the frontlines, but also played a leading role in the deportations to the death camps. Today, the DB Museum commemorates this in its permanent exhibition and has been putting an end to the look away ever since.

This is also the reason why this is missing in the special exhibition, which is being shown in the vehicle hall II and on the open-air grounds since 25 June 2020 to mark 100 years of the German Reichsbahn. Until 31 October, the DB Museum in Nuremberg is displaying a special exhibition entitled “Focus! 100 Years of German State Railways” including vehicles of all three types of traction from the period 1920 to 1945.

Not to be missed here are the sister locomotive 05 001 of the record-breaking locomotive, the torso of the “Flying Hamburgers” and the mother of the aforementioned standard locomotive in the form of E 44 001. The first two specimens mentioned above are permanent exhibits such as the 78 510 as an example of the steam locomotives, which were adopted and standardised by the state railways.

The Bavarian EP 5 (later E 52) is also an integral part of the exhibition. Together with E 91 99 and the impressively restored 175 059-5 (class E 75) it shows the technical development of bar-driven electric locomotives from large engines to smaller drives. If we also include the E 44 001 and E 19 12, this evolution leads to the single-axle drive and more modern control systems.



This illuminated advertising board reminds us of the role of the Deutsche Reichsbahn in road traffic, its nascent competitor.





A large picture wall in the open-air area presents photographs from the DLA and contemporary quotes from the famous photographers. The DLA pictures were catalogued and could once be ordered as postcards.

The 50 622, which used to be operable and was severely damaged like 175 059-5 in the locomotive shed fire in 2006, represents the unit steam locomotive and this even in the form of its probably most successful design. Only the diesel traction is underrepresented, because besides the SVT 877 only a V 36 is to be attributed to it.

## DB-Museum Nürnberg

Lessingstraße 6  
90443 Nürnberg

### Business hours:

Tuesday to Friday 9:00 to 17:00  
Saturday and Sunday 10:00 to 18:00  
Mondays closed

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or 08 00 / DBMUSEUM

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Internet pages

But it also has an important role to play: It never belonged to the Deutsche Reichsbahn, and, as a former Wehrmacht locomotive, is more reminiscent of the chapter on armament and war. But it was the first diesel-hydraulic locomotive with a higher power. So it can at least provide a cross-reference to the V 16 001 (later V 140 001) preserved in Munich, which would have deserved a chapter of its own at the Reichsbahn.

The approach taken by those responsible for the special exhibition was extremely creative, spinning a red thread through the 13 locomotive exhibits. With the DLA, the German Locomotive Picture Archive, they made use of a group of photographers who are still well-known today.

Carl Bellingrodt and Hermann Maey are probably the two most famous photographers of this group, who later also worked for the state railway service – in retrospect, we owe many valuable photographic documents to them and their comrades-in-arms.

From the end of the twenties onwards, 14 standardised perspectives formed the basis of professional railway photography. And since the DLA team had set itself the goal of photographically documenting all series in the service of the Deutsche Reichsbahn, even fragments of the former state railways were preserved on celluloid.

The special exhibition also reminds us what a demanding task this was at the time when photography was still an extremely expensive hobby, even after buying a camera. But the sharpness of photographs taken on glass plates remained superior to that of the usual film material for a long time.



It seems almost unbelievable that 175 059-9 could still be saved after the fire. As a result, however, the electric motors no longer turn, which is why the drive rods cannot be attached. The unevenness in the metal sheets in the upper part is evidence of the heat of the fire, while the locomotive received new sheets below. Three clear view segments now allow a view of one of the two traction motors.

In order to immerse the visitor in this period and the work of the DLA, individual vehicles have been released and provided with floor markings to the standard recordings. Special raised hides open up further perspectives and viewpoints. But there are also many selected pictures of the old masters to be seen, which also remind us of other constructions in the service of the Reichsbahn.

Those whose interest has been aroused should not hesitate now: This special exhibition will be on show for just under a month. We have compiled the opening hours of the museum in an information box. It is recommended that you familiarise yourself with the currently valid regulations on health care at short notice. Then, nothing stands in the way of a visit.

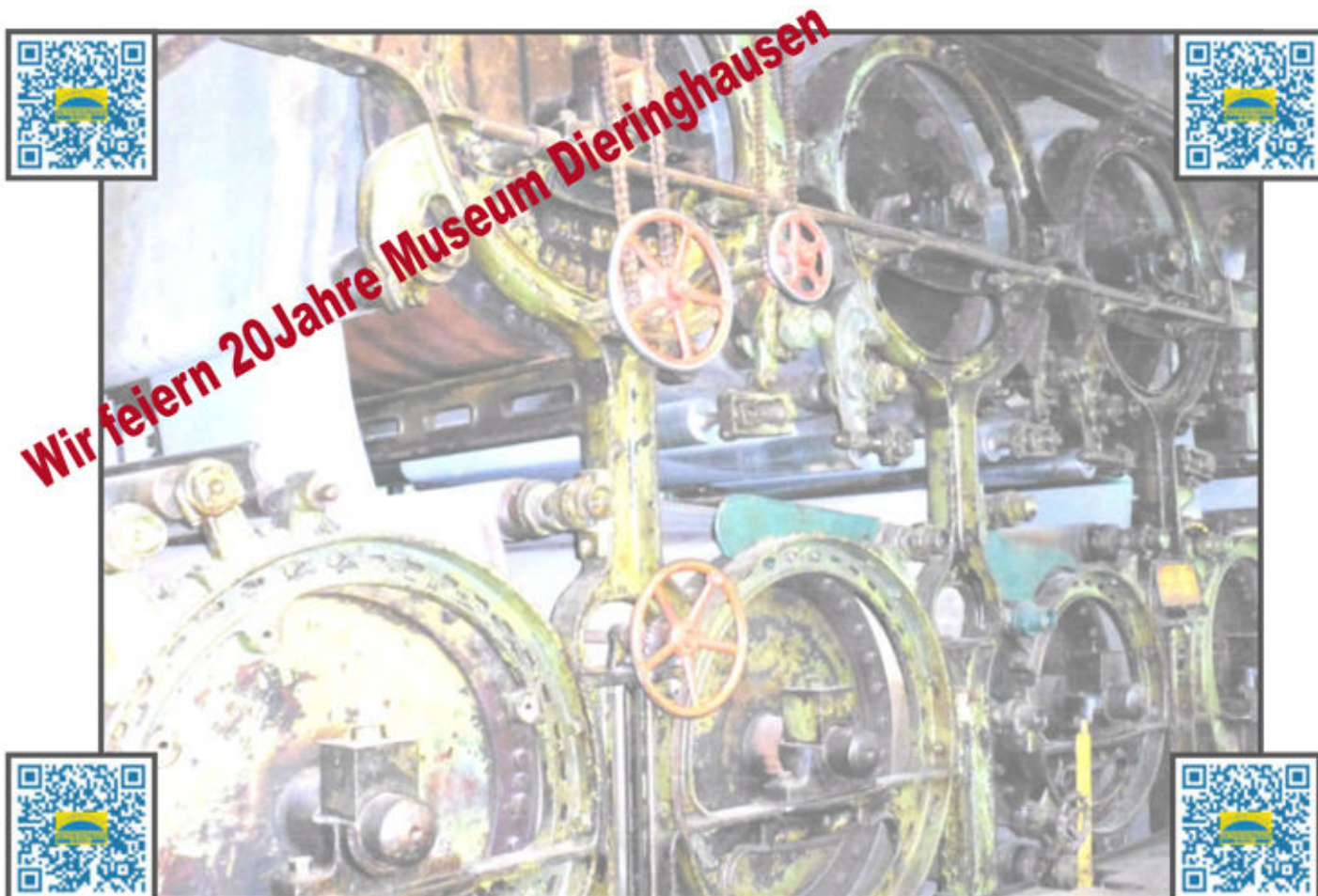
The web pages of the DB-Museums Nürnberg:  
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Leserbriefe und Meldungen

## Zetties and Trainini in Dialog

*Thank you for every letter to the editor and all the feedback that reaches us. Write to us (contact details see imprint) – Trainini® lives from the dialogue with you! Of course this also applies to all providers in Z-gauge who would like to present new products here. A representative picture is our goal. Also, notices of events or meetings with Z-gauge reference will find their place here, provided we are informed in good time.*

### Enthusiasm about our magazine:

You do a lot for Zett and we all drool every month for the next issue. There's always something for everyone and you can't get better information about our track gauge than in the Trainini.

Thank you all for your tireless efforts and the monthly issues of your magazine. This must be said!

By the way, I was in Kaliningrad the summer before last and saw the Russian version of the BR 120. It really made quite an impression on me. And since I'm building the Anhalterbahnhof (a Berlin train station), so until 1945, and the BR 120 has certainly driven in the remnants of this huge station, I decided to order such a machine from Alex. It was a very nice contact (...). Thanks for your hard work for our gauge.

David Studer, Brig (Schweiz)

### 15 years of Trainini and nobody noticed...

Since the last edition, the 16th year of publication of Trainini is already beginning. Didn't anyone notice that your really good magazine has already been published for 15 full years?



An appreciation of what has enriched the Z scene over the last 15 years would have been appropriate in my opinion.

From the market leader with its errors and confusion, I would have to mention the many new (and, of course, old) small series manufacturers.

As a cosmopolitan warbler, I also enjoy the Rokuhan models and the Rokuhan track system... if only it wasn't for the long journey from Japan to Europe!

This does not mean that I neglect Märklin, on the contrary...

Especially successful and, in my opinion, beautiful models are in my possession multiple times. Please continue to report about the "small" world of Z-scale and good luck with Trainini!

Alfred Angermaier, Unterföhring



## Breakthrough with the “Bromberg”?

Zmodell apparently presented a successful model with the only four-axle covered freight car of the former Reichsbahn, which was assigned to the Bromberg genus district. The DB version is currently being delivered as GGths 43 (Item No. 96051).

Due to the high demand, the delivery of all pre-ordered cars will probably take some months. Afterwards, versions as GGths of the DR in the former GDR, as KKwho 5 of the PKP and as GGlds of the ÖBB will follow.

The models run on pressed-plate bogies from Märklin, are available with short or regular couplers and have a chassis and body made of cast synthetic resin. The separately attached brakeman's platform railings are made of fine, etched, stainless steel.



For a long time the GGths 43 “Bromberg” was on the wish list of many Zetties. Now it was surprisingly released by Zmodell (Item no. 96051).

The correct coating and printed addresses are also convincing. The vehicle floor with its many details and the reproduction of the brake change-over switches are also particularly successful. For all of the versions planned to date, the 1zu220 shop (<https://www.1zu220-shop.de>) has taken over the general import, and the models can be ordered there.

The other versions can also be ordered from the manufacturer (zmodell[at]ukr.net) and must be imported from the Ukraine. In addition to the shipping costs, import duties, and sales tax will be charged by customs.

## Märklin deliveries:

Completely delivered is the electric multi-purpose locomotive of the class 120 (item no. 88527). It is a special edition of the MHI and Märklin intended it to be used for covering the special passenger train, which was also produced as an MHI product.

Inscribed as 120 004-7 of the Deutsche Bundesbahn, the purple-ivory painted model belongs to Era IV and represents one of the five pre-series machines that were put into service in 1979. This also means that the serial number has been changed, compared to the former first edition, allowing this model to be used alongside its predecessor.



A model of the four pre-series locomotives of the class 120, to which Märklin's forms fit, was not in the product line for a long time. Now, it has been released as 120 004-7 (Item no. 88527) in a very successful design and with state-of-the-art technology.

The Prussian G 8.1 (88985) is now available as another locomotive model. The freight tender steam locomotive was redesigned several years ago and now also has a bell-type armature motor. Of course, it also convinces with its prototypical and elaborate paintwork and printing in accordance with Era I.

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These two rebuilt coaches (87073), to which we have dedicated a detailed article at the beginning of this issue, mark the beginning of a small series of coaches for the first special train "German Wine Route."

Also received by the dealers is the wagon set "Gütertransport DR" (86689), consisting of three open freight wagons Eas [5949] / [5971] of the Deutsche Reichsbahn in the former GDR (era IV). For these models Märklin used his moulds of the Eaos 106 of the DB, which had its first edition under item number 8650.

The members of the Märklin Insider Club can also be happy, because their year 2020 (80330) is now also available for collection at the dealers. This time, the choice was once again a covered car of the "Dresden" type, which has a grey-blue paint scheme with Cuba Imperial advertising, and is registered with the Deutsche Bundesbahn (German Federal Railways).



Like its prototype, it is lined up as GI 22 and represents a replacement type of car, which had different sliding door guides, additional diagonal stiffeners on the sides of the loading openings, and a truss on the car floor behind the running boards.



Also delivered is the 2020 annual car for Insider Club members (80330; front), a privately owned GI 22 with advertising for Cuba Imperial furniture. To compare the versions we have placed it in front of its 2011 H0-gauge brother.

The model does not have this because Märklin does not have the necessary moulds. The implementation was done with a slightly different GI 11 of the related design. At Z-Doktor Modellbau (<https://www.z-doktor.de>) suitable trusses for painting and gluing to the car floor are available as 3D accessories.

We try to show the differences by a photographic comparison with the H0 model from 2011. This also proves the slight difference in colour between the two models, as the Z-gauge counterpart tends much more towards blue than the more grey 1:87 scale model.

The (first) pair of conversion cars WG3ye "Deutsche Weinstraße" (87073) with the car numbers 1 and 2 according to the train running sign should be the prelude to a series of the first special train. The coaches are correctly painted in cobalt blue/beige and were presented in detail with their prototypes at the beginning of this issue.

#### **Severe destruction after fire in Talent (Oregon):**

The devastating forest fires on the west coast of the United States have also reached Talent (Oregon), where the company Micro-Trains is based. According to information from the manufacturer, the plant was spared and remained undamaged.

Nevertheless, the disaster has also had an impact on the production and delivery of the product range. On the one hand, it has been temporarily impossible to start orderly processes for at least a week due to a power cut and a breakdown of the water supply, and additionally, plant staff have also lost their personal belongings.

New deliveries were therefore not known by the copy deadline for understandable reasons.

#### **Rail distribution moved from N-tram:**

Wolfgang Besenhardt (N-tram) announces on his website that his track and accessories programme has been taken over by Spur-N-Teile.de (<https://spur-n-teile.de>). Whether production will actually take place there in the future, we do not know yet.

In any case, the change of the sales department will also have an effect on the Z-gauge, because the metre gauge tracks of the scale 1:160 are also used by Zetties, when it comes to laying rails in the road formation.

The track inserts for Märklin, Rokuhan and Peco Code 55, the tram tracks and sleeper tracks from the previous N-tram range.

#### **Death in the Z-scale community:**

Walter Schmidt, until a few months ago was still the operator of the private large-scale layout "Z-Stübchen" in the rooms of the former Krefeld site, died on 11 September 2020.

What came as a great surprise to many of our Zetties friends was, as we unfortunately learned, the result of a serious illness.

Nevertheless, Walter never lost his passion for the hobby and was still drawing attention to himself with his zest for action. We appreciated him as a nice host, friendly conversational partner and always helpful contemporaries.

We fondly remember meetings in his rented rooms in Krefeld, where we met in smaller or larger groups to indulge in our hobby and exchange ideas. We also took a portrait of his probably unique layout for the tenth anniversary.

Regulars' tables including a tour of the factory had also taken place there many years ago. Therefore, Walter Schmidt will certainly not only be missed by us and take a worthy place in our memories. We wish his relatives much strength to get through this difficult time.



#### **News at the beginning of autumn at Ratimo-Z:**

Initially, in two versions, models of the MDyg 986 makeshift packaging truck are to be published by Ratimo-Z (<https://www.rainer-tielke-modellbau.com>) in October 2020. Kits are also planned for the future, an alternative offering with Märklin close couplers is currently undergoing practical testing.



In view of the lack of four-axle baggage cars on a scale of 1:220, a big gap has to be filled, as the cars are widely used in prototype. And according to the motto "provisional solutions last longest," the originals with modernised side walls could be seen well into the eighties. Even today, they are still part of many auxiliary trains in DB layouts in traffic red livery.

This autumn's novelty is implemented in 3D printing using resin for the body, the box struts and the gooseneck bogies, which have not been offered before – a typical feature of this type of construction. The grab handles could be produced as separate accessory pieces.



Right from the start, the popular and formerly widely used MDyg 986 makes its debut at Ratimo-Z in two versions: with four large side windows (item no. 60001; rear), and eight large side windows (60004; front).

The car floor is made of milled polystyrene, the inserted window panes of transparent acrylic, which is also milled. Couplings and the dark nickel-plated wheelsets are from Märklin. Rainer Tielke recommends a minimum radius of 195 mm. The length over buffers is 104.64 mm.

Two versions of the design with closed transitions (MDyg 986), wooden slatted side walls and old windows are now being implemented. They differ only in the number of windows, once four large side windows per side of the car (item no. 60001) and eight large side windows (60004). Further versions will follow in the future.

#### **TrainSetter becomes active in track Z:**

Ulli Liedtke and Natascha Drews from Tauberbischofsheim have only been active as small-series manufacturers for the nominal sizes N and Z since June 2019. Now they are venturing onto the market with a catenary system in 1:220 scale.

The new catenary components from TrainSetter (<https://www.facebook.com/pages/category/Retail-Company/TrainSetter-Ulli-Liedtke-Natascha-Drews-GbR-472743126602026/>), as their brand is called, are designed for Rokuhan catenary masts and thus also enrich Japanese-inspired layouts with a contact wire. With a bit of skill, they can also be attached to Märklin masts thanks to their closed and open eyelets, and can then be used to design European-inspired layouts.

All parts are made of 0.25 mm thin stainless steel and therefore offer a fine and prototypical look. What also suits the design of Rokuhan pantographs is the preference for non-contact operation.

The purpose of the innovation is to present the eye with the catenary wire, which would otherwise be missed at sight, so that the personal impression of the observer is correct – a contact wire on a scale of 1:220 would not even be visible exactly to scale.

Up to now, no test of the mechanical load capacity by the pantographs pressed on with spring pressure could be carried out at Märklin. However, this should be done as soon as possible in order to be able to make reliable statements here as well.

These etched parts are not intended for electrical operation, as safe current collection would not be guaranteed due to the low material thickness. The material used guarantees the highest possible stability, despite the low thickness and can also be soldered to a certain extent.

For the time being a starter pack is available, which contains two pieces of 220 mm catenary wire and four pieces of 110 mm. This corresponds to the catenary wire length planned by Rokuhan, while Märklin has planned 165 mm as standard length (mast spacing on the prototype in Germany: 50 meters). The long wires are intended for parade tracks and curves with larger radii.

#### **New innovations on the assembly line ...**

With NoBa models (<https://www.noba-modelle.de>), creativity seems to know no bounds, because here we get information about new models one by one.

There are four new products to be announced for September, of which the five resin litter bins (Art. No. 11015R) are certainly the least spectacular. Nevertheless, they should not be missing on any layout, because environmental awareness can also be shown in the model.



This is how the convincingly successful Scania 113H tractors look as finished models (item no. 8032). Photo: NoBa-Modelle

Due to their high popularity, models of the Mercedes universal motor unit are proving to be a long-running favourite. Here the fire brigade's Unimog U 1450 has now made it into the range as TLF 8 with water tank (6224).

Shortly before the last turn of the month, the resin model of the modern, two-axle tractor unit Scania 113H (6011R) was added to the range, which is now also available as a finished model (8032).

#### **Two autumn new products from Faller:**

The "Häuslebauer" from the Black Forest has announced two autumn new products for gauge Z, which were already on display at this year's exhibition diorama in Nuremberg, but were not explicitly mentioned there. All autumn new products should be available by the end of January 2021.





An attractive building is the pharmacy Eutin (art. no. 282773), which Faller has now announced, and which will appear as a hard cardboard kit.

On the one hand, there is the appealing pharmacy Eutin (art. no. 282773), which continues the laser cut building series. The original building was erected in 1694 and is now used as an office building. Its characteristic features include the red stone infill, the large gable and a crippled hipped roof.

A re-edition is the polystyrol construction kit of the railway crossing attendant's house (282712), which is offered without a railway crossing, to our astonishment. According to the description, the house with stone base, plaster facade and boarding still has a small shed extension.

#### **Trade fair cancellations in neighbouring countries:**

Even in Germany's neighbouring countries, the organisers recently considered the risk to be too great to safely to stage a mass event such as a trade fair. So this year Eurospoor will not be held in Utrecht (Netherlands). The next edition is now scheduled for 29 to 31 October 2021 (see <http://eurospoor.nl/de/>).

Modelling in Vienna is also affected (<https://www.modell-bau.at>). As it could not be guaranteed that the exhibition would be sufficiently safe from infection, the most important exhibition in Austria will not take place again until next year.

#### **The current deliveries of AZL:**

September 2020 will also see the release of further variants of the new shapes presented only a few months ago. These are mainly further diesel locomotive designs of the ALCO RS-3 in the colours of the New Haven (Item Nos. 63303-1 to -3) and the RSD-5 for the Chesapeake & Ohio (63315-1 / -2).



The EMD GP38-2, once launched as a beginner's locomotive in the first common colour scheme of the BNSF (62503-5 / -6), is an old acquaintance that has been re-issued.

The still young Gunderson-MAXI-I-carriages now also drive up for the BNSF and carry the Herald logo. They are offered without containers (906509-1 to -4) and in small numbers also with 40-foot containers from MSC (906509-1MS / -2MS) or Matson (906509-3MA / -4MA).



ALCO RS-3 in the colours of the New Haven (art. no. 63303-1; picture top left), ALCO RSD-5 of the C&O (63315-1; picture top right) and carrying wagons with Matson containers (906509-3MA; picture right). Photos: AZL / **Ztrack**

Manufacturer photos of the current deliveries can be found at <http://www.americanzline.com>.

#### Wiener (Viennese) Regulars Club car 2020:

The Wiener Z-Stammtisch (Viennese Z-Stammtisch) is also launching new regulars' table club wagons in 2020. The models are open freight cars from GKB. They are painted in the characteristic grey of GKB.

The Graz-Köflacher-Bahn (GKB) operates railway lines in Weststeiermark (Western Styria) in Austria. Its international holdings and subsidiaries include LTE and Adria Transport.



The Wiener Z-Stammtisch (Viennese Z-Stammtisch) has had this car duo of the GKB put on the "Jahreswagen 2020," and sells the cars not distributed to its members to interested third parties. Photo: FR Freudenreich Feinwerktechnik

From the seventies onwards, the GKB was an international centre of attraction for friends of steam operation. And even today, steam locomotives are used there for special trips. Trips with an orange rail bus to the famous Styrian wine-growing regions are also particularly popular.

There are still very few cars that have not yet been sold and delivered. If you are interested, please contact us as soon as possible by e-mail to the following address: [zspur.stammtisch\[at\]gmail.com](mailto:zspur.stammtisch[at]gmail.com).



## Trade fair cancellations in neighbouring countries:

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## The calendar season begins:

The fourth quarter is approaching and with it the eyes are increasingly turning not only to the new handicraft season, but also to next year. That is why VGB and EK-Verlag among others are now publishing their photo calendars for the year 2021.

We have again flown over the wide range of products from Freiburg (<https://www.ekshop.de>), which offers something for almost every taste. These are not only topics of other transport sectors, narrow gauge and museum railways but also model calendars of steam locomotives and selected series.

As in previous years, we have taken a closer look at the "Model Railways" calendar and leafed through it: Once again, despite the extremely high quality of the trade fair participations shown in recent years, no Z scale layout has made it into the selection, while 0 gauge seems, to us, to be over-represented.

Nevertheless, we find a very attractive and well-made selection, which is not season-specific except for a few motifs. The perspectives, design quality and also the craftsmanship of the photographs taken were successful.

So it is a pleasure to leaf through the calendar "Model Railways 2021" and to look forward to a new, special motif every month. We do not want to assume a high affinity of the editorial staff to the V 100, but we also do not want to exclude it: This series, which is also very popular in Z scale, can be found on the cover as well as on a monthly sheet.



Images: (3): EK-Verlag Freiburg

We are certainly not wrong in concluding that this calendar, or another one from the varied selection depending on your taste, is a perfect gift for every railway and model railway enthusiast.

**New light signals in prospect:**

The small-series manufacturer known from N-gauge also offers new light signals for Z-gauge on its website (<https://www.kastenbahner.com/shop/z-ecke-1-220/>). The ÖBB light signals are to be transmitted on a smaller scale from 1980, and DB light signals of type 69 are also currently being developed. However, advance orders are already possible.

**And here the autumn new products 2020 from Märklin:**

Despite many backlogs, which also result from the consequences of the Corona measures, market leader Märklin has presented a quite extensive range of autumn new products. The Zetties also have a lot to offer again, except for the most popular Era III, which had already been given plenty of thought recently.

For Z scale, the 2020 Christmas Car (Item No. 80630) was already expected: This year, the choice fell on an X 05 low side car with a brakeman's cab in a festive design. It carries a Father Christmas made of coloured hard cardboard as its load. It is packed in a yellow-transparent Father Christmas trailer with silver tinsel for the Christmas tree.

The rest of the programme contains surprises and expected editions: The latter category includes the EMD GP38-2 of the Union Pacific (88616), another variant of this diesel-electric locomotive from North America. Like the version presented in spring, it is being produced in cooperation with AZL.

The three beer cars for Reichelbräu (86396), Mönchshofbräu (88397) and Sandlerbräu (86398) as private cars registered with DB on the basic design of the G 10 are old acquaintances: While they were available as a triple pack a few years ago, apparently remaining stocks are now offered individually.

This year's "100 Years Deutsche Reichsbahn" anniversary (see article in this issue) is being paid late tribute to with two more new products. Era I includes both the private gas car with two horizontal gas containers (82401), as in 1932 condition, and a new production steam locomotive.



The Reichsbahn's anniversary is given late recognition in the form of 38 3199 (Item No. 88993), which could not have been produced from existing moulds without the bronze investment casting technique, including the gas tank car (82401). Photo: Märklin

The class 38 with the road number 3199 (88993) now appears in the current series of museum locomotives as a representative of the SEH. Characteristic for it is the still existing Prussian livery with a new designation after classification in the Reichsbahn numbering scheme.



Technically it is, like the more recent editions of this series, up to date, but for the first time it is offered as a three-domed version. This is made possible by the use of die-cast cast bronze, which raises the price of the model somewhat, albeit to a comprehensible extent.

The bronze investment casting is also used for two other models, which continue a collector's series begun last year with the crocodile. A modern Italian refrigerator car (82389) and the class 85 tender locomotive without wind deflectors (88932) are now being presented with a metallic finish.



The series of bronze investment casting models is continued with the Italian refrigerated car (82389; picture above) and the 85 001 without wind deflectors (88932; picture below). Photos: Märklin

Meanwhile, model railroaders who are on the move in modern times will enjoy two new products from MHI. They are especially pleased with a three-part container wagon pack (82663), consisting of a four-axle wagon of the type Sgs 693 and two of the type Lgjs 598. They carry three 20-foot containers from Hambrug Süd and four tank containers from Bertschi.

Also the diesel locomotive ER 20 D from Siemens is a modern vehicle and belongs as a black MRCE representative (88883) to epoch VI. Upgraded to the latest state of the art, it is driven by a bell-type armature motor, and white-red light change is via LED.

**The latest news of Küpper from Aachen:**

Spur Z Ladegut Josephine Küpper from Aachen (<https://spur-z-ladegut.de/>) is currently reporting with re-visions of popular loads, and a reference to a small selection of advertising cars in the current range.

Available again are load inserts for Märklin's three-stack container cars, last issued last year with the 82359 package including a delivery vehicle. You can choose between coal (item no. Z-82359-K), broken bricks (Z-82359-Z) and gravel (Z-82359-S).

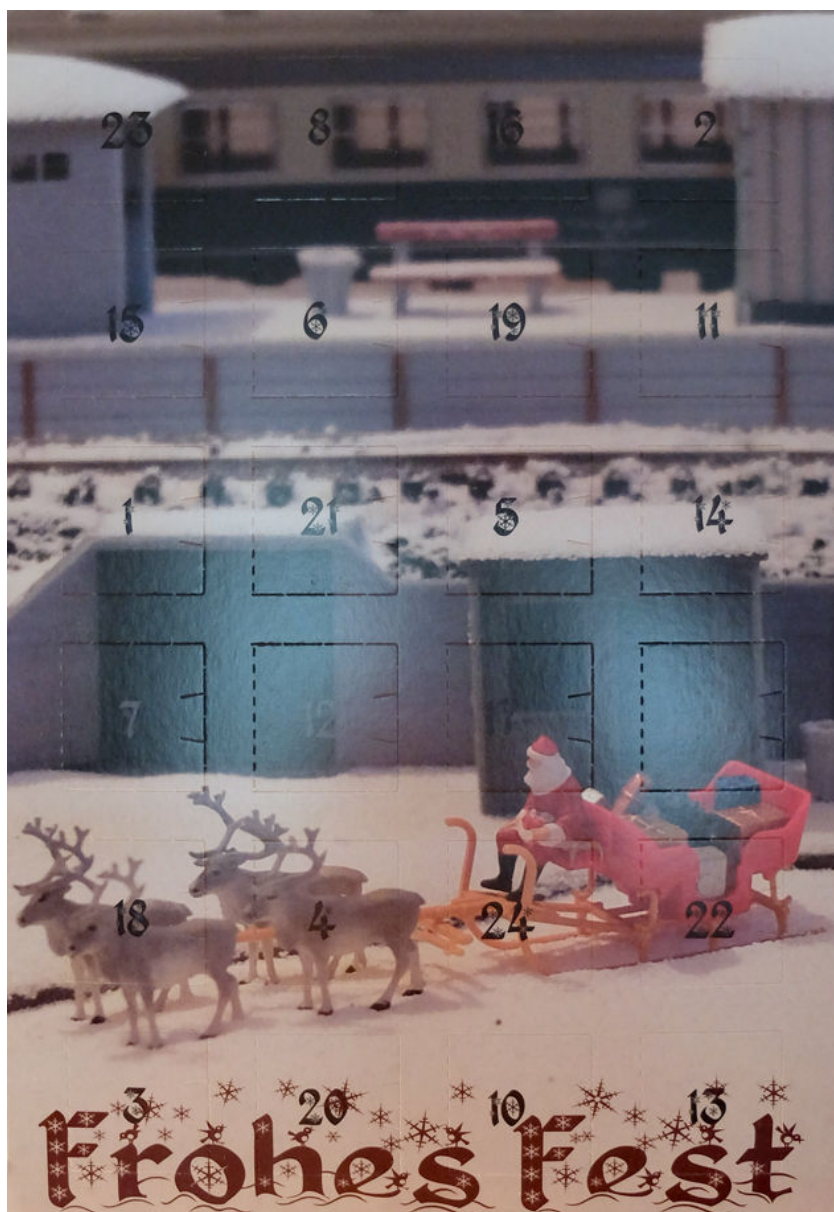


Photo of the advent calendar 2020; photo: Schrax

**And before we know it, it's Advent:**

As soon as the first Speculoos (a cookie) appear on the supermarket shelves, 3D print provider Schrax (<http://www.schrax.com>) starts to give thanks for the not, too distant, Advent season.

With an Advent calendar, which is also available for Z-gauge (item no. 880101-Z), he wants to sweeten the time from December 1st to Christmas Eve for model railroaders.

With a view to early availability, the manufacturer also points out that this article is also very suitable as a gift and is popular in this respect.

The advent calendar for model railroaders contains a total of 24 different Schrax models.

Among them are various accessories, goods loads, accessories, or small buildings from the current program, as well as exclusive prototypes and new products, which are currently not in the range.

At least five new developments from the current year are guaranteed. The size of the calendar is approx. 30 x 21 x 1,8 cm.



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