

*International Edition*

Free,  
electronic magazine  
for railroad enthusiasts  
in the scale 1:220  
and Prototype

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# Trainini

German Magazine for Z Gauge



Small steep ramp in the Alps

Museum steam in Z-gauge  
Ghost wagon with Rokuhan

## Introduction

Dear Readers,

the Eisenbahnfreunde Marsberg e.V. (model train friends Marsberg, registered association) have become forty years this year. I was proud to participate in their anniversary event and to see many esteemed Zetties again.

It was quieter than at many other events despite good attendance and so there was time for a chat or two. That made me very happy, especially as I get so many suggestions and ideas or even find out what to expect at the next bigger meetings.

Therefore I would like to use this introduction today to remember and promote the events in Zell (Mosel) during Advent and in Altenbeken at the beginning of spring 2020. Both are “family gatherings” in the best literal sense.

We are all looking forward to it and enjoy what only Z gauge can offer: No matter from which corner of the world we come, somehow we all know each other and if not, we are curious to get to know each other and admire other works. Be part of it! Show us your most beautiful creations, be amazed and enjoy the great atmosphere, which is so characteristic for Z gauge!

We would like to motivate you with our article about the construction of a ghost car. Thomas Heß has been an enthusiastic reader for years and found it time to give something back to our unique community and to present his idea.

Keven Horat also dares to go public for the first time in this edition: he continues our annual focus on “Layout diversity” and presents his Gotthard diorama. That it is his first work is by no means apparent from this expressive display.

To match the topic my editorial colleague Dirk Kuhlmann literally wants to swing aboard a train by dealing with the track centre distance. And so he examines track geometry, MOROP standards and the best possible appearance. Some future works will certainly also benefit from his ideas.

Last but not least, we risk a small leap in time: We start in the middle of the DB (German Federal Railroad) steam locomotive era and look at the second career of selected tender steam locomotives. In 1985 (when steam train operation was permitted again on tracks of the DB) they experienced a renaissance that lasted for years and has unfortunately noticeably abated in recent years. Nevertheless, special steam trips offer a great opportunity to use the relics of bygone times in epochs V and VI as well.

To tune in and round off this special topic, we have also selected our supplementary literature proposals. On the one hand, the EK publishing house dedicates a portrait to a popular role model with the Bubikopf (bob hairstyle, German nickname of class 64 locomotives), on the other hand, the class 10 experiences its operational highlight once again in a DVD film from the VG Bahn.

If this now appears varied and balanced, then I am happy and wish fun reading.

Sin-Z-erely,

Holger Späing



**Holger Späing**  
Editor-in-chief

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We thank Keven Horat and Thomas Heß for their reports and the Eisenbahnstiftung for photo support.

Date of publication of the German language version of this issue: 26 September 2019

### Cover photo:

This old Ce 6/8<sup>III</sup> 13302 is hauling a freight train on the Gotthard north ramp in beautiful weather. It is hard to believe that this impressive scene is the first work of one of our readers. Photo: Keven Horat



Museum steam on a small scale

## Character heads wanted

*Do modern railways necessarily mean monotony? Do steam and the Taurus simply not fit together? We would like to deny both. Anyone who knows how to install and use his preferences in a targeted manner can also have old steam engines run alongside the most modern electric locomotives. We make a plea for special steam trips and museum railways in the epochs V and VI.*

The present epoch is rather underrepresented on the Z gauge model railways. The focus of the majority of the modelling is mainly on epochs III and IV. The modern railway also has a lot to offer and is now more colourful than ever before.

The main reason for this are the many private railway companies that are now active in freight and local transport, and have their own colour schemes, to give their brand a lasting impression, instead of a product. Only long-distance transport remains firmly in the hands of Deutsche Bahn AG. Only Flixbus shakes the role of the top dog there.



With regard to the predominant forms of modern locomotives, for a long time the railway had little variety to offer. The Taurus and the Vectron were the first to break the monotony, and second-hand locomotives do the rest. Here, you can see 185 CL 006 from Rail4Chem with an articulated tank car train on 7 May 2011 on the route Dortmund - Hamm (Westphalia), shortly before Dortmund-Kurl.

But why do so few Zetties turn to epochs V or VI? Some people think it's due to the lack of offers, because Märklin hasn't redesigned any modern vehicles in recent years and has instead left it at the colour variants of existing models.

The last notable new design to appear was the modern articulated tank wagons in a composition (Art. No. 82530) of various options intended for single wagon sales. Later, models with the same operating numbers were sold individually in factory aged form.

The supporters of modern rail transport have waited in vain to this day for the Siemens Vectron, assigned to the 193 series. With the ICE 3, however, at least, recently, an important model has been reworked, considerably.

In the area of diesel railcars, which are typical for modern mass transit, the Desiro (class 642) from Hagemodell in Hungary and the class 628 are at least worth mentioning. The latter vehicle is a still young construction of special models Z (SMZ) from Austria, which was not only produced an excellent technical conversion, but, to our knowledge, has produced considerable numbers for a small series producer.



Märklin has also provided its customers with articulated tank cars, but many suitable locomotive models have not appeared until recently. The NoHAB from FR Freudenreich Feinwerktechnik, therefore, offers variety and an excellent alternative locomotive. Steam powered special trains can bring even more options to modern systems.

If we were to seriously investigate the causes, then it would probably be too short-sighted to cite only the supply side as the reason for the low level of representation. After all, Märklin as a commercial enterprise can assume that they are serving a lucrative market, even if it is here.

We will not find any satisfactory answers at this point, because this would require representative surveys of as many market participants, as possible, in order to rule out statistical errors, as far as possible.

However, we can assume that the traction types limited to diesel and electric vehicles could also be jointly responsible. After all, it is often stated that the great variety of vehicles of the end of the steam age has a decisive influence on the choice of epoch of model railroaders.



Thus the sixties and early seventies of the last century did not offer the enormous colour varieties of today, but locomotives still appeared as true “character heads”.

They produced variety through the archaic appearance of a steam locomotive, the last representatives of the pole-mounted locomotives, the round forms of the economic miracle period (V 200 and V 160 “Lollo”), and the rather cubic era, which was already apparent with the standard locomotives and became the standard with the V 320.



When 64 289 entered the Feldberg-Bärental railway station with their special train on 8 May 1975, exactly 30 years after the end of the Second World War, their career as operational museum locomotives had only just begun. Photo: Burkhard Wollny, Sammlung Eisenbahnstiftung

As an indication for our thesis, we also state that many railway enthusiasts have complained about a very monotonous appearance of modern machines. Beginning with the 101 class, continuing with the 189 freight locomotive through to three TRAXX generations, they offered indeed little visual variety.

Only a few locomotives built in very small numbers deviated from this very uniform design: The most prominent example are the Taurus locomotives of ÖBB (Austrian Federal Railways), which were later also manufactured for many other railway administrations without this brand name.

## Progress by Tradition

Nevertheless, a modern model railway system does not have to be monotonous and boring in terms of its typical design style. The different train types already promise variety. Although container trains may dominate, goods are still transported in other types of cars, even today.

The usual trains common today even offer an advantage from the model railroader's point of view: with the same number of cars, a train of the same type of cars looks longer to the observer than a train of mixed types. This is a popular way of concealing the compromise that is unavoidable on layouts, as long as it is only used consciously.



The anniversary year 1985 brings the steam locomotive back on Bundesbahn tracks! 86 457 is on its way with a shuttle train from Hersbruck to Nuremberg near Neunkirchen am Sand on 25 May 1985. Photo: Peter Schiffer, Sammlung Eisenbahnstiftung

But that's not the point today either. Instead, we were concerned with the question of how modern rail can be enriched with what the majority of railway enthusiasts still don't want to miss: the steam locomotive.

It offers a unique opportunity to counter modernity with a counterpoint that creates interest in the observer and thus increases attention. Equipped with suitable historical carriages, the contrasts could not be any greater.

But there is also a need for a suitable argument for historical representatives. If several of them were to travel on the main line at the same time, this would perhaps be a planned steam event. If only individual trains are involved, the branch line connected to the station can be justified as a museum railway, which also allows the integration of a complete depot with round shed and turntable.

Today, we have put our thoughts back to the time immediately after the 150th anniversary of the German railways: In 1985, the Deutsche Bundesbahn lifted the ban on steam travel on individual lines, and finally dropped it altogether.



Special trips with the recently reactivated vehicles are now enjoying great popularity again, and more and more clubs and museums are therefore having their treasures restored to working order in order to participate in this success.

Over a period of almost twenty years, the steam locomotive is finally back in business, before it settles down again, and the number of operational locomotives drops again.



When 64 289 was photographed on 30 May 1977 on the Zollernbahn in Hechingen, it shows a different appearance than our model. The smoke chamber supports and ladders have been painted red, and the buffers are decorated with a warning coat of paint. Photo: Wolfgang Bügel

But not only this time window offers many possibilities to put old next to new, to join crowds of people with and without cameras to the platform or to glue passengers into passenger coaches leaning out of lowered windows. The invigorating factor emanating from the figures will do the rest.

## Operational model

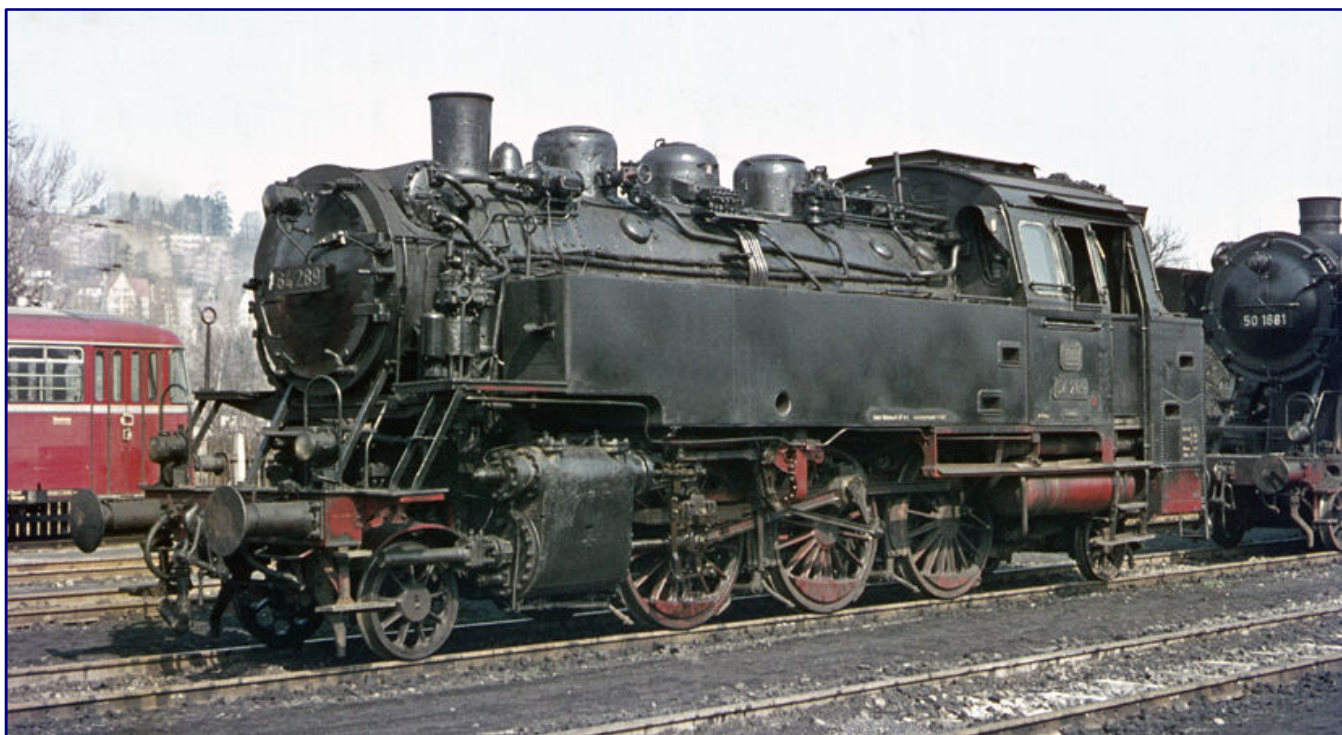
Märklin models, in particular, offer many options for recreating museum steam or special steam rides on a scale of 1:220. If you're not so precise, you can use new, out of the box steam locomotives for this purpose.

Those who want to orient themselves strictly to prototype, or who want to upgrade their models, further, will then choose suitable operating numbers of popular museum vehicles, which will most certainly be quickly noticed by enthusiasts.

Since branch lines are most often reproduced on model railway layouts, we have specifically selected two steam locomotives which had appropriate applications there. It should be noted that we deliberately avoided the large tenders.



The 64 289, which is today the oldest locomotive in the stock of the Eisenbahnfreunde Zollernbahn (EFZ), provided the first model. It was built by Krupp under factory number 1298, delivered to the Deutsche Reichsbahn-Gesellschaft on 31 January 1934, and accepted one day later.



064 289-2 (picture above) stood from 1 February 1934 to 5 March 1974 in Staatsbahndiensten. After being taken out of service at the Crailsheim Railway Station, it was initially taken over by Eisenbahn-Kurier in Hildesheim, but one year later was passed on to Eisenbahnfreunde Zollernbahn. Photo: Will A. Reed, Sammlung Eisenbahnstiftung

On 28 March 1969, 64 289 (photo below) still carried their old signage and waited in the Tübingen train station for its next mission. It shows here exactly the condition, which was also reproduced in the model. Photo: Wolfgang Bügel, Sammlung Eisenbahnstiftung

In the EFZ inventory, it is in the state of the late federal railway age, which is why we would like to take a brief look at it this time. Its home in Schwerte (Ruhr) from 3 October 1954 to 4 December 1955 was only a short episode, but this also allows some local variety in Ruhr area themes.

From 2 May 1957, however, the model was at home in southern Germany until the end of his service. With its old number, which it also carries as a museum locomotive, it was at home as follows:

2.5.1957	-	30.6.1959	Tübingen
1.7.1959	-	26.9.1966	Rottweil
27.9.1966	-	8.3.1971	Tübingen

Later it arrived in Heilbronn and Crailsheim, where it was put back from the repair on 21 December 1973 (z 21.12.1973). Between 22 July 1974 and 14 March 1975, it was in service with the Eisenbahn-Kurier.



When 64 289 was travelling with a special train on the Leine bridge near Göttingen-Weende on 6 October 1974, it was in the service of the Eisenbahn-Kurier and, with the exception of the buffer plate warning paint, was still in the condition of the model. Photo: Prof. Dr. Willi Hager, Sammlung Eisenbahnstiftung

The EFZ took them over the following day and continued to use them for special trains. After the steam driving ban was issued, this was only possible on lines that did not belong to the DB. In September 1985, in front of a Donnerbüchsen passenger train, the locomotive took part in "150 Years of German Railways" parades in Nuremberg-Langwasser.

It was not until 1991, when the ban on steam travel was lifted, it was able to operate on DB tracks again. In 1996, for the DB nostalgia programme, it finally operated regularly on the Gäubahn from Stuttgart to Freudenstadt, for which it was rented by Deutsche Bahn AG.

On 28 April 2001, the fire in the boiler of 64 289 finally extinguished after its boiler and running gear periods had failed. It was transferred to the Süddeutsche Eisenbahnmuseum (SEH) in Heilbronn in autumn 2005 and has been waiting to be re-conditioned ever since. After a long period of outdoor storage,

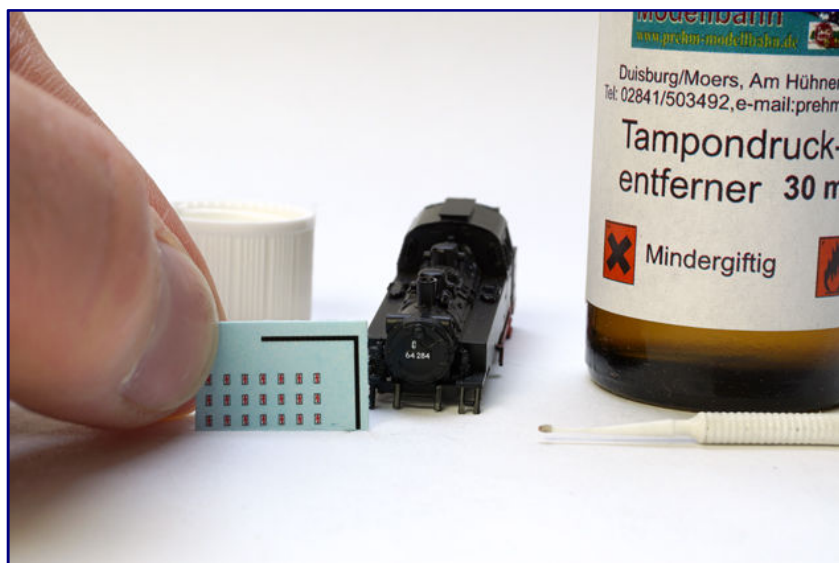


their condition today can only be described as moderate at best. At least its further preservation seems to be assured, and it is operable, as well as unmodified.



The Märklin model required only a few adjustments to make it the 64 289: new signage, window inserts, minor colour corrections on the coloured edges, and moving the lightning warning arrow shield on the smoke chamber door.

The choice of model was supported by her long career as a museum steam locomotive as well as the fact that she was one of the last representatives of its class in DB stock.



The printed lightning warning sign could be removed and wiped off with tampon printing remover without damaging the varnish. A new replica with the correct red arrow was then used as a transfer decal.

A reproduction in the last operating condition for the Bundesbahn also corresponds to its first years as a museum locomotive, which makes it very versatile for the epochs IV and V.

These features, which have been implemented on the model (base: Märklin 88740), include a red perimeter edge with black ladders, spoked wheels in the front and rear, screwed DB emblems on the side walls of the driver's cab and signage with riveted numbers in DIN 1451 middle typeface.



Photo above:  
64 289 makes powerful steam when it leaves Rottweil on 8 May 1975 with its special train. Photo: Burkhard Wollny, Sammlung Eisenbahnstiftung

Photo below:  
With a comparable train also our model is on the way. The fact that it can't be a regular train pulled by the class 64 can be seen from the ocean blue lower edge of the Silberling (passenger car), which was only introduced in 1975. But, by this time, the DB had already discarded the Bubikopf.

The number plate on the smoke chamber door is located at the level of the former central locking device, the lightning warning arrow plate has been placed to the right of it (in the direction of travel). Before it



could be attached to the model, however, the higher pressure, which the basic model carried ex-works, had to be removed. The tampon printing remover from Prehm Modellbau did a good job here.



Between 1977 and 1985 museum steam locomotives could only run on private tracks. This is to be expressed in the special train by setting a heat protection car of the Öchsle-Bahn (photo above). When 64 289 were rented later for the DB nostalgia program, it was probably to be seen however with historical vehicle park also under contact wire (photo below).

The model was accordingly upgraded with window inserts on the driver's cab (Ratimo), glued in with Contacta Clear (Revell), real carbon lining in the tender (Jeweha Modelbouw), etched signs (Kuswa) and decals (Nothaft), as well as colour corrections.

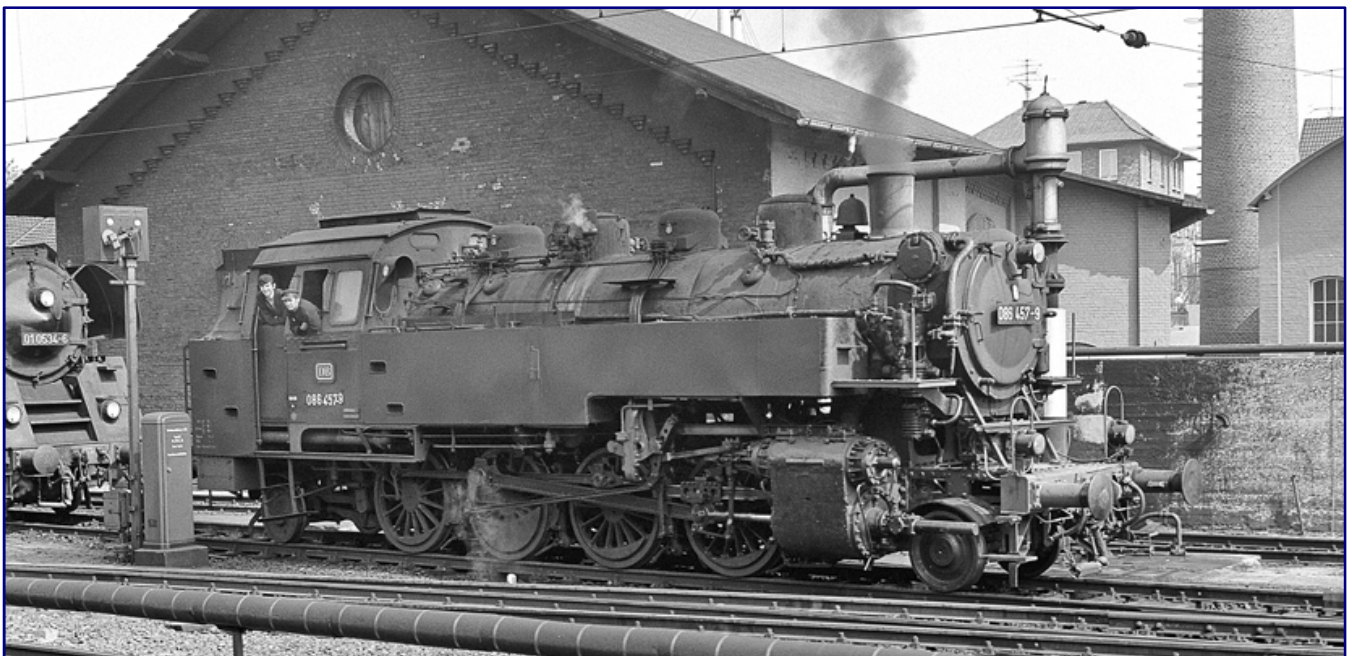
## In Transport Museum service

The second locomotive that we selected, the 86 457 unit tender locomotive, is closely related to the “Bubikopf” and the class 24. All three belonged to the 15-ton axle pressure series for use on branch lines.

The 86 series was intended for freight service, but, it was also used for passenger service from the outset. Series delivery began in 1928 and by 1938 they had reached a total of 300 units.

After the Anschluss (annexation) of Austria, they were also manufactured in Vienna; after the beginning of the Second World War, simplified versions were produced until 1943, as transitional war locomotives (ÜK locomotives). A total of 776 locomotives of this series were built.

Differences in design concerned the design of the driver's cab (standard design and ÜK), “refinements” and disc wheels in the front and rear runners of ÜK versions (from 1942), riveted or welded water boxes, and the non-consistent use of Bissel axles, or the Krauss-Helmholtz steering frame.



When 086 457-9 passed through Bebra on 9 April 1971, it was probably on its way to the AW Braunschweig. In any case, at the end of its service with the DB with disc leading and trailing wheels, it appears completely different from its second career from 1985 on. Photo: Joachim Claus, Sammlung Eisenbahnstiftung

86 457 is one of the machines equipped with a Krauss-Helmholtz frame, whose maximum speed was therefore 80 km/h instead of only 70 km/h. The maximum speed of the Krauss-Helmholtz frame is therefore 80 km/h instead of 70 km/h. It was built in 1942 with the factory number 442 by the Deutsche Waffen- und Munitionsfabrik Posen. Delivered on 29 November 1942, the locomotive was able to start its service in the RBD Danzig on 11 December of the same year.

The locomotive selected by us was at home in the inscribed condition shown after delivery to the Bw Kaiserslautern on 13 May 1951 for about eighteen years in the BD Mainz of the Deutsche Bundesbahn, where it operated on main and branch lines throughout Rheinland Pfalz.



However, it is also interesting to note that it was used in the duty rosters of the sister series 64, according to photo documents when it belonged to its last office, the Bw Nuremberg Hbf (Hbf = central station) from 13 August 1971.

This also allows common journeys with 64 289 on a model railway layout. Another attraction for the time of their planned deployments is the focus on beet transport, which was carried out by DB in campaigns. Such agricultural themes are also ideal for branch line motifs on a scale of 1:220.

In the DB, the 86 series was once scattered over large areas and was therefore in use in many regions, but line closures and the traction change that was initiated soon pushed it noticeably back.

In 1965, the phase-out began on a massive scale when sufficient V 100 class locomotives were in service. This development only came to an end when the last three locomotives were parked at the end of 1974.

86 457, however, this fate already befell at the beginning of 1972 (z 8.3.1972, + 15.8.1972). It outlasted the time on the monument pedestal in the AW Trier, before it was selected in 1984 for a fully working order restoration for the 150th anniversary celebration.



This motif was once often photographed: The DB museum locomotives 50 622, 23 105 and 86 457 are standing in front of the shed of the Bw Nuremberg 1 on 1 August 1985. Anyone who carefully compares such photos from different years will also notice how the appearance of 86 457 has changed in some details. Here, for example, it has a completely red painted smoke chamber support. Photo: Volker Fröhmer, Sammlung Eisenbahnstiftung

In contrast to the 64 289, it is thus one of the late museum locomotives, which, as an operational machine of the Nuremberg Transport Museum, was once again housed for its last service at Bw Nuremberg Hbf.



After its first special trip on 24 February 1985, it was used for many years from there on numerous routes. So it remained until the night of the fire on 17-18 October 2005 in Nuremberg-Gostenhof, when this well-known representative of the DB Nostalgia Programme also suffered serious damage.

At that time, around one fifth of the historic vehicles remaining with Deutsche Bahn were saved from the flames (see report in **Trainini®** 11/2005, issue 4). At the beginning of 2006, 86 457 together with 23 105 were borrowed from SEH Heilbronn, towed there, and subsequently cosmetically restored.



On 21 February 1988, 86 457 with special train E 19691 and wonderful steam development is on its way from Neumarkt/Oberpf. to Beilngries on the long since shut down line. In contrast to our model, it also carries signage with the full name of its railway administration at that time. Photo: Wolfgang Bügel, Sammlung Eisenbahnstiftung

Since then it has been seen there as a non-operational exhibit. A correct museum use of our locomotive model is therefore limited for the time being to the years from 1985 to 2005, a period of twenty years, which includes both epochs IV and V.

For a long time, 86 457 instead of DB biscuits bore the older Bundesbahn lettering on the driver's cab sides. In the last phase of its regular service it then had disc wheels. If we include both features in our considerations, then the model is quite easy to identify as a museum locomotive, because only a rather narrow time window opens up for planned services.

We have therefore decided on the following features on the miniature based on an old Märklin model (Art. No. 8896): red revolving edges and smoke chamber support corners in this area, Ege biscuits on the driver's cab as well as spoked wheels in the leading and trailing wheels, which did not require any change compared to the standard state of the original model.





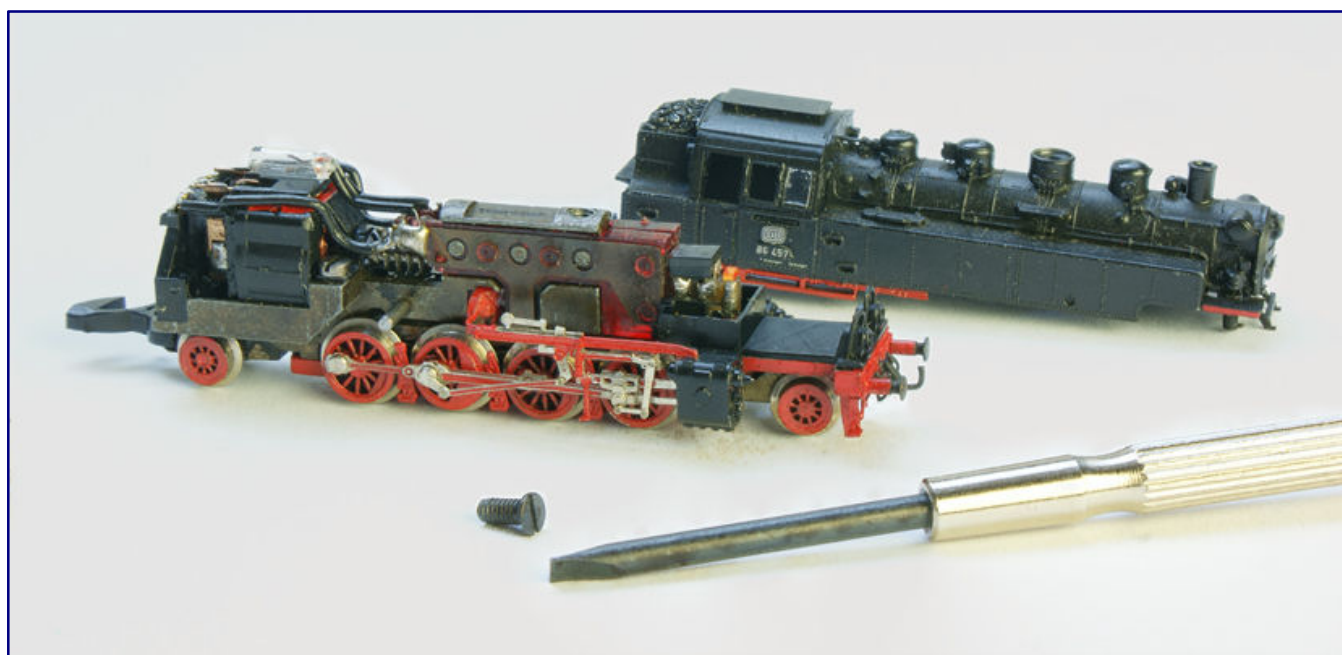
The chassis with fully movable detail controls, increased counterweights on the driving axle and brake replicas has been super detailed by Michael Bahls. New buffers, brake hoses, towing hooks, track scrapers and a front coupling hook as a replacement for the missing system coupling are also on his account (picture above). The body with lamp brackets, colour corrections, etched signage from Kuswa, Ratio window inserts, real carbon in the tender box (picture below), removed smoke chamber central shutter and replacement by of lightning warning sign was worked on by himself.

This resulted in an upgrade of the model with various parts and measures. First, our 86 457 was fitted with etched nickel silver plates from Kuswa, and the font DIN 1451 Mittelschrift DB was correctly used.

However, a compromise was required when the locomotive number was affixed to the smoke chamber door. The simulated central lock, which is not typical for a DB machine, could easily be sanded off and painted deep black in RAL 9002 after priming the now blank area.

However, the cast-on number plate underneath was problematic. This could not be removed in such a way that the curved shape of the smoke chamber door would have remained undamaged with all its details. Therefore, the decision was made to lower the new number plate accordingly, and not to place it at the same level as the earlier locking ring.

Above the front number plate, there is an lightning warning sign for the prototype and model, for which a shift image by Andreas Nothaft was used. The completion with two fixed side windows on the driver's cab could also take place here thanks to Ratimo. The crystal clear inserts (16009) were glued in again with Contacta Clear from Revell, which does not obscure the transparent plastic.



Since the lighting had to be kept functional, the lanterns on the buffer plank that were too tight were not removed and replaced. Instead, they were fitted with lamp brackets at the correct height. Under the housing, an LED light base by Hans-Jürgen Zimmermann now provides a highly visible, warm white top light at the front of the locomotive.

As with the Bubikopf, a real carbon layer followed in the tender box (Jeweha Modelbouw) and colour corrections at the front edge (Oesling Modellbau). Technically, an upgrade was carried out with the help of an LED exchange insert (1001 wws) by Hans-Jürgen Zimmermann, which replaced the front bulb base. At the rear, the locomotive has to get by with its light bulb.

The work was completed by a Bahls chassis superung. A fully moveable detail control in front of wheels, with a black background and painted wheel tyres, now ensures maximum enjoyment, especially during slow manoeuvring.

Also, brake replicas, buffers of correct size with flat and curved plates, buffer plank ascents, as well as a buffer plank fully equipped with towing hooks and brake hoses were part of it. For this, the front system coupling was replaced with a graceful but fully practical coupling hook.





The use of 86 457 in front of contemporary train sets, which like the locomotive on a modern layout stand out clearly from the rest of the rolling stock, is appropriate (top photo). But even before photo freight trains (photo below), steam locomotives that are ready for operation can be seen again and again, to this day.



## A cautious outlook

Certainly there are many more models available for similar projects. We think of the 74 1192, which was on the road for many years for the DGEg Railway Museum in Bochum-Dahlhausen with DRG signage.

Also within the series 64 and 86 further sister machines can be found, which were on the road in East and West in museum service. But when we look at other series, we have to make more compromises or carry out more complex conversions.



Steam trains are a good place for enthusiastic passengers behind open windows who let the smoke blow around their noses. When, when entering a railway station on the way, there are other passengers on the platform who want to travel, who move to the doors or just marvel at the machine, then the scenery is perfect for a special steam ride.

The boiler equipment of the Märklin model 8806 does not fit for the 78 468 which is operational today and which was already in service on the Teutoburger Wald-Eisenbahn. The 94<sup>5-17</sup> series (88943) looks similar when we think of the position of the feedwater heater.

If this could be changed, nothing would stand in the way of a replica of 94 1192 (Deutsche Reichsbahn of the GDR) or 94 1538 (Deutsche Bundesbahn). Both are today at home at the Rennsteig, after damage to both machines, at least one is operational again today.

If we look even further in the direction of the forthcoming Advent meeting, then an ELNA locomotive will inevitably come to mind. Not only on the Moselbahn was such a representative on the way. The identical 146 BLE is now in Bochum-Dahlhausen and was once operational for many years.

On a scale of 1:220, it would attract attention because it stands out pleasantly from the appearance of the standard Reichsbahn series. However, those who want to stay with the Staatsbahn are welcome to wait for further conversions of the class 80 at Märklin: As 89 039, it could work for Museumseisenbahn Hamm (MEH), where it once came to after being retired from service at RAG.



This “rocking horse” would certainly please many Zetties, since the basic model is one of the latest and best running designs from Märklin. Due to its high axle pressure, however, the model could only be used to a limited extent on secondary tracks.

**Basic model, refinements and materials:**

<http://www.bahls-modelleisenbahnen.de>

<http://www.jeweha-modelbouw.be/info%20duitsland.html>

<https://www.kuswa.de>

<https://www.maerklin.de>

<https://www.modellbahndecals.de>

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

<http://www.prehm-modellbahn.de/>

<https://www.rainer-tielke-modellbau.com>

<https://www.revell.de>

**Contact with H.-J. Zimmermann (LED-Sockets):**

possible via the editorial office

## Advertisement



# 14. Modellbahn-Ausstellung Zeller Adventsmarkt

**Zell an der Mosel  
Zeller-Schwarze-Katz-Halle**

**Sonntag, 08. Dezember 2019, von 11 bis 17 Uhr**  
Veranstalter: Z-Freunde International e.V., 56856 Zell (Mosel)

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Swiss mountain panorama

## A journey over the Gotthard Pass

*Overcoming one's own prejudices and emotions is not an easy thing to do, says our reader Keven Horat. After years of admiring the works of others, he takes the plunge and puts into practice the many ideas that he has collected over time. Having designed his first diorama for a competition, he is enjoying the positive reaction he has been receiving for his first effort at railway modelling. Today, he tells us how everything began and what finally became of it.*

From Keven Horat. Having thought about it long and hard, I decided to participate in last year's diorama competition organized by "Eisenbahnmagazin", a leading German railway modelling magazine. I have always had a great enthusiasm and passion for model railways and especially for landscape design.

However, not having built or designed anything since my youth, I was at first quite hesitant to register for this event. Everything appeared clear and logical in my imagination, and I could think of the most beautiful landscapes and track plans, but putting it into practice seemed a different matter altogether.



A Sersa-Köf shunting engine from Zcustomizer pulling a track construction train on Keven Horat's first railway model built. It serves as an alibi for the missing catenary masts on the left track that were broken off when the train was returned to the builder after the diorama competition.





**This aerial view of the little masterpiece shows the different scenes and elements described in the text. Who would have thought that this attractive diorama occupies a footprint of just 30 x 15 cm?**

After all, this competition was open to all regular model railway gauges and I was keen on showing what is also possible in Z-scale. Yet, at the same time I was wondering if I was really up for the challenge.

Finally, in a brief moment of madness, I submitted my registration for the competition. I had a rough plan of the overall design and the official deadline was also known. But now I was forced to turn my ideas and thoughts into reality. After many years of theorising and admiring the works of others, it was all of a sudden up to me and my own skills.

What if I would not be able to live up to my own expectations? And what if the mountain turned out looking like a big rock or the mountain stream like a water feature in a theme park?

But by now it was too late to second guess my decision, and so I started, like everyone else, with the detailed planning. My theme was going to be the Gotthard route -- what could be more natural for a Swiss than dedicating himself to this world cultural heritage with its countless bridges and tunnels?

The competition rules stipulated that all dioramas had to have a footprint of 30 x 15 cm. It was clear to me, therefore, that I would not be able to fit the entire Gotthard North ramp into such a small space. But a double-track section complete with bridge, tunnel and gallery should work: Thanks to the small Z-gauge!

Another reason for taking up this topic was that I had been sitting in my drawer for some time a plan for a real model railway layout. Of course, this should also be Swiss themed, making this little "newbie" diorama project the ideal test bed for my future layout "Thanwil", which is now under construction.

But back to the diorama of this report: Its key feature is a stone arch bridge, which crosses a gorge. On the right side the diorama ends with a tunnel and on the left side with a gallery. Since I had never modelled a body of water before, I absolutely wanted to try this out on this diorama. So this was also on the list of specifications for this built.



The view through the right-hand tunnel portal down the track with the Swiss signal bridge as a focal point. Hay is being made up on the pasture to the right above.

The diorama also needed a bit of depth and structure. In keeping with the competition theme “Along the track”, and with the bridge as the centre piece, I decided on a rock face with a waterfall and a small embankment, a motif that is quite common in Switzerland. In my eyes this was going to make for a harmonious backdrop and would allow me to also practice rock design.

### And here we go

The base board consists of stacked XPS boards, which I have framed with a wooden frame at the bottom, so that everything is built on a solid foundation. The basic shape of the landscape was then carved into the foam, resulting in a first impression of the overall proportions.

Transitions and finer landscape features were modelled with putty. Next, I had to build the bridge before doing any further work on the landscape. I had it clear from the beginning that the bridge could only be built from scratch. This was done by cutting pieces wood to their appropriate size, gluing them together and covering it all with printed stone wall sheets from my collection of modelling materials.



The tunnel portal and the gallery were also made of wood. But in contrast to the bridge, I carved all the stones of the portal by hand. Let me just say that I will return to the topic of “carving stones” later on.

Sitting on my balcony some time ago, my eyes wandered off to my potted palm tree and I had a sudden inspiration: the texture of the pine bark used for planting the tree actually looked like rock and boulders!

Immediately I went to the pot, took a closer look at these pieces of bark and thought: “I’ll have to try that one day...” Having started on with my diorama, the idea came back. I picked out the most beautiful and finest pieces of bark from the pot and glued them onto the diorama where I planned to have the rock face. I filled the gaps with putty, aiming for a natural looking transition between the bark pieces.



The rocks that free climbers now conquer were created with the help of pine bark. The brown cattle on the pasture don't mind all this.

After everything was dry, I primed the rock with a grey tinting paint from the DIY store. This was followed by a coat of strongly diluted black wash which added depth to the texture. Finally, when everything was completely dry, I dry brushed the rocks with white paint in order to add highlights, and the rocks were ready.

Afterwards, I swiftly moved on to the landscaping. Here, too, the first step consisted in priming the ground with a coat of brown paint. As for the grass, I had it clear from the beginning that the fibres should be shot straight into the surface instead of being just scattered flat across the meadow. Grass, after all, grows vertically.

However, buying a static grass applicator to cover the few square centimetres on my diorama did seem a bit over board. Looking for an alternative on internet websites, I came across the the static grass puffer bottle from Noch (Art.-No. 081001), which I also ended up buying.

“There is practically no cheaper method and if it doesn't work, I just have a new salt shaker for the kitchen”, I thought to myself.

After delivery, the puffer bottle was immediately put to a test and I was very satisfied with the result. Of course the grass fibres were never as vertical as with a battery-operated Gras-Master or a similar electrostatic grassing device.

But for my cow pasture and the individual pieces of meadow on the rocks, it was quite sufficient. Also from Noch, I bought some finished tufts of grass (07700), which I distributed selectively on the diorama. These serve also wonderfully as basis for smaller bushes, which can be covered with appropriate turf.

For larger scrubs, I chose lichen as a base, which was then treated and upgraded with different of types of turf and flock. Thus, little by little, the vegetation in my small and happy world took shape.



Noch's static grass puffer bottle, which also does the job on smaller projects.



Sersa's track construction team is working hard to make the line passable again on both tracks.

Next came the design of the waterfall and the stream. The stream was also modelled with putty and coloured afterwards. This method left me with different options for modelling the water surface.

One method would have been to apply several coats of clear varnish. Or I could use the product “Water Effects” (60872), also from Noch, which I had already used for the waterfall.

I ended up going with the Noch product. Why buy clear varnish when the alternative is already at home?

But even the Water Effects method took several fine layers until the water looked as it should, and I was satisfied with the result. On such a small

surface, this method is adequate, but with larger areas, I would probably proceed differently.



## A source of irritation: the Bridge

After the landscape was growing and flourishing, I was going to tackle the installation of the bridge. But the more the detailing on the rest of the diorama progressed, the more I was disturbed by the two-dimensional appearance of the printed wall sheet which I had applied to the body of the bridge. It also looked unconvincing in photos, and did not fit well into the surrounding landscape. Yet, building the bridge again from scratch also did not make any sense, as the rest of the diorama was already designed to fit the dimensions of the bridge.

Finally, I ended up covering the bridge with a fine layer of putty and carved the stones by hand after the putty had dried. After a little paint and the subsequent installation, the model suddenly fit much better with its surroundings and no longer looked out of place. So in the end my sixth sense prevailed, and the redesign of the bridge turned out well.



The bridge with a more convincing look after it has been reworked and the stones are now carved by hand. An SBB Intercity is passing over it.

Once the bridge was in place, I could start with laying the track work. Let me just mention a few parameters which were important to me, and which I intend to follow in any of my future projects:

1. The spacing of the double tracks in the visible areas was reduced from 25 mm (Märklin standard) to approximately 20 mm;
2. Curved sections in any visible area should have a generous radius;
3. The grain size and colour of the ballast must be to scale and have a natural look.



The view from above of the embankment and the brick bridge also makes it easier to see the self-made SBB masts and the signal bridge. The track centre distance has been sensibly reduced compared to the Märklin geometry.

4. The catenary masts must follow the original SBB design, i.e., no standard mass produced catenaries.

The tracks were glued to the previously laid cork bed (2 mm) with superglue and painted with a rusty looking brown paint. After drying I scattered the ballast along and between the tracks and fixed it with the well-known mixture of white glue and water.

Once everything was dry, I applied some grey and brown paint to give the track its final appearance. In doing so, I was careful to dab the ballast only lightly with a dry brush in order to avoid having too much paint smear the fine structure of the ballast. It takes a bit longer to do it this way, but the final result speaks for itself, and is definitely worth the additional effort.

I also think it is important to use for Z scale projects ballast with a grain size which is as small as possible. For my new layout, I have chosen a grain size which is even one degree finer than the one used for the diorama. Looking at it with the eye, the difference does not appear to be much, but it does become noticeable in high-resolution photos where the finer grain delivers a more balanced overall look to the ballast, track, and rail vehicles.

The same story applied to the catenary masts for this project, which I also wanted to be as fitting and true to scale, as possible. The four masts for this diorama were scratch built from 1 mm plastic H profiles and 0.5 mm round profiles.

Visually, they fit perfectly into the overall scene. However, two of them did not survive the return transport by mail from the competition and are missing now. Fortunately, they both broke off on the same side, so I can always pretend that they are being replaced and that the route is on single track service during construction.



I don't want to say much about the other small details and scenes, which were created on the diorama. I will rather leave it to the observer to tour around the diorama and let their imagination flow around the "Braunvieh" cattle typical of Switzerland, the two farmers making hay above the embankment and reservoir, the free climbers on the rock face, or the railway maintenance team from Sersa Company – just make up your own story!



The viewers of this diorama are invited to come up with their own story about the various detailed scenes. The alpine mountain world is full of charms and idylls, which should certainly inspire one's own imagination.

Finally, I would like to thank all readers for their inspiration and ideas and for sharing them with the rest of the modelling community.

Be it in the form of pictures and tips in the social media, with forum contributions of all kinds, with video contributions or the like: Building my diorama was a lot of fun and I could learn a lot for my future projects. I would never have thought that a report on my first work would appear in **Trainini®** magazine, and I feel extremely honoured by this - thank you very much!

From my personal point of view, I can now answer the question I asked at the beginning whether I can do this with a "yes". Let's go on - let's do it...



The final view of the bridge scene in front of the embankment shows the waterfall, which was modelled after several trials with "Water Effects" from Noch. And what could make this wonderful scene look better than a Swiss class Ce 6/8<sup>III</sup> "Crocodile"?

All photos (with the exception of page 26 top): Keven Horat

The motivation was provided by the following site:

<https://eisenbahnmagazin.de>

Pages of the suppliers mentioned in the article:

<https://www.maerklin.de>

<https://www.noch.de>

<https://www.zcustomizer.de>



Perfect track spacing

## The golden mean

*The Märklin track geometry, with which the Z gauge was launched in 1972, has been followed to this day by almost all manufacturers who entered the market on a scale of 1:220. This brings advantages, especially if an existing system is to be converted to a different track system. At the same time, its weak points are taken over and solidified. One of these is the large parallel track spacing, which is usually not necessary here.*

By Dirk Kuhlmann. Märklin's Z-gauge rail material has been on the market since 1972. Over the years the range has been expanded with additional products and remains unchanged. Other manufacturers such as Micro Trains or Rokuhan have also adopted its geometry.



The perfectly working parallel track spacing on the "Kallental" layout is measured according to the NEM standards, and not the Märklin track geometry, which almost all manufacturers have adopted.

According to the standards of European model railroaders (NEM), a code 60 profile with 1.5 mm track height applies to Märklin. Further data can be taken from the NEM 120. In this report, we concentrate only on a part of the track geometry: the track centre distance, also called parallel track spacing distance.

For Märklin and other competitors, this is quite generous at 25 mm. If the observer looks closely, the large distances between two trains on a double-track main line are quite noticeable.

According to NEM 112, the track centre spacing distance should be at least 19 mm on a main line and at least 21 mm in the station area. The upward deviation chosen by the manufacturers follows the standard in this respect, but impairs the effect on the observer of a system.

## The problem with too tight radii

With the straight track material, the hobbyist can at any time create a track centre spacing distance on his layout that corresponds to the model, but the 19 mm distance with the commercially available narrow radii (195 mm & 220 mm) cannot be maintained. In this case, only, at least, a partial installation of flexible tracks can help.

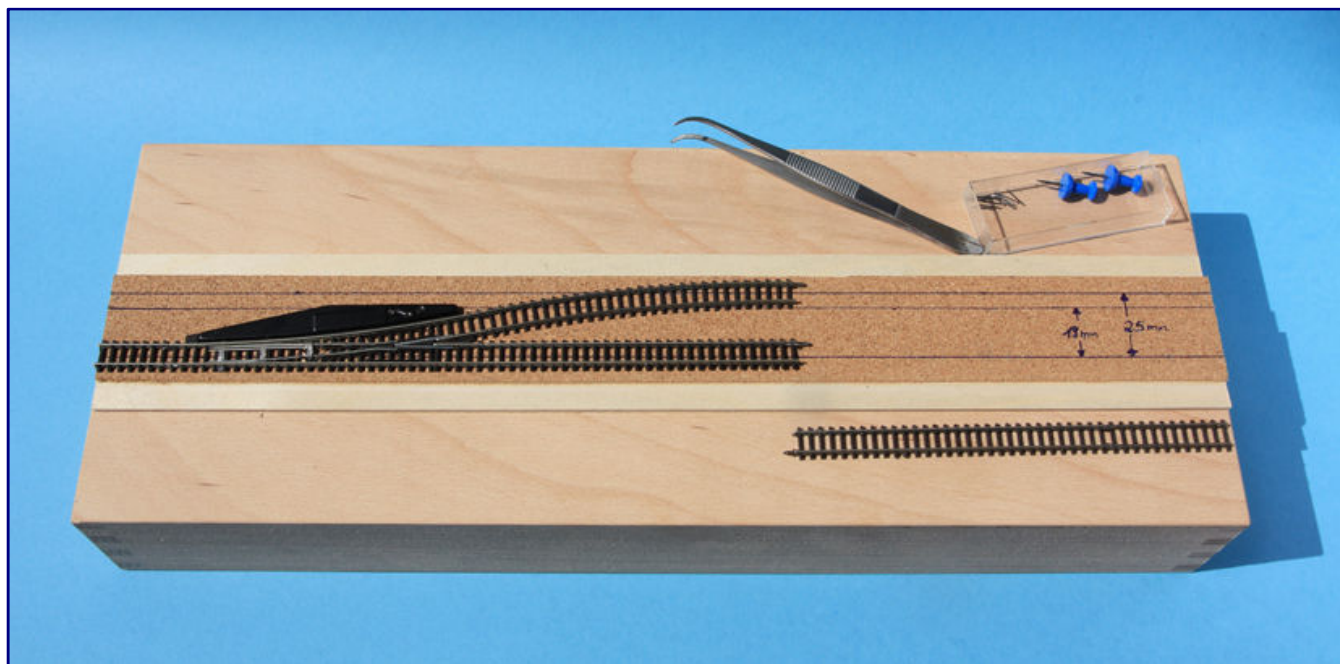
So that two trains do not strike each other when cornering, it is advisable to make a prior attempt with long, wide swinging-out rolling stock. In connection with the installation of flexible track, this even appears to be even more necessary, in order to reliably determine the resulting larger minimum distance in the radii.

It should also be mentioned that in highly modern model railways, the narrow radii that appear in the standard range are often no longer visible to the viewer. When I built the “Kallental” and “Bad Rothenzell” dioramas, I proceeded exactly in this manner.

The track curves leading to the staging yard are no longer visible there due to the superstructure of the turnstiles with a cover (“black box”). Thus my double track parade line with 19 mm track centre distance could unfold in the best possible manner.

Only to the scenery passage the distance of both rail lines spreads here again on the usual 25 mm. Here the model landscape helps with an effective camouflage. However, if at least one “normal” turnout comes into play in the visible area of the layout, the tinkering really starts. With it, the usual track geometry has to be changed.

The following is a variant for a satisfactory, “slim” track figure:

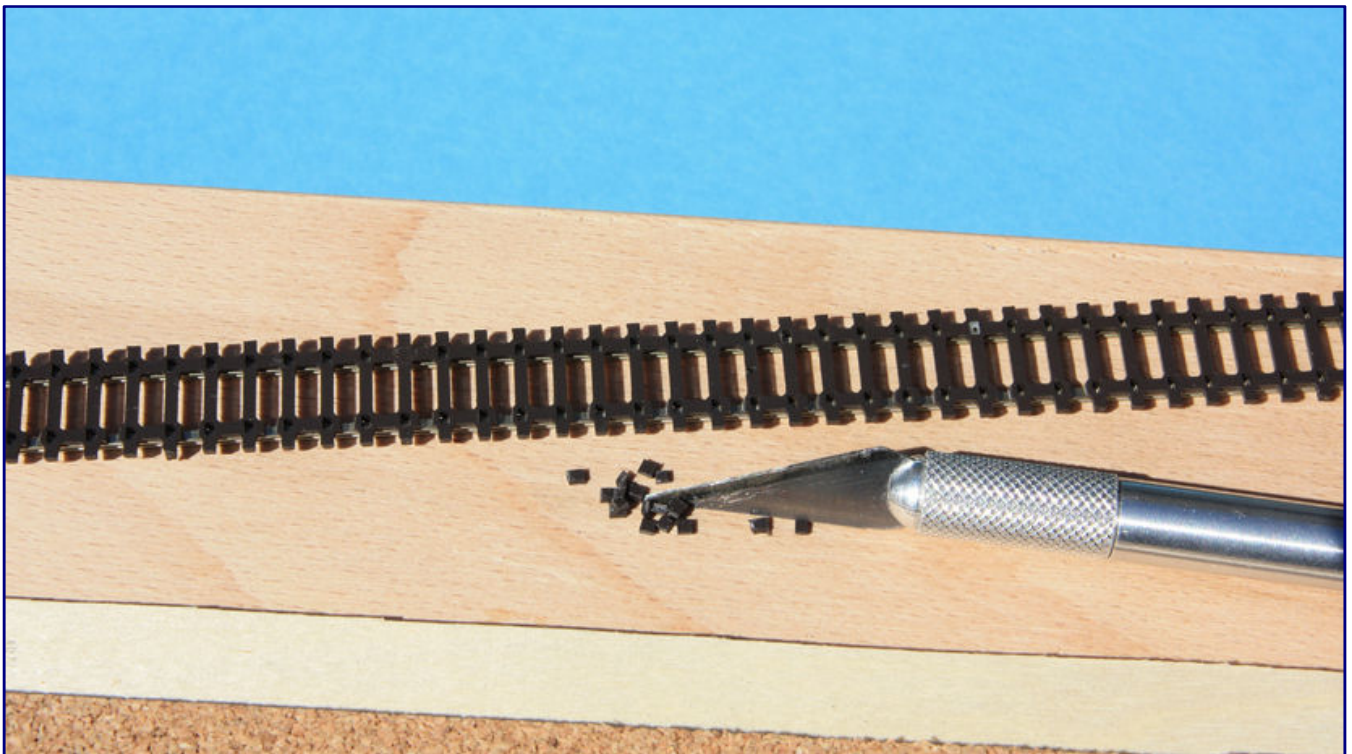
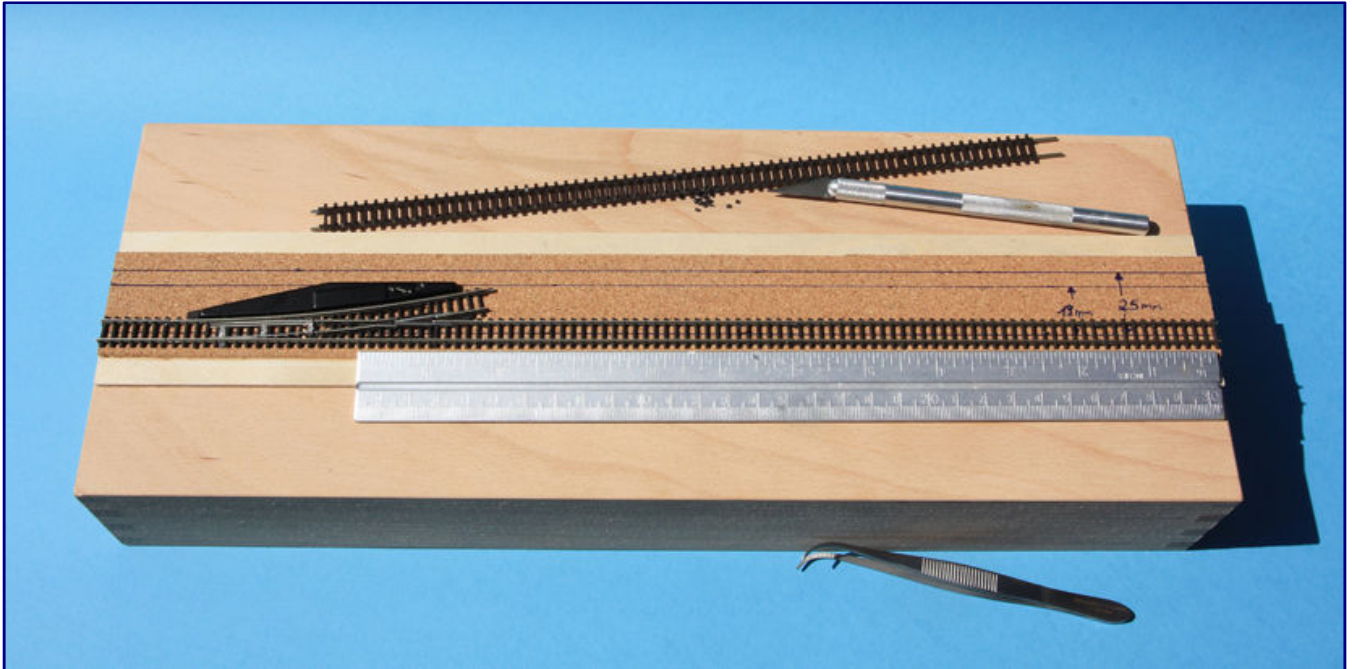


The test setup with an 8591 counterbend from the Märklin track range illustrates the track centre distance of 25 mm (distance between lower and upper line) provided by the system. Our goal is a distance of 19 mm (distance to the lower marked line).



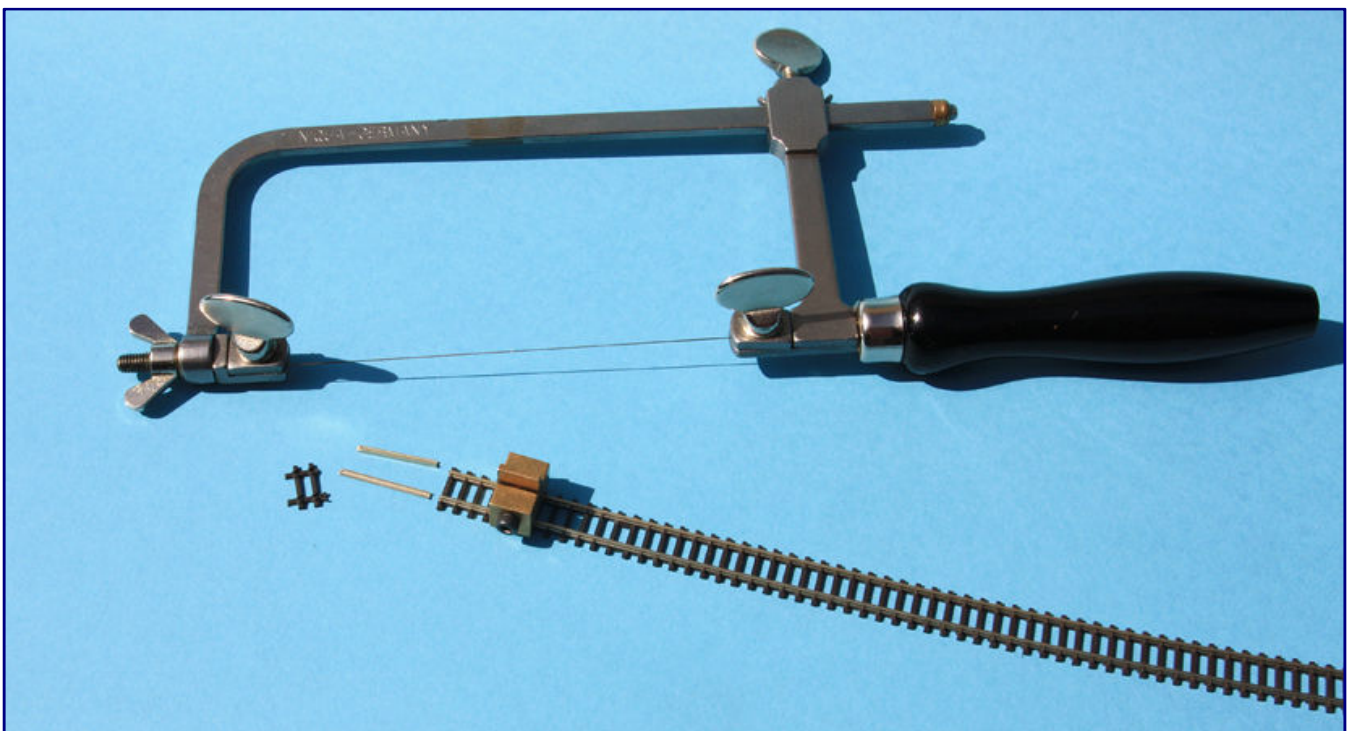
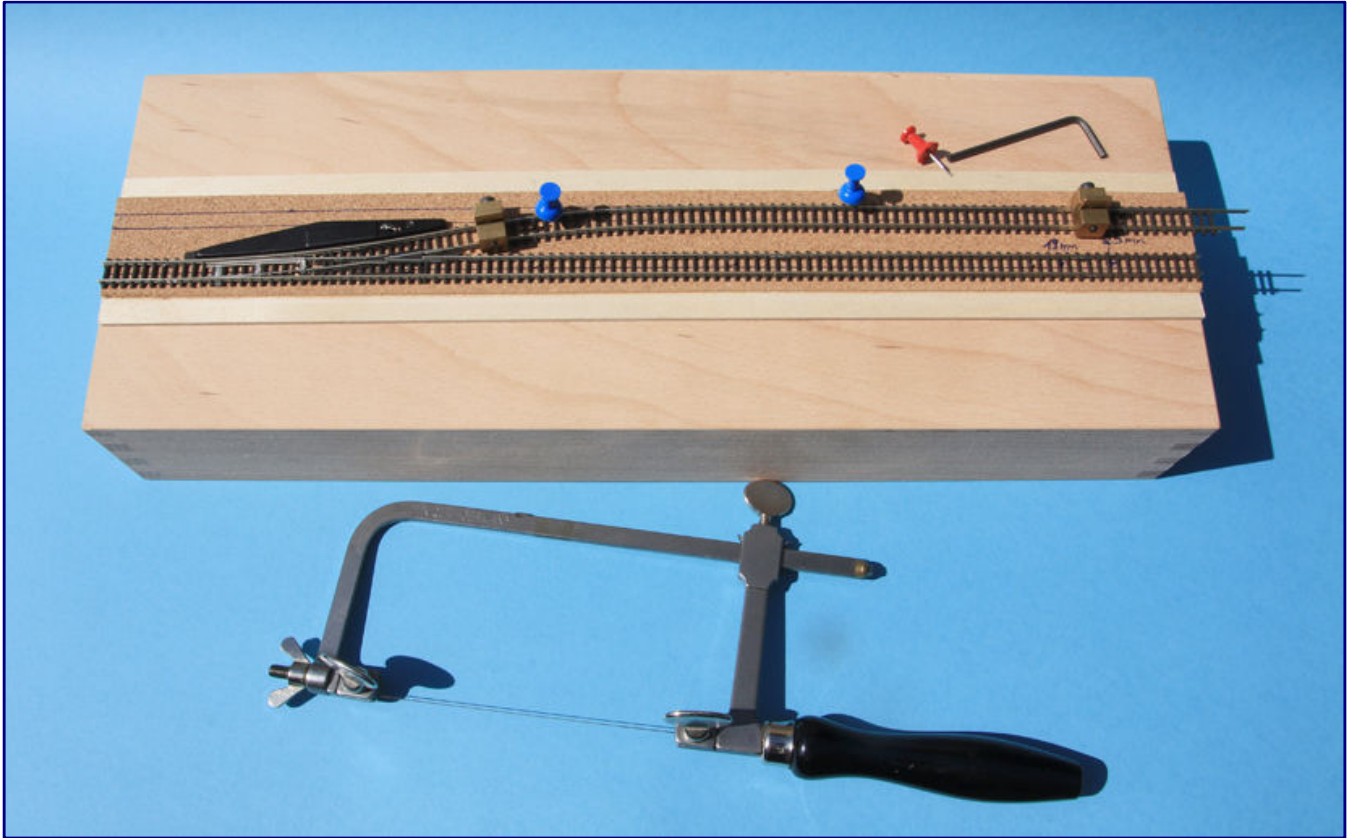
The test setup shows how the track centre distance of 25 mm is achieved with a turnout (Art. No. 8562) and the opposite bend (Art. No. 8591) from the Märklin range. The branching angle here is 13 degrees with a radius of 490 mm.

However, we would like to achieve the scale and optically finer distance of 19 mm. This is to take place with few and careful treatments of the proven track system.



For our project we cut the sleeper tape of a straight track section on the outside of the planned curve (photo above and below).

Therefore, the sleeper band of a straight track (e.g. Art. No. 8594) is first cut with a sharp scalpel only on the outside of the curve. If the connecting webs are cut out between each pair of sleepers, the result is a return curve with a high degree of freedom of movement.



The flex track cut into the sleeper belt is brought into the curve by Krause track clamps and fixed with pin board needles (photo above). The overlapping tracks are finally cut off with a jewellery saw (photo below).



The main track has already been fixed with nails, and an aluminium ruler is used for a completely straight alignment. Switches should not be fixed, as they have a small movement when operated. But the later ballasting does not stand in the way of this.

The next step is to bring the flex track rail with the so-called Krause clamps into the desired curve to the 19 mm line and fix it with pinboard needles. The overlapping tracks (right) are marked.



If ballasted as a trial, the optical effect of the narrower track centre distance can be assessed even further. This makes it ideal for a layout.

Cutting is done with a jewellery saw, which is fitted with a metal blade with a cutting width of 0.16 mm. Then the new return curve is also fixed with nails, and the track clamps can be removed.

On our Casani wooden base (40 x 15 cm), a ballasting provides an idea of how a track centre distance of 19 mm can be achieved and will appear on a diorama or a layout.

Now a small block place placed in the middle of pastures and old trees, finished would be our showpiece somewhere on a side road. If the black drives of the Mini-Club switches were now separated from the sleeper grate as well, an almost perfect picture would result - well noticed, in the scale 1:220.

**Tool requirements:**

Jewellers curved saw (curve depth ca. 70 mm) Fohrmann-Art.-Nr. 14121

Fretsaw blades (32 Teeth / 0,16 x 0,32 mm) Fohrmann-Art.-Nr. G14480

Krause Track clamps (2 or 4 units) Fohrmann-Art.-Nr. 01424 or 01425

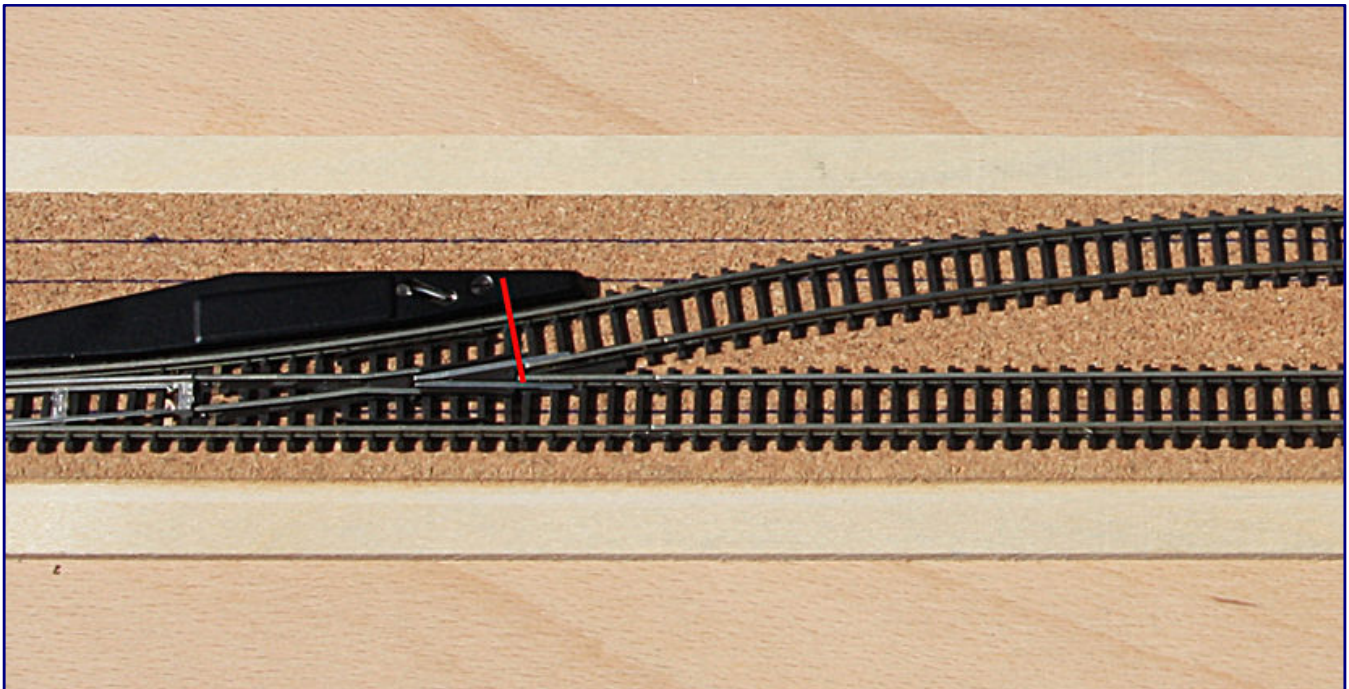


Photo above:

For comparison with the previous picture we show another perspective. It illustrates even more clearly the prototype-like effect of the distance between the parallel tracks.

Photo below

For experienced model railroaders there is an alternative to laying flex track by shortening the switch at the red marking. Then the return curve track 8591 could also be attached directly to it and reached to the same centre separation distance.

The experienced model railroader might shorten the turnout (red line in the photo above) and use the counter curve (Art.-No. 8591). In the area of the frog, the copper contacts would have to be loosened and reattached. This would not be a problem with special tools, but due to the high possibility / danger of a functionally impaired switch, it would only be advisable to a limited extent.

Is there a better solution for the industrial material?





This recording of “Bad Rothenzell” shows us how what is described in this article works in plant practice: The parade track on the right side has been laid with 19 mm track centre distance, station and depot on the left received the distance of 25 mm specified by the large series geometry.

In 2022, the Z gauge will be fifty years old. In addition to the anniversary articles that can certainly be expected, the manufacturers could (only by the way) delight us with slimmer standard switches or a refreshed or reworked track system. It would be an appropriate time, after half a century.

Most fortunate are those who own the tracks and switches of Eckhard König. For example, there is a EW 49 - 190 1:9 turnout with a radius of 864 mm and a branch angle of 6.34 degrees. I simply call this “simple elegance”.

**Source of supply for the tools:**

<https://www.fohrmann.com>

**List of the standards mentioned (MOROP):**

<https://www.morop.eu/index.php/de/nem-normen.html>

**Manufacturer of the König track (source of supply):**

<http://weichenlaterne.de/index.html>

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Self-built project on shorty chassis

## As if driven by the hand of spirits

*Thomas Heß has been reading our magazine Trainini® for many years. He has used a lot of advice and ideas from the contributions of our readers, and the specialist authors working for us and the editorial staff. Now it seemed to him the time to give something back to this community. In the following he describes the construction of a ghost (powered) car using a Rokuhan shorty chassis.*

By Thomas Hess. It was not until the year before last that I bought myself a small "Ticino" still-fabricated plant, and set it up with the Märklin Mobile Station 2, which I had from the H0 carpet track, as well as digital switches and lighting switches from JSS. This is how my system Winzlingen (Schwaben (Swabia)) came into being.

By Thomas Hess. It was not until the year before last that, I started to rebuild selected locomotives with decoders from Velmo and Doehler and Haass. In the last handicraft season I dared now to a change of rolling stock. My specifications said: It should be a ghost car with appealing driving characteristics; it must also be possible to control it digitally with DCC. The tractive power should be higher than normal locomotive models, because the grade on the Noch pre-formed layout Ticino is quite steep!



In Winzlingen (Schwaben (Swabia)) station, the battery-powered small locomotive (Ka) shunts a short freight train. The fact that the drive in this case is in the first freight wagon, however, should only be noticed by connoisseurs. Photo: Thomas Heß

And it must be possible to carry out the conversion at a reasonable cost - in terms of time, technology and money. In fact, I had already purchased a ghost car quite some time ago - a conversion based on the 2-axle Märklin rail bus with a housing from the sliding wall car.

However, I am not really satisfied with the performance and the contact reliability. So it was out of the question. On the contrary it came to me that the manufacturer Rokuhan delivered a steep pattern with the motorized, four-axle "Shortys". There should be something that can be done.

It was worth a try, especially since the basic model is available from Jörg Erkel (1zu220-Shop) for about 18 Euro. Its contact reliability and driving behaviour should also be correct: With the models of the series 181<sup>2</sup> of Rokuhan I was allowed to make finally very positive experiences.



A motorized shorty chassis from Rokuhan and an ordinary self-discharging wagon 8630 from Märklin are sufficient for the conversion presented today. Using a D+H decoder, the ghost car was even digitized.

Their positive properties include smooth running due to the bell-shaped armature motors, the high tractive force due to traction tires and their basic characteristics as bogie locomotives. The Rokuhan Shorty also has all this, but only the front bogie is driven.

And a suitable housing for my ghost car should certainly be found in the Märklin freight car range? I would have to cut the floor out of the Märklin car so that it can be attached to this chassis.

And a Doehler and Haass Micro-Lokdecoder (DH05-C) was supposed to be accommodated as well... The decision was made quickly, and the specifications were already in place. The conversion should be done by hand: "Trying makes you smarter", and that increases the fun of it.



When the Rokuhan shorty arrived a few days later, I set to work. First I looked at the dimensions of the Shorties.

I had not found anything, in advance, that would have shown me its exact dimensions. And so there was a surprise: The Shorty is relatively short after all!

So it had to be a quite short housing for a four-axle car as well. In my freight wagon collection I found different models: The telescopic hood wagon was too long, and the inside was too narrow.

Also, the Erz-Ild wagon is too long and too low. I would have gotten the locomotive decoder in, but then the housing would have "floated" over the bogies.

The best compromise for me is the housing of the self-discharging car Fads 176 (Märklin 8630): wide and high enough to accommodate the undercarriage completely. The locomotive decoder also fits, and the conversion can be concealed by a load insert. However, this car is also too long!

The basic idea was to move the pin for the rear, non-driven bogie on the Shorty by about 5 mm towards the end of the wagon. This increases the distance between the bogies. Then, this is again reasonably correct.

#### Required tools:

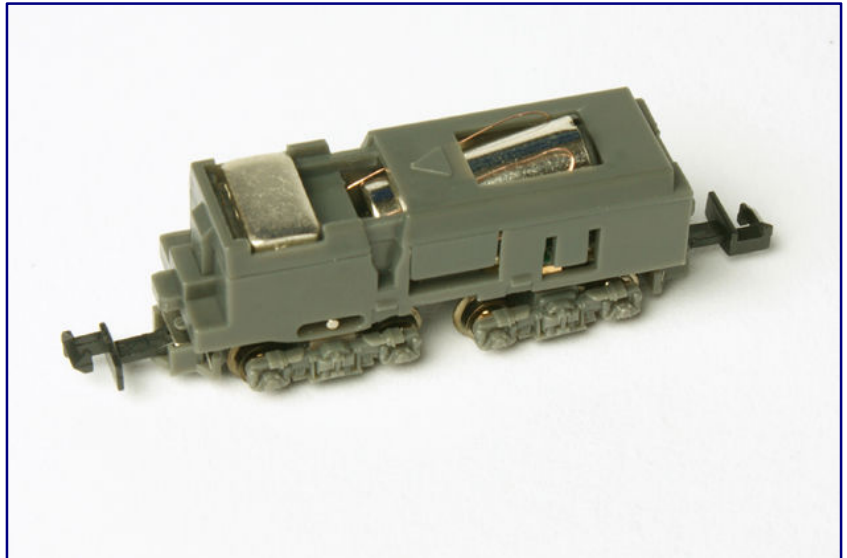
- magnifier with light
- precision mechanic screwdriver
- sharp craft knife
- side cutters, small flat nose pliers
- key file, sandpaper medium and fine grain
- soldering irons
- "Third Hand"
- multimeter
- tweezers
- fine brushes
- craft kit
- tray for storing the individual parts

I would like to thank Mr. Holger Späing of **Trainini®**, without whose persuasive assistance, I would not have been able to make this decision, as I had feared that the project would fail.

#### Extend bogie spacing

First of all, the shorty has to be dismantled. The underframe and the gearbox are made of plastic. I prefer cutting plastic rather than sawing or filing metal.

I started by removing the front driven bogie. As with Märklin models, this is done by pushing out the metal quick-release axle. However, be careful, because the gearwheel on the axle is very small, and might get lost, if you don't put it in a safe place right away.

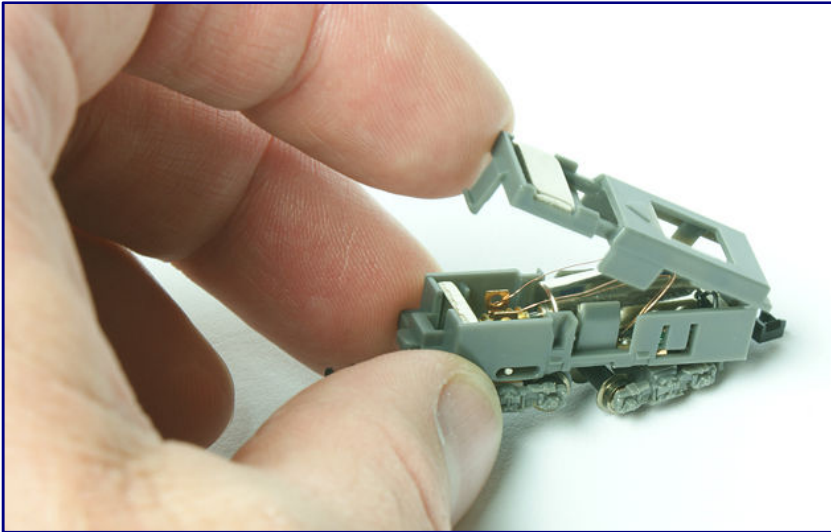


The chassis of the Shortys is, nevertheless, very short, which made the selection of a suitable base model for the ghost car difficult, at first.

All other alternatives seemed to be too elaborate or not feasible: Extending the chassis or shortening the Märklin car's housing were ruled out as options, if I were to equip the cars with Märklin compatible couplings.

For the realistic impression of the axle bearing covers, it was first necessary to be convincing, because it was a quite complex solution to implement with the help of glued on covers of the genus Fads 176 (Märklin 8630).

However, this step was most worthwhile, as it contributes decisively to the positive overall impression of the car. I



To remove the upper latch, the latching lugs can be prised open with a jeweller's screwdriver. The upper part can then be removed carefully. The driven bogie (left) falls out, as with Märklin, as soon as the pin, which also holds the central gear wheel, is pulled out..

I certainly overlooked that. And since it is made of plastic and makes little noise on impact, I only missed it during assembly, and only found it with a lot of searching efforts, and under heavy swearing I found it on the floor between two boxes.

Then I took down the cover of the Shorty, it is secured at both front ends with snap hooks in corresponding eyelets in the frame, there are no screws.

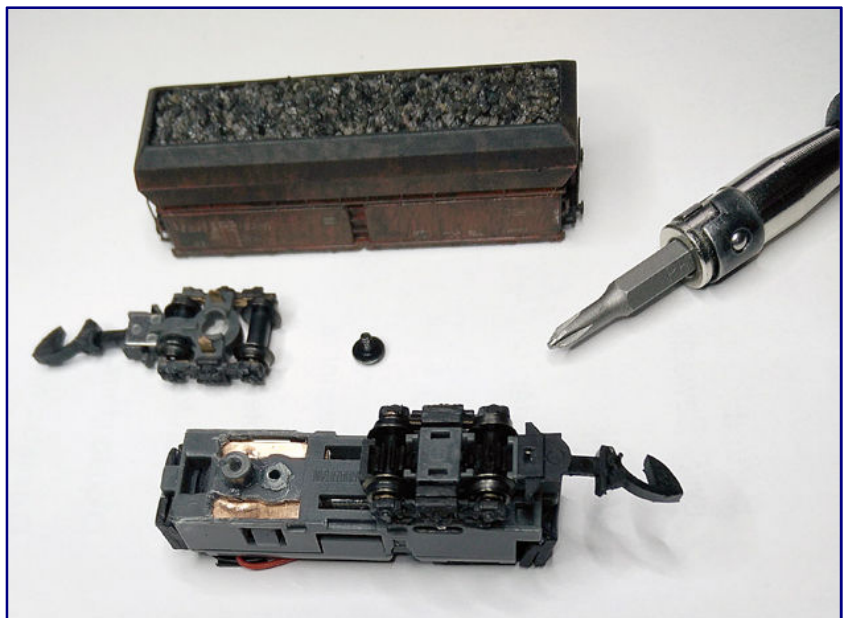
With a jeweller's screwdriver the snap-in hooks can be carefully prised open, and the upper portion can then be carefully removed.

should be removed (motor connection and power connection to the front bogie). The motor is snapped into the side cheeks of the locomotive frame. It is also best to unsolder the wires on the circuit board immediately, so that the subsequent work is not hindered by the stripping.

Rokuhan has mounted small metal plates in shafts on the front side of the locomotive frame to weigh down the locomotive. These like to slip out. So they too should be secured against loss and stored away. To do this, unscrew the rear bogie, cut off the pin on the underside of the locomotive frame flush with the base, using a sharp hobby knife, and glue it back in place.

I have shifted the position of the pivot by about 5 mm in the direction of the rear end of the undercarriage. To find the exact location, you can use the selected housing as a guide.

I did the gluing by careful use of liquid superglue (manufacturer Bondo in a bottle with dosing tip or pin for application). When closing the bottle, make sure that the pin is seated correctly and that it is not off-centre or crooked.



In order to create the correct bogie spacing of the basic model, important for the uniform effect in the train, the free-running bogie was removed after loosening the retaining screw, and the guide pin was moved outwards. The contact surfaces for power transmission to the running gear had to be enlarged as well. Photo: Thomas Heß



## Extension of cut-outs and contact surfaces

So that the rear bogie can be mounted again after moving the pivot and can also transmit the current, I have extended both of the cut-outs in the car floor and the contact surfaces.

Now the cut-outs in the car floor can be extended towards the ends of the car. With the sharp craft knife I tried to reproduce the curve. This is necessary because the contact flags in the bogie swivel around the vertical axis of the frame. If a straight cut is made, the swivel range could be restricted if the contact lugs touch the cut-out.

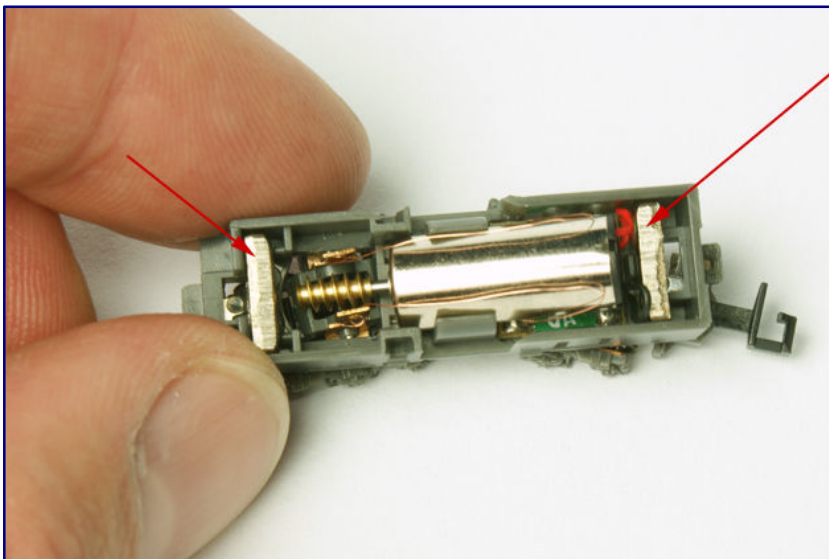
However, it is also possible that on the later mounted housing of the Märklin 8630, the bogie axle bearing covers on the downward moving side walls will stop the car, so that the rounded cut-out, would not be an absolute necessity.

### **Construction ex-works:**

Rokuhan realized the current transmission for the bogies with the help of metal flags standing vertically in the bogie. The ones at the rear press on contact surfaces on the underside of a small printed circuit board.

This is snapped into the interior of the car floor. The motor connections are soldered onto it, and the connections of the front driven bogie are also brought here by means of very thin, flexible enamelled copper wire.

In order to extend the contact surfaces for the transfer of current between the rear bogie and the small circuit board with the motor connections, I used thin copper sheet (thickness 0.3 mm). This is placed under the board. Therefore I cut two 2 mm wide strips and glued them in the shorty's bottom with superglue.



The photo shows the sensitive enamelled copper wires that conduct current from the driven bogie to the motor. Our reader decided to exchange them for more flexible strands. Two of the three inserted small weight plates are shown marked with arrows to increase the traction.

The correct length is obtained by simple trial and error. However, it is important to ensure that the glue does not interrupt the current flow to the circuit board later.

It is just as important to protect the inserted plates against short circuits, both in relation to each other, and to the motor (especially when using a locomotive decoder).

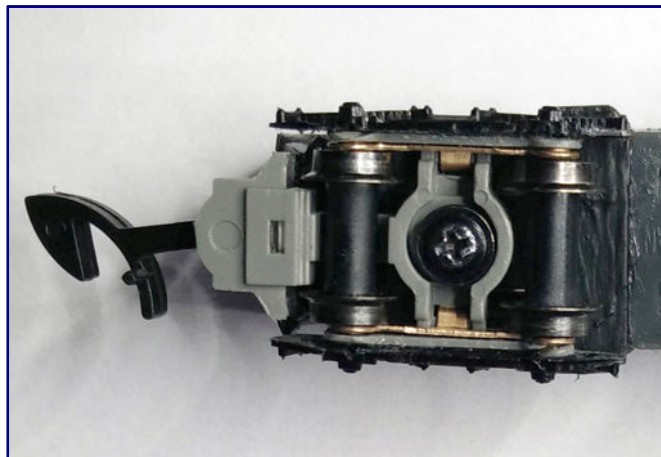
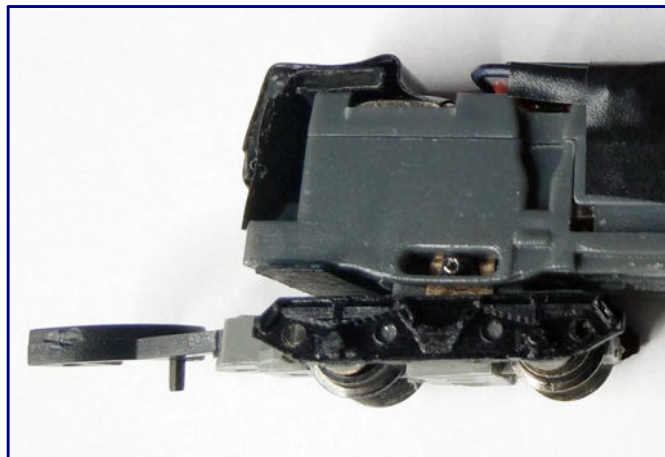
After the adhesive has dried, the rear bogie and the printed circuit board can now be mounted for testing.

A multimeter can be used to check the current flow between the wheelsets and the circuit board. The left and right wheels of an axle are also insulated against each other by Rokuhan.

## Realistic design of the bogie panels

The Fads 176 from Märklin (8630) served as a parts donor. Its bogie covers were glued to the bogies of the Shortys after modification.

In the first step, I cut off the front panels of the Märklin wagon flush and sanded them flat on the back, so that they still had a material thickness of approx. 0.45 mm. Previously, the thickness above the point where the covers represent the axle bearing was approx. 1.1 mm.



According to the description in the article, the shorty bogie frames were removed in order to be able to glue the Märklin model's panels on with superglue (left picture). However, these also had to put up with a "rejuvenation cure" beforehand (right picture). Both photos: Thomas Heß

The grinding process was carried out with the help of 240 grit sandpaper, which I had fixed to the worktop. I removed the thickness by placing and moving the screen over the sandpaper.

Handymen like me, who are blessed with relatively thick fingers, will quickly notice what happens if the fingers rub permanently on the rough surface because the small grinding part is difficult to grasp. Repeated thickness measurement is necessary during the grinding process.



After adjusting the bezels, the ghost wagon (right) is barely recognizable as a ghost wagon. Only the light grey coupling shaft can reveal it, if we disregard the exchangeable, bright nickel-plated wheel sets of the left series model. Photo: Thomas Heß



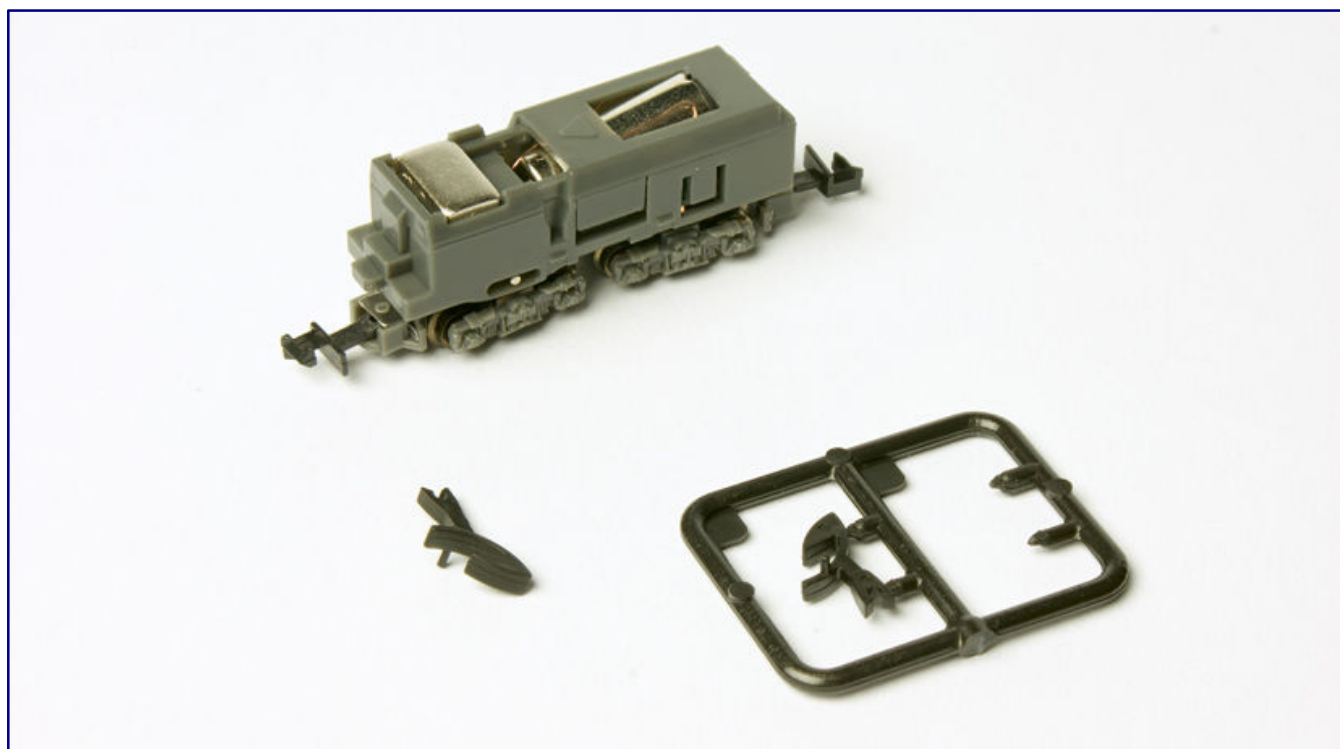
On the Shorty I cut the removed frame parts flat with a scalpel and then grinded them down, as well. The material thickness after the grinding process was approx. 0.6 mm.

So that the bogies were not damaged during the grinding process, I had not disassembled them before. I had to disassemble and clean the bogies of the Shortys anyway before gluing on the covers. Nevertheless, extreme care had to be taken, and, most importantly, the journal bearings for the axles could not be damaged.

Then the parts were glued together with superglue. Care had to be taken to ensure that the bogie covers were seated correctly. In particular, the bogies of the Fads 176 still had to be able to swivel perfectly, so that later in switches and in curves, there would be no derailments.

## Coupling hook and assembly

Instead of the original Shortys couplings, I replaced them with Märklin compatible Rokuhan couplings in the long version. These couplings are available in specialist shops. The replacement is done by pulling the old couplings out of the front of the receiving shaft and plugging in the new ones.



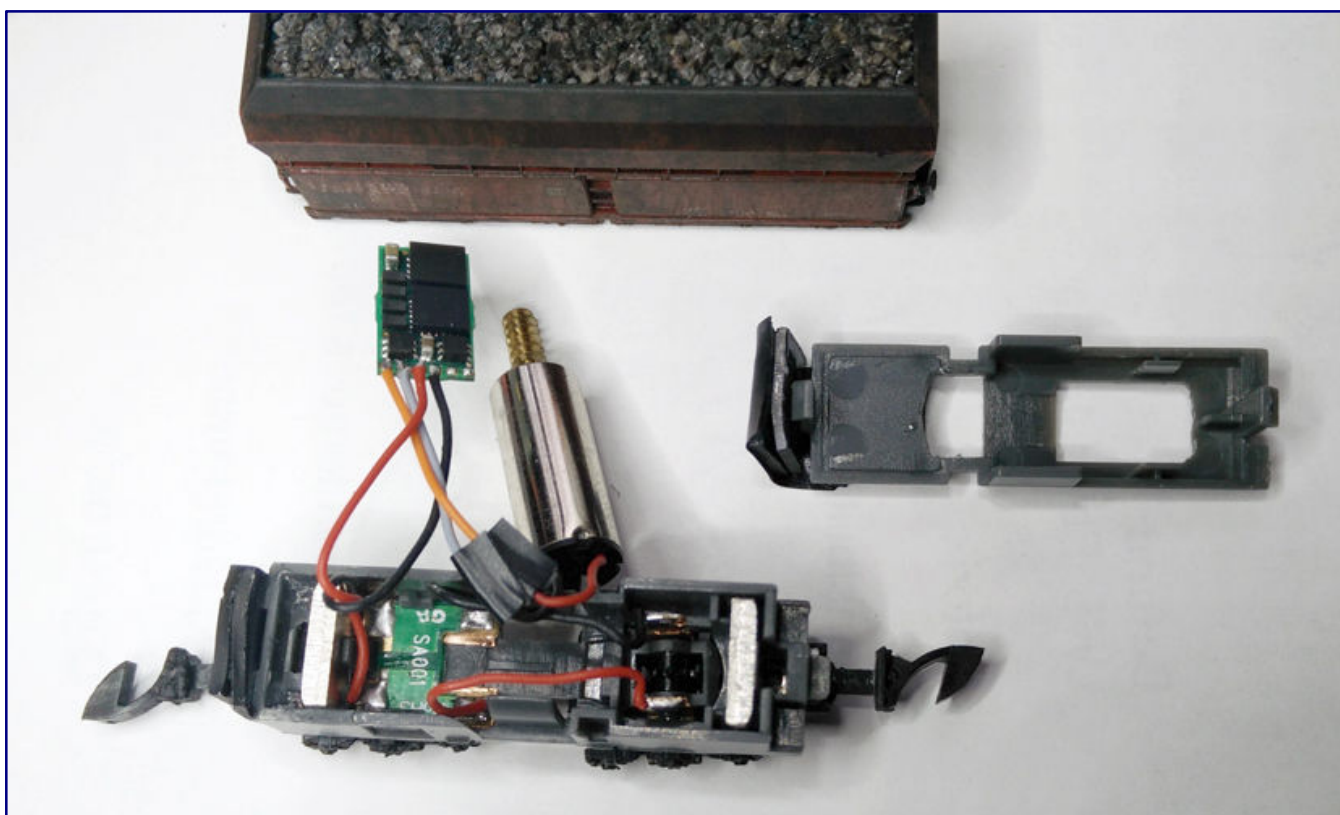
The couplings on the Shorty that are not Märklin compatible can be easily removed and replaced. Suitable replacements with Märklin compatible couplings on long or short shafts are available in the Rokuhan accessory range.

Readers who want to convert another model into a ghost car may want to consider using the Rokuhan couplings in the short version. Alternatively, the Rokuhan couplings can be cut off at the base of the claws and glued to the claws of the Märklin couplings instead. Thus it would be possible to realize length compensation, if the total length of the body does not fit.

The assembly is then carried out in reverse order. At this point, however, I would like to mention a few special features:

- I changed the live connection between the front bogie and the circuit board in the car floor. The reason is simply that the very thin wire used in the factory broke several times. I used some flexible decoder strands and soldered them to the contact lugs of the front bogie and to the circuit board.

These strands are laid over the motor during assembly and then laterally past it. It is best to mount the front bogie, then insert the circuit board and guide the strands in an arc. For reasons of operational safety, I have enlarged the existing front (smaller) cutout in the cover of the shortys: I have cut in a slight curve.



The fine enamelled copper wires were replaced by red and black strands after several breaks, which were fitted, as described in the article. Photo: Thomas Heß

The strands I use can be laid in the area of the front bogie in such a way that they have more room to move and can “work” by means of a loop. This way the swivel of the bogie is not hindered by stiff strands.

- When mounting the motor, make sure it is seated correctly. The motor is located at an angle in the locomotive housing. In the area of the circuit board underneath, it must find its seat on a small shoulder. It is snapped laterally into the frame.

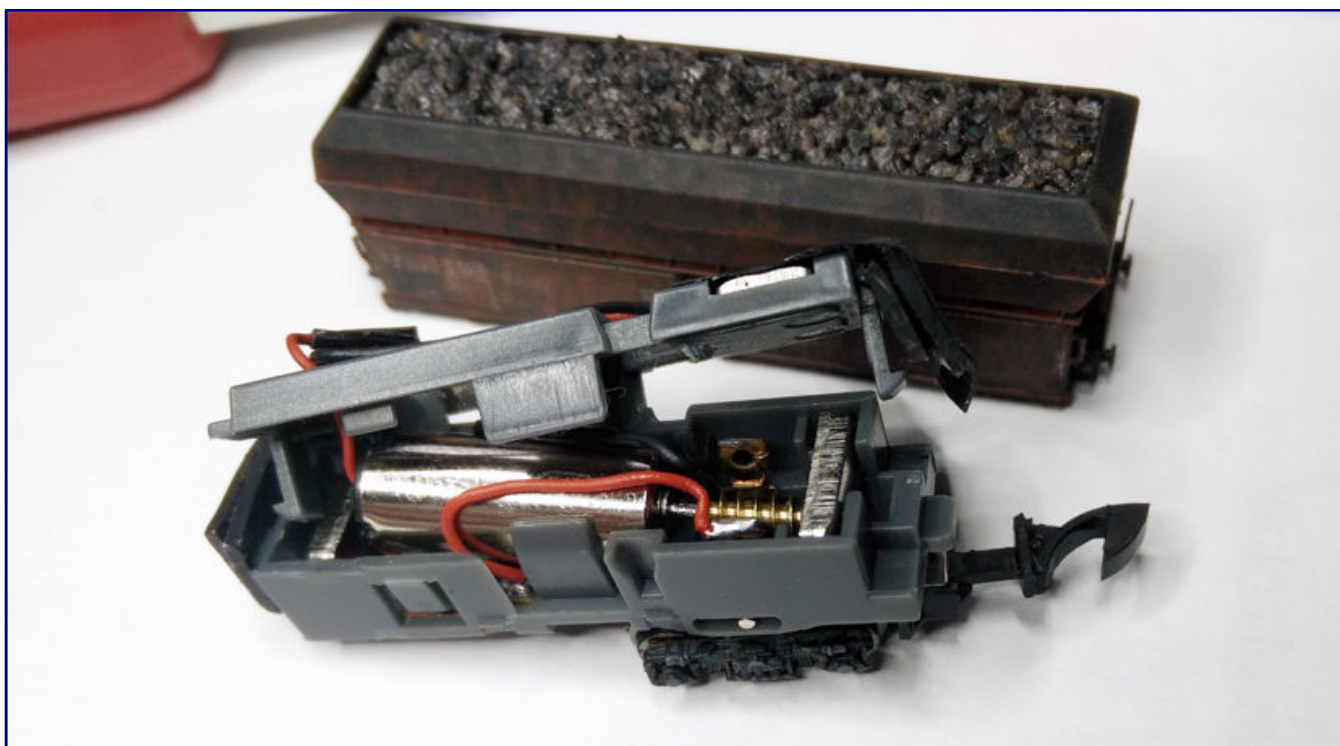
The gear worm must engage cleanly with the plastic gearwheel on the drive axle at the front, if the bogie is already mounted. When fitting the cover, always make sure that the connecting wire strands are not crushed.



- For operational safety, I also used small pieces of cut rolled lead in addition to the existing plates in order to increase the weight. These were glued on the front and on the lid of the Shortys.
- The DH05-C locomotive decoder from Doehler and Haass is suitable for digital upgrades. This is placed on the lid of the Shortys. The current-carrying connection is made with thin, flexible strands. The rear cutout has been extended to the rear, the dimension is about one strand thickness.

Thus the connecting strands (4 pieces: 2 x track and motor each) can be laid better and the decoder itself can be threaded better. The engine seat is not disturbed, because it is secured by lateral cheeks.

If you don't want to use a decoder, you don't have to do this step, the wiring remains completely inside the Shortys. For use with bell-shaped armature motors, D&H gives advice on programming the CV values on its pages (in my case, for the DCC format).



For the conversion of our reader the choice fell on a decoder of the type DH05-C of Doehler and Haass. With the described adjustment work the tiny one could be accommodated in the ghost car. When reassembling the Shortys, make sure that no wires are crushed. Photo: Thomas Heß

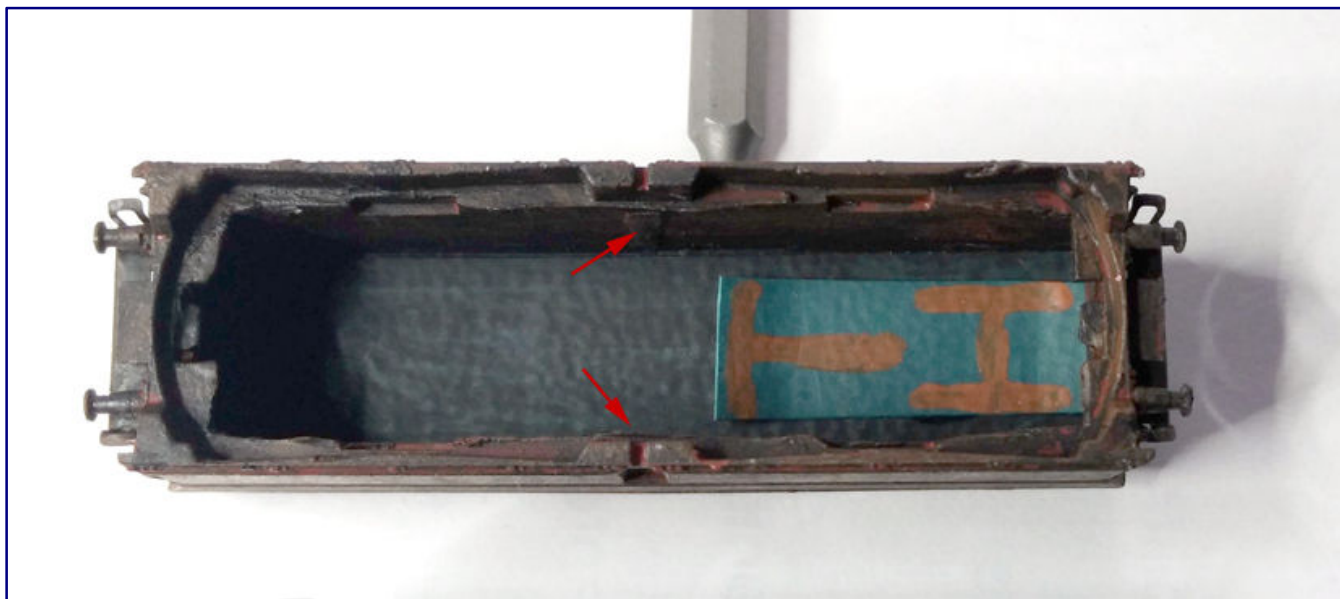
## Customizing the Base Car Body

In my case the case of the Märklin self-discharging car Fads 176 (Art.-No. 8630) is used. First its bogies are removed. They can be carefully prised out with a jeweller's screwdriver. The same procedure is used for the metal pouring surfaces.

Since the floor of this car is not removable, the floor must be removed with a sharp handicraft knife. I have removed it almost along its entire length. But you have to make sure that the cut-out is not too wide or asymmetrical to the longitudinal axis of the car.

On the one hand, the width should be just wide enough so that the car is still firmly clamped into the chassis without losing its seating, but, on the other hand, not wide enough so that the side walls of the housing are spread out. Therefore, it is advisable to constantly check and adjust the seat during the work.

In the middle of the vehicle there is an upwards pointing bridge at right angles to the direction of travel, which must also be removed and requires special care. For its removal, I used a small side cutter for the first two cuts. If the remains of the bridge remain, this can also have a positive effect on the housing seat. Here, too, the rule is to remove only as much as is necessary.



In the middle of the car body, a crosspiece had to be removed so that it could be placed as a "little hat" on the machined Shorty chassis. At the top the model closes a self-made load insert, the bottom of which can be seen here together with the marking for the suitable side of the chassis. Photo: Thomas Heß

I cut the insert for the load from the back of a plastic folder, inserted it from below and then glued it together. Then I applied gravel and coloured it discreetly with well diluted acrylic paint. This insert is also used to adjust the height of the housing on the locomotive frame.

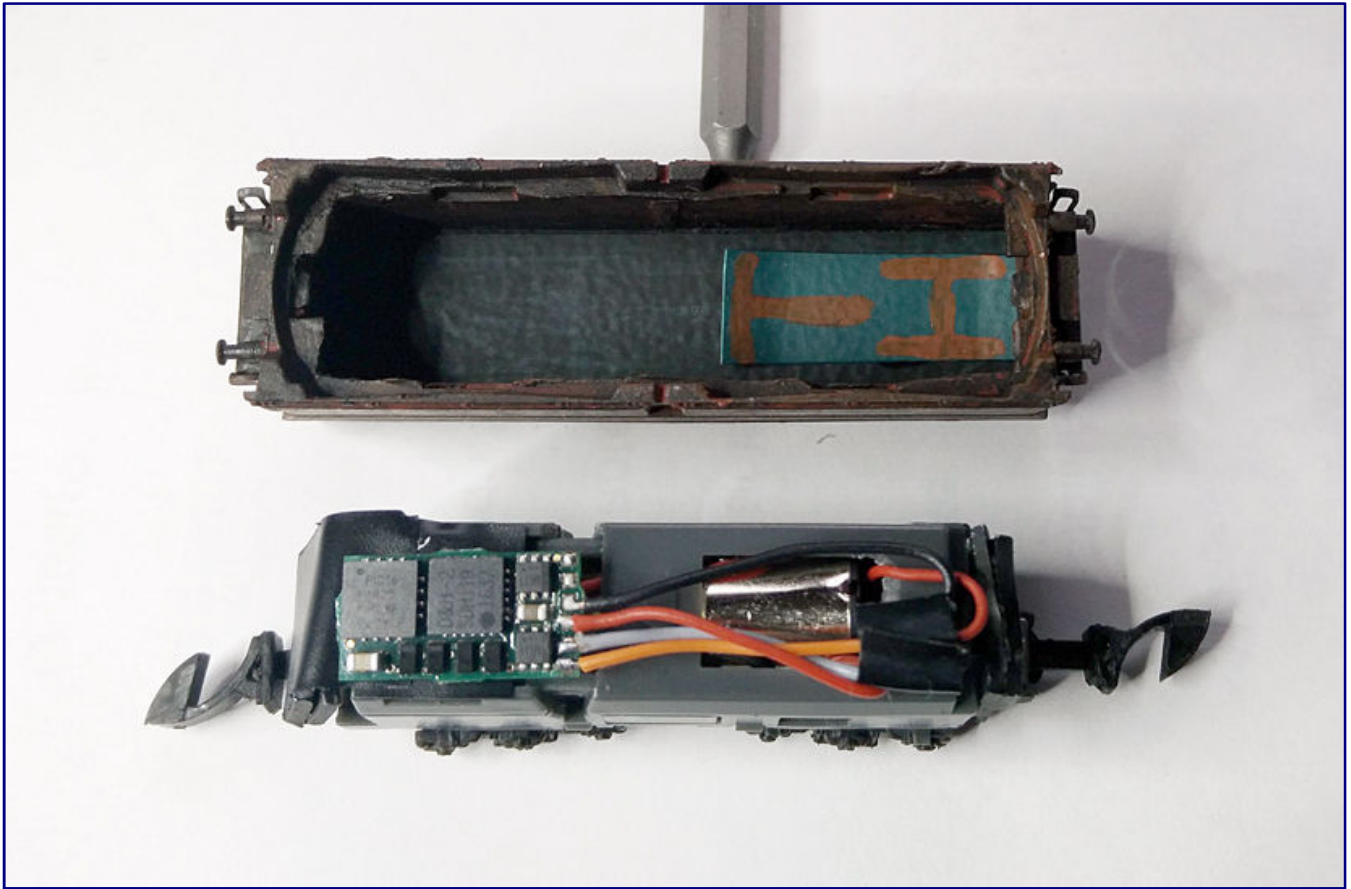
The height fits on one side at the front because the load insert rests on the decoder. At the rear, however, the resulting misalignment must be corrected: For this, I glued a second piece of plastic on one side. Its other end can be bent and set up, as required. By a spring effect now a height compensation takes place and the inclination is corrected.

To hide the plastic shine of the original case and the Rokuhan bogies, I used brown, black and anthracite acrylic lacquers and, mixed differently, applied them with a fine brush. Their application was strongly diluted and in several layers. So far, no clear coat has been applied, because I don't know which coat is suitable.

The conversion was a lot of fun for me. I think the result is quite respectable in relation to the effort involved. The tractive force has been increased to such an extent that nine wagons with loads are no longer a problem, even on the "Winzlinger Steige (incline)" with 4 per mille.

In pushing mode, however, the ghost wagon weakens with so many wagons - probably because only the front of the two bogies is driven. The overall running smoothness is, however, very good, and the contact reliability is impeccable.





All work has been completed and the car body can be placed on its new chassis. Equipped with the digital decoder placed on top, it will teach the locomotive models without drives to run in the future. Photo: Thomas Heß

I am also very satisfied with the cost side, as I have used a basic type that is easy and inexpensive to procure. Shorty chassis, decoder, adhesives and other working materials included, this project only costs about 70 Euro.

**Manufacturer pages to the article:**  
<https://doehler-haass.de>  
<https://www.maerklin.de>  
<https://www.rokuhan.de>

**European source of supply :**  
<http://www.1zu220-shop.de>

**Suppliers outside of Europe:**  
<http://www.rokuhan.com>  
<http://www.ztrackcenter.com>

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.

## Die Baureihe 64 im EK-Portrait **Geschichte der Bubiköpfe**

**Die besten Baureihenbände erscheinen für viele Vorbildfreunde zweifelstfrei im EK-Verlag. Das neue Werk zur beliebten Baureihe 64 scheint nahtlos daran anzuknüpfen. Zu beachten ist allerdings, dass es sich hier um die überarbeitete Auflage eines früheren Buches handelt. Deshalb stellte sich uns besonders die Frage, für wen sich der neue Titel wohl lohnen mag.**

Peter Melcher  
Die Baureihe 64  
Die erfolgreiche deutsche 1' C 1'-Einheitstenderlok für Nebenbahnen

EK-Verlag GmbH  
Freiburg 2019

Gebundenes Buch  
Format 21,0 x 29,7 cm  
344 Seiten mit 537 S/W- und 47 Farbbildern

ISBN 978-3-8446-6032-6  
Best.-Nr. 6032  
Preis 49,90 EUR (Deutschland)

Erhältlich direkt ab Verlag  
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Die Einheitsdampflok der Baureihe 64 war eine erfolgreiche und häufig gebaute Tenderlok der Deutschen Reichsbahn, die in ganz Deutschland über immerhin vier Jahrzehnte bis in die siebziger Jahre hinein zuverlässig ihren Dienst versah. Zu sehen war sie vor allem vor Personenzügen auf Nebenbahnen, aber auch Übergaben im Güterverkehr oblagen ihr dort nicht selten.

Vor über 30 Jahren erschien im EK-Verlag erstmals ein Baureihenportrait des beliebten Bubikopfes. Und auch wenn ihre Betriebsgeschichte längst abgeschlossen scheint, lohnte sich hier auf jeden Fall eine Neuauflage des Buches.

Das lange Warten hat sich da auf jeden Fall gelohnt, denn herausgekommen ist in diesem Fall sogar ein völlig neues Buch: Im Umfang deutlich gewachsen zeigt es sich mit vielen neuen Fotos und erheblich besserer Bildwiedergabe als im früheren Werk aus dem Jahre 1987. So geben sowohl die Auswahl der Aufnahmen wie auch deren Darstellungsqualität keinen Anlass zu Klagen.

Profitieren werden seine Käufer zudem auch noch von vielen Erkenntnissen, die zwischenzeitlich gewonnen werden konnten. Geschlossen werden beispielsweise viele Wissenslücken bei Maschinen, die nach dem Zweiten Weltkrieg in Ostblockstaaten verblieben sind. Trotzdem sind viele Dinge hierzu nicht dokumentiert worden oder Informationen unzugänglich geblieben, weshalb auch heute noch Lücken bleiben müssen.

Das ist dem Buch leider auch bei einigen Bildlücken und Aufstellungen zur Stationierung anzumerken. Doch es schadet dem insgesamt hervorragenden Werk nicht, denn eine derart umfassende





Zusammenfassung von Entwicklung, Konstruktion, Einsatz, Bauartänderungen, wie auch Beheimatungen und Verbleib der Lokomotiven ist bislang einmalig.

Die herausragende Qualität der EK-Baureihenbände zeigt sich folglich auch bei diesem Buch ein Mal mehr. Zu verdanken ist dies der Akribie des Autors und begleitender Unterstützung durch EK-Chefredakteur Jörg Sauter.

So wird auch die enge technische Verwandtschaft zu den Baureihen 24 und 86 bestens herausgearbeitet. Die umfasst sowohl die beabsichtigten Vorteile wie auch daraus resultierende Kompromisse. Im Bereich der Einsatzgeschichte umfassen die Ausführungen sowohl die deutschen Bahnverwaltungen der Vor- und Nachkriegszeit als auch andere Länder, in die es einzelne Maschinen oder eine größere Zahl von ihnen verschlagen hatte. Nicht vergessen wurden erhaltene Museumsexemplare.

Der vorliegende Titel empfiehlt sich deshalb für jeden Freund der kleinen, aber erfolgreichen Tenderlok und verweist gleichzeitig seinen Vorgängerband deutlich aufs Abstellgleis. Wer ihn bereits sein Eigen nennt, kann ihn bedenkenlos durch die neue Auflage ersetzen oder ergänzen. Letzteres macht insofern ebenfalls Sinn, weil viele Bilder ja gleich ausgetauscht wurden.

Publishing pages with reference possibility:  
<https://www.ekshop.de>

## Schwarzer Schwan im Filmportrait Das Beste zum Schluss?

*Die Baureihe 10 sollte alles in den Schatten stellen, was je auf Deutschlands Gleisen herumgedampft ist. Sie war zur Nachfolge der Baureihe 01<sup>10</sup> bestimmt und sollte den deutschen Dampflokbau krönen. Doch mit den Ansprüchen wuchsen auch die Ideen rund um ihre Konstruktion in den Himmel. Als sie fertig war, wurde sie gar nicht mehr gebraucht. Ein Filmportrait erinnert an die beiden Vorserienmaschinen ohne Zukunft.*

JS-Filmproduktion  
Die Baureihe 10  
Die größte Schnellzugdampflokomotive der Deutschen Bundesbahn (Krupp 1957)  
aus der Reihe „Stars der Schiene“ (Folge 19)

VGB Verlagsgruppe Bahn GmbH  
Fürstenfeldbruck 2010

DVD-Video  
Bildformat 4:3  
Tonformat Dolby-Digital 4.0  
Sprache deutsch  
Laufzeit ca. 55 Min.

ISBN 978-3-89580-660-5  
Best.-Nr. 6319  
Preis 16,95 EUR (Deutschland)

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Gerade einmal zwei Exemplare wurden von der legendären „Zehner“ gebaut. Ihre lange Vorgeschichte hatte zur Folge, dass die schwere Pazifik am Ende zu spät auf den Gleisen erschien. Zu weit war der Traktionswandel bereits fortgeschritten und die V 200 hatte einen großen Teil ihres Einsatzgebiets besetzt.



Große Fortschritte machte auch die Elektrifizierung der großen Magistralen, wo mit der E 10 eine Ellok dominierte, die jeder Dampflokomotive weit überlegen war. 1950 war das noch anders. Da dachte die junge Bundesbahn noch, auf lange Sicht weiter auf die Dampflokomotive setzen zu müssen.

Deshalb entwarf sie ein Neubauprogramm, dessen Höhepunkt eben die dreizylindrige Schnellzuglok der Baureihe 10 war. Teilweise verkleidet, sollte sie durch Schnelligkeit, Leistungsfähigkeit und Eleganz Aufsehen erregen.

Krupp setzte 1957 mit zwei Exemplaren einen Schlussstrich unter dieses Neubauprogramm: Zwar wurden bis 1959 noch Maschinen der Baureihe 23 abgeliefert, aber die Entwicklung von Dampflokomotiven war nun endgültig vorbei.

Mit nur knapp über zehn Jahren Betriebsgeschichte, nie vollständig abgestellten „Kinderkrankheiten“ und einer schwierigen Ersatzteilversorgung aufgrund ihres Status als Splittergattung sind Aufnahmen von dieser besonderen Reihe eher selten. Zudem schieden sich die Geister, ob dieser Typ nun gelungen und angenehm zu fahren sei oder lieber gleich aufs Abstellgleis wandern sollte.



Die Filmmannschaft um Joachim Schmidt, auch Gründer der Eisenbahnstiftung, hat es dennoch geschafft, ein spannendes Portrait zu drehen. Es ist zwar schon fast zehn Jahre alt, was besonders am Filmformat 4:3 zu erkennen ist.

Dennoch ist es unverändert aktuell und passt hervorragend in das Thema dieses Monats über Museumsbahnen. Für das filmische Denkmal musste aber auch in die Trickkiste gegriffen werden, denn nur eine der beiden Maschinen blieb mit 10 001 in Neuenmarkt-Wirsberg erhalten und ist nicht betriebsfähig.

Trotzdem ist es gelungen, die betagten „Schwarzen Schwan“ wieder zum Leben zu erwecken. Sie pusteten ihm Dampf um die Zylinder und sorgten auch dafür, dass es aus den beiden Schloten wieder zu rauchen scheint.

So vermitteln die neu gedrehten Farbaufnahmen einen guten Eindruck, was diese schwere Schnellzuglok ausgemacht haben muss. Natürlich dürfen dabei auch historische Aufnahmen nicht fehlen, die ein solches Portrait erst abrunden und auch den großen Anteil an der Gesamtlaufzeit haben. Doch diese sehen halt auch alt aus, weil sie eben das typische Flimmern und die dunklen Ränder der damaligen Super-8-Filmstreifen aufweisen.

Einmalig wird diese JS-Filmproduktion allerdings durch seltene, wohl einmalige 35-mm-Aufnahmen aus den Krupp-Hallen, die den Bau dieser besonderen Krönung der Dampftraktion zeigen und einen ebenfalls beachtlichen Anteil am Gesamtportrait einnehmen.

Klug entschieden war es, alle diese Beiträge nicht nur mit neuem Material einzurahmen, sondern mit Aussagen und Erläuterungen der Experten Manfred van Kampen und Gerhard Modell sowie des früheren Lokführers Rudolf Henning moderierend zu verbinden.

So ist in Summe ein unterhaltsames, höchst informatives und spannendes Werk entstanden, das unter der Bestellnummer 6319-e inzwischen auch als Videostream (für 9,99 EUR) zu erwerben ist.

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: Publishing pages with reference possibility: .....

: <https://shop.vgbahn.info/vgbahn> .....

: <https://www.riogrande.de> .....

# 25 Jahre

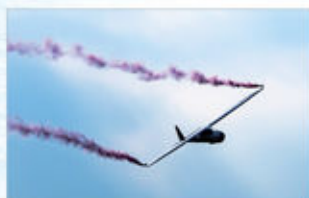
# Faszination Modellbau

*Internationale Leitmesse  
für Modellbahnen und Modellbau*

**1.-3. NOVEMBER 2019**

**MESSE FRIEDRICHSHAFEN**

Öffnungszeiten: Fr. und Sa. 9.00–18.00 Uhr, So. 9.00–17.00 Uhr



Willkommen zum 25. Jubiläum des weltweit größten Modellbau-Events! • Miniaturen aller Modellbausparten • Indoor-Flugschau • Outdoor-Flugschau „Stars des Jahres“ • FPV Drone Race • RC-Car-Offroadshow • German Open RC-Car Masters • Truckparcours • Roadworker • 400m<sup>2</sup> Wasserbecken • Modellbahn-Anlagen aller Spurweiten • uvm.

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Readers' letters and messages

## Zetties and Trainini in Dialogue

*Thank you for each letter to the editor and all the feedback that reaches us. Write us (contact details are in imprint) - Trainini® lives from dialogue with you! Of course, this also applies to all suppliers in Z gauge, who would like to introduce innovations here. A representative sample is our goal. Likewise, here we note any events or meetings with significance to Z gauge reference, if we are informed in time.*

To the letter from Mr. Severloh (Trainini® 8/2019) we received the following answer:

This letter to the editor was about the various controllers by Jörger and Passmann. There is a top specialist for Z-controllers. Have a look at them: <https://klaus-steuer.jimdo.com/>.

He is very competent, friendly and helpful, and also builds according to special customer wishes. My grade is 1+! Let's see what you can report.

Eckehart Tijssen, by E-Mail

These are Märklin's autumn new releases 2019:

As expected, among the autumn new releases, presented at the Göppingen exhibition is the 101 064-4 of the Deutsche Bahn AG (Art.-No. 88677) with its anniversary design. We had already made a that assumption in the last issue. Like the second model, which is to be presented at the same time, it has a bell-shaped armature motor and direction-dependent LED lighting on both ends.



The chassis and body are cast in bronze for the autumn new release of the covered car of the genus "G1 Dresden" (Art. No. 82170). In contrast to the original, the model has spoked wheels, and these are insulated on both sides. Photo: Torsten Schubert

With the bronze cast crocodile Ce 6/8III (88565) Märklin starts a new fine casting series which is based on the experience the manufacturer had gained with the 80 series for Insider members. The heavy model is intended to appeal to collectors and is given a transparent protective lacquer.

This also applies to the covered freight car "Gl Dresden" without handbrake (82170), whose chassis and body are also cast and which appears in the same fine casting series.

This year's Christmas car (80629) also serves the collectors' clientele. It is a festively designed low side car (base 8610) with a group of snowmen made of transparent Plexiglas on the loading area.

This Christmas car 2019 is presented in a transparent snowman with one half of this tree trailer transparent orange. It can be attached to the fir tree with a cord.

The service railroaders will also be provided with a "side dump car" (82436). The three Fas 126 side dump cars of Deutsche Bahn AG (DB AG) are labelled in accordance with Era VI and carry "gravel piles" load inserts.

**A green eye-catcher is now on its way:**

It was listed in the collector's catalogue under the serial number 1795: We are talking about the annual train car 2018 of the Z-Freunde International e.V. (Z friends international), which could also be acquired by Z forum members who are not members of the supporting association.



The Z friends international have made a very special model out of their annual car 2018 (Art.-No. 8612.046) with a lot of effort: The green-painted ascension ladder, walkways and railing, as well as the yellow UIC rope clasps, together with the multi-coloured printing, bring it very close to its historical original.

The entirely green painted tank car with the white inscriptions BfB (Federal Monopoly Administration for Spirits, Art.-No. 8612.046) has been manufactured and printed by Märklin. A unique 150 copies of this beautiful model have been produced.



The model, which was elaborately painted and extensively printed, including the ascension ladder and railing, is modelled on a two-axle tank car of the former BfB, which was operated by the German Federal Railways.

Since July, the models have been on their way to their owners, who will certainly be pleased about this eye-catching, but also true to model, splash of colour on their layouts.

**Faller new products 2019 for Z gauge now official:**

With its novelty brochure 3/2019 Faller has officially announced what we had already announced in the February issue. For gauge Z, two new architectural kits made of laser-cut hardboard will be released this year.



The church "St. Johannes Baptist" (Art.-No. 282778; left) and the Cinema Kandelhof (282795; right) are the new releases of Faller 2019, which were officially announced only now, in autumn.

The Kandelhof Cinema (Art. No. 282795) is a typical cinematic theatre of the economic miracle era, housed on the ground floor of a four-storey, municipal tenement building with a hipped roof. The kit includes lettering and billboards for completing the entrance area.

The current series of townhouses will also be supplemented by the Church of St. John the Baptist (282778), a hall building with a saddle roof and apse. The tower with the pointed steeple is set at the side. Both buildings were modelled after real buildings.

**The following new products have been released by Märklin:**

The orient red diesel hydraulic locomotive 218 286-3 in experimental design for the colour scheme of the DB product colours introduced in 1986 (art. no. 88780) was the special model for the Toy Fair 2019. It shows the operating state of its model around 1987/88, when the first machines of other series were already repainted.



The 218 286-3 in orient red test paint (Art. No. 88780) also received slight traces of operation in the form of soot deposits in the roof area.

Now the locomotive, packed in a real wood box, has arrived at the dealers and is attracting attention with its good driving characteristics. The reason for this is the conversion of their chassis to the bell-shaped armature motor, which has become the new standard.



With its large lettering, the Miele car (80329) will in future be an eye-catcher on the facilities of Insider Club members.

With a weight of 26 g, the converted model has gained 2 grams in weight, and the driving characteristics have also improved further.

The model has also benefited from larger buffer plates and changed lighting, as the peak/final signal changes between warm white and red.

This year's Insider Club 80329 with its large Miele lettering on the light grey walls of the body is also very appealing. The freight car (Era III) rented by the Bundesbahn to the

Gütersloh household appliance manufacturer belongs to the category G1 11 and is an eye-catcher in every freight train.

#### Discount on admission to Faszination Modellbau:

At the "Fascination of Model Making" trade fair taking place in Friedrichshafen from 1 to 3 November 2019, **Trainini®** readers can get a discount on admission. All they have to do is show the corner of the event advertisement placed in this issue when they purchase their admission ticket. This year the fair will be 25 years old and open daily from 9:00 a.m. to 6:00 p.m., on Sunday it closes one hour earlier. The Z-Freunde International e.V. has once again organised a colourful and attractive contribution for Z gauge.



**New small series manufacturer makes a name for itself:**

Why Björn Plutka made “Z-Doktor Modellbau” (<https://www.z-doktor.de>) his company name, he explains on the phone with great enthusiasm. In his spare time, he designed and printed 3D models on a computer.

And since they were much too good to be thrown away, but he couldn't or didn't want to keep them all, he started to give them away to his friends. Also with technical problems, he helped gladly and repaired locomotives free of charge, which were not operating.



The Eicher Königstiger (Art.-Nr. ZD-220-00002-X) shows how finely the 3D-printed models of Z-Doktor Modellbau are produced. The ladder trailer with coupling produced by him using the same production method is, so far, a unique piece.

To the astonishment of its owner, a vehicle that had already been written-off experienced a “rebirth”, and so the owner proudly thanked Björn Plutka with the compliment that he was a true “Z-Doctor”. Thus he acquired a good reputation as a helpful and competent Zettie, which finally led to a small series company.

As a free service, he also offers a limited range of simple repairs. If things get more complicated, he makes the customer an offer beforehand. His main activity, however, is 3D printing, where he seems to be exploring the limits of what is technically possible.

For example, a buggy was created for fun, which we would like to show as one of the extremes for the children's world on a scale of 1:220. The offer includes extremely precisely designed and finely detailed models of a “Formula Z” racing car (Art. No. ZD-220-00003-X), the Lanz Bulldog tractor (ZD-220-00001-X), Eicher Königstiger tractor (ZD-220-00002-X) and the tiny Holder A12 ride-on tractor (ZD-220-00004-X) with a total length of only 9.5 mm.



In order to represent the size and scale of Z-Doktor Modellbau's buggies, we already had to reach into the bag of tricks: If the coin illustrates the tiny size of the models, the added Preiser figures prove that the prams were printed in the right size.

All these models are ready varnished, unpainted, or also as light coloured defective specimens. The interior fittings for Märklin passenger coaches are also worthy of note. Already available is a four-part set for the Langenschwalbach passenger coaches (ZD-220-20001-X).

True to the motto "The best for last", we can't avoid a car model that is the only one that can be used with a wink in all the model railroad epochs that have already been defined and that can still be imagined in the future: In view of the success of the DeLorean DMC-12 (ZD-220-00005-X) we don't have to say any more words about it.

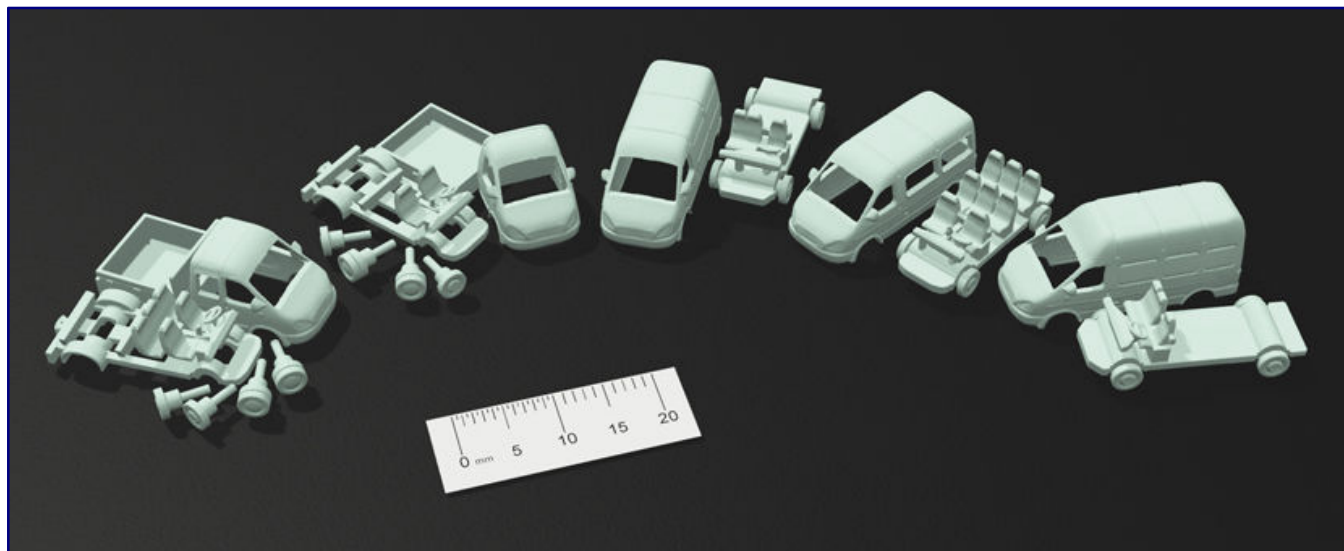
So far, the models are primarily available through direct sales. With the 1zu220-Shop (<https://www.1zu220-shop.de>), a first sales partner has already been added.



**Full streets thanks to EtchIT:**

EtchIT Modellbau (<http://www.etchit.de>) solves delivery problems on a scale of 1:220. Small commercial vehicles are currently on the agenda for new products in early autumn. Panel vans with a short wheelbase (Item No. ET014a\_Z), a long wheelbase and a high roof (ET014b\_Z).

The vehicle is also available as an eight-seater minibus (ET015\_Z) and as a platform truck with short



The volume display shows all five body variants of the new, light commercial vehicle including their assemblies. They are also offered in this form as a grouped package (Art. No. ET014s\_Z). Photo: EtchIT Modellbau

cabin and low side walls (ET016a\_Z), as well as a double cabin for five persons and high side walls (ET016b\_Z). All five vehicles are also available together at a reduced price (ET014s\_Z).

**The current deliveries of AZL:**

American Z Line proudly announces the launch of its California Zephyr packs. The model train was jointly operated by CB&Q, D&RGW and WP from 1949. One train consisted of ten cars at first, supplemented by an eleventh from 1952.

The trains were pulled by EMD F3 units, which were assembled differently depending on the railway company: A-B-B-A (CB&Q), A-B-B-A (D&RGW) and A-B-B (WP). This can be achieved by individually combining the following locomotive packs:

EMD F3 A-B of the D&RGW (Art.-Nr. 62915-1)  
EMD F3 A-B of the D&RGW (62915-2)

EMD F3 A-B-B of the WP (62916-1)  
EMD F3A of the WP (62916-2)

EMD F3 A-B-A of the CB&Q (62917-1)

The two wagon packs, each containing a complete train, bear the article numbers 72100 and 72101. The additional wagon that completed the train is offered separately as 10-6 sleeping wagons (72104).

On the way to the customer are also light passenger coaches in grey design of the NYC. There is a choice of 4-4-2 sleeping (73007-1 to -4), dining (73507-1 / -2), baggage (73607-1 / -2), seating (73707-

0), pulpit (73807-1 / -2) and mail coaches (73907-1 / -2). Suitable EMD E8A locomotives (62604-3 / 62604-4) are still available from AZL.

Photos from the manufacturers of the current deliveries can be found under <http://www.americanzline.com>.

#### **New Products from Noch for the autumn:**

The accessories specialist from the Allgäu region has also presented seasonal innovations for autumn and winter, including a product that is interesting for Z gauge. 104 tufts of grass, each 6 mm long, are counted in the pack "tufts of grass dark green, medium green, brown, golden yellow" (Art. No. 07009).

#### **New catenary line from HOS Modellbahntechnik:**

At the same time as the architectural kits for the Altenbeken viaduct published at the 1zu220 shop, HOS Modellbahntechnik presented its own overhead line system suitable for installation in the bridge section and based on the DRG overhead contact line.

In the meantime, the range has grown considerably and has also reached the Re 160 DB overhead contact line, which was developed after the war for maximum speeds of 160 km/h. The new system is now also available in the form of the DRG overhead contact line. It is also the model for the Märklin system, which is no longer up to date with punched contact wire parts.

In keeping with its geometry, Heinz O. Schramm, also sold by the 1zu220 shop, therefore offers finely etched replacements that allow the pantographs to be put on in silver or dark stained and meet today's requirements. Also, we plan at present a showpiece with these elements.

One advantage is that assembled Märklin masts do not have to be removed. Suspended overhead lines can easily be removed and replaced. Nevertheless, HOS Modellbahntechnik also offers its own mast bases, which give Märklin's lattice masts a correctly shaped base.



The reseda green tower masts are available from HOS Modellbahntechnik in different equipment variants: with top light (Art.-No. OL 04; far left), in a simple version (OL 03) for attaching cantilevers (OL 17), as well as with wheel (OL 13; 2nd from right) and the older lever tensioning system (OL 05; far right).

In connection with the new presentations for the Märklin Days, gaps in the Märklin range were also closed, which make the design of the track systems really complete for the first time.



We noticed a reseda green 62 mm high overhead tower mast (Art. No. OL 04) made of 0.15 mm thick nickel silver. It is not only used to hang cross-beams, but also has an additional (LED) light to illuminate the track area in darkness.

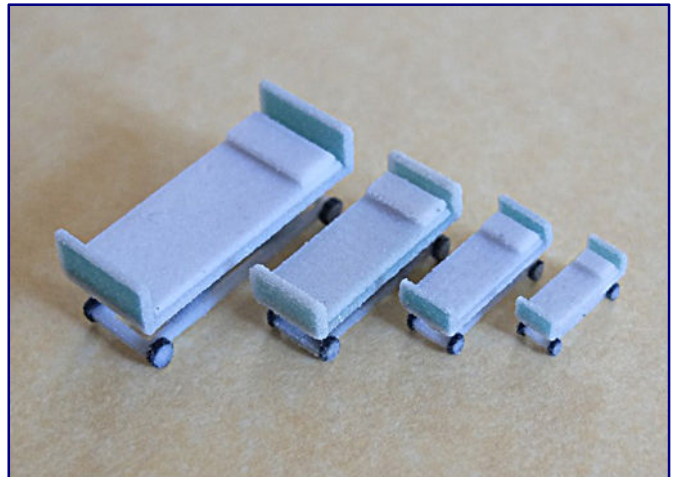
It is also available as a double pack (OL 03) without a luminaire attachment and can then also be fitted with separately offered DRG brackets (4 pieces; OL 17), as this pole type was widespread on double-track lines from around 1928 onwards.

Also important are the two masts with clamping mechanisms, as they can be found at the end of electrified sections, in order to keep the cables tight, to prevent excessively strong oscillating movements and to counteract wind forces, these important elements are usually neglected in models.

HOS Modellbahntechnik offers two versions: With the lever tensioning station (OL 05) it corresponds to the Reichsbahn designs, which remained in use even during Bundesbahn times; with the wheel tensioning station (OL 13), it fits better to the lines first electrified by the Bundesbahn.

#### **Two new items from Schrax:**

3D printing producer Schrax has introduced two rather unusual new products that are also available for Z gauge. The colorful carousel gondola fits well with modern rides and can be integrated into your own creations, because there is a lack of suitable basic models from series production on a small scale.



The illustrations show both the new carousel gondolas (picture left) and the hospital bed (picture right) in various sizes, of which the Z-gauge is the smallest in each case. Photos: Schrax

The new hospital bed in light blue on wheels appears more common place here. This is a familiar item which is known to everyone. A suitable hospital, with sufficiently large windows for a view into the interior, should be quite easy to build by yourself or by adapting kits.

These two new products are also available, as usual, at <http://www.schrax.com>.

#### **And here's what you can get from Micro-Trains:**

The farm-to-table series goes into the next round with car number 8. This time the model is a boarded refrigerator car from Mid-West-Catsup (Art.-No. 518 00 780). Boxcars with single sliding doors are also two other new models, each of which is offered with two company numbers.

Colourful are the "Cushioned Ride" cars of the Great Northern (505 00 401 / -402), which stand out with green paint and red doors. More common on the road are the ATSF (505 00 411 / -412) models with white and yellow "The Chief" inscriptions.

The eight-pack of modern TTX carrying wagons (994 00 812) has the manufacturer with rust and graffiti provided, as it is also widespread in the United States. Without such patina the four yellow passenger coaches of the CNW (994 01 240) get along of course.

Micro-Trains products can be purchased in Germany at Case-Hobbies, among others. (<http://www.case-hobbies.de>).

#### **Eisenbahnfreunde Marsberg celebrates their anniversary:**

On the weekend of 20/21 September 2019, the Eisenbahnfreunde Marsberg e.V. celebrated their 40th anniversary with an operating day. Four founding members are still represented in the circle of active members, who were honoured on this occasion even after the event closed on Saturday.



The two operating days on the occasion of the 40th anniversary of the Eisenbahnfreunde Marsberg e.V. met with lively public interest.

In the former supermarket building at Waldecker Straße in Marsberg-Westheim the club presented its H0 system and other showpieces in the same scale and for track 0. Also Z gauge was well represented. In showcases Jörg Erkel showed various models of 0 and Z gauge; Rita Kruse-Spiekermann knew how to present some dioramas with her self-made trees.

Jan Tappenbeck had come especially from the Hanseatic city of Lübeck to contribute to the success of the exhibition with two dioramas of his own. One showed a museum steam locomotive depot on the basis of a three-storey Märklin round shed with turntable.

With the second copy he also promoted his association, the Eisenbahnfreunde Bad Schwartau e.V. The object of this showpiece was the former signal box in Bad Schwartau, where this community has now settled.



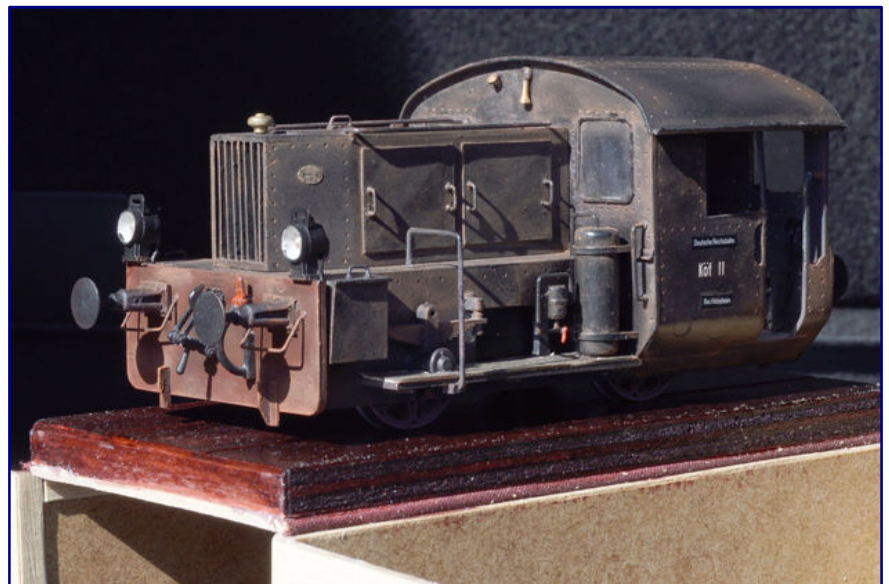


Homage to the Heimatverein: Jan Tappenbeck showed the signal tower of Bad Schwartau, where his Spur-Z group meets regularly (picture above). The thatched farmhouse (picture left) and the Blankensee signal box (picture right) also have their home in the far north. But also other curiosities could be marvelled at: The Köf in the size 0 (picture below right) is a complete self-built by Raimund Meiseberg, which this Zettie built many years ago.

He had also brought along the farmhouse "Dörpeder Hof" from Archistories from the distribution of the 1zu220 shop. At this beautiful house he demonstrated how it can be fitted with a thatched roof and thus adapted to the German coastal architecture.

He was also visibly proud of his self-made "Bls" (Blankensee) positioning system, which is intended for installation in a module.

But more important were the personal exchanges.



The association had provided food and drink and invited people to linger outside in beautiful weather. The guests thanked them for it, because they came beside the closer environment to a large part from a catchment area from Duisburg to Sprunge, as well as from Hamburg to Reutlingen - no distance seemed too far, to join the crowd of visitors.

And so the occasion was used for a joyful reunion, showing and trying out newly acquired or handmade models and, of course, a lively exchange on railway related topics. In the end, everyone agreed that it was over much too quickly...

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