

*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



The electric locomotive of the series E 41

Mechanical signal box  
Church in neo-Gothic style

## Introduction

Dear Readers,

Spring has finally arrived and with it also the time for spring exhibitions and fairs. In this edition we therefore briefly report on the Lahnsteiner Model Railway Days, where scale Z has long since taken on a fixed role.

Regular visitors to the exhibition rave about the high standard of the exhibits on display and repeatedly confirm to the organising association that it holds one of the best events of its kind in Germany every year.

In the next two editions we will follow our reports about the Faszination Modellbahn (Model Railways Fascination Exhibition) and the upcoming Intermodellbau exhibition, because at both fairs scale Z plays an important role again.

But the focus in March belongs to another topic: Märklin has recently delivered its E 41 012 for Insider Club members. Many more versions for the other customers will surely follow soon. This is reason enough to dedicate ourselves in detail to the history of the great icon and to measure, test and examine the miniature in detail.

Märklin did a lot different with this model than we are used to, and so the question of course also arises: Was this a good decision and will it become the standard in the future? In this context, we try to answer many of the questions that customers were asking themselves when they held their model in their hands for the first time. There are some noticeable features on the outside, but those who take off the shell are even more amazed.

We have also found a suitable book tip for you if you would like to dig even deeper into development, technical features and operating history. However, the second book presentation is also very interesting, because we would like to place it even as an insider tip.

Because model railroading does not only take place on the tracks, we also dedicate ourselves to the accessories. The church of Archistories has just been delivered and is now exclusively distributed by the 1zu220-Shop. We looked at this kit also. The sacral building has much more to offer than we had initially assumed.

But what would our hobby be without some handicraft work? It's not too warm yet to put the work tools aside! Our reader Wilfried Pflugbeil was creative and closed an existing program gap in his own way.

The roll supports for the mechanical signal boxes that he manufactured can be copied by anyone. That's why he wants to pass on his ideas to all other readers today. After all, all too often it's just a question of know-how, isn't it?

Our news in March are marked by the first deliveries of new products and supplementary information on the announcements we have received in the meantime. Enough written: My editorial colleagues and I hope you enjoy reading this issue.

Sin-Z-erly,

Holger Späing



**Holger Späing**  
Editor-in-chief

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We thank the Petkelis family, Eisenbahnstiftung and Roland Hertwig for their photo support.

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### Cover photo:

At the beginning of the sixties E 41 012 still wears her chic blue coloured finish. With an express train on the coupler, it crosses a steel girder bridge on the single-track main line, from which our view falls to the road in the valley.

Archistories' neo-Gothic church

## For whom the hour strikes...

*As an extension of their "Kallental" and "Dörpede" series of laser-cut kits, Archistories, together with the 1zu220-Shop, have jointly launched the neo-Gothic church "St. John Paul II", a sacral building in a typical 19th century style, but with a patron saint of the late 20th century. Our editor Dirk Kuhlmann immediately thought about its many potential modelling uses, once he came across this kit.*

By Dirk Kuhlmann. Believe me, I too was amongst those who were quite impressed by the first photos of the Archistories Church, when we got a glimpse of them at our editorial office in the early autumn of last year.



Noble and full of pride, Archistories presents the neo-Gothic church "St. John Paul II" (Art. no. 404181) on their own promotional images. We agree that they have every reason to be proud of this product. Photo: Archistories

Of course our attention was directly drawn to the colourful windows and their intricate tracery. By the way, tracery is an architectural term and describes the delicate stonemasonry of windows and balustrades which were representative of the high skills of the masons at that time.

Shortly afterwards, I received a parcel with a finished specimen of the church. A close inspection of the model only confirmed its quality and coherence conveyed earlier through photos. Moreover, the structure is very sturdy and likely to survive a fall from a certain height, although I did not try my luck at testing this.



The church will cut a fine figure on any layout and can be easily integrated into either a rural or urban setting.

The model is kept in the neo-Gothic style, a historical art and architecture style of the 19th century. The neo-Gothic style is an undercurrent of historicism and draws from typical Gothic features such as lancet windows, intricate tracery and buttresses for purely decorative purposes and with the aim to create a sacral effect that corresponded to the aesthetics of the period.



The original medieval Gothic style tried to dissolve wall surfaces through the creation of huge windows. This required the use of buttresses in order to support the load of the structure. Examples of the Gothic style include the cathedrals in Reims and Cologne.

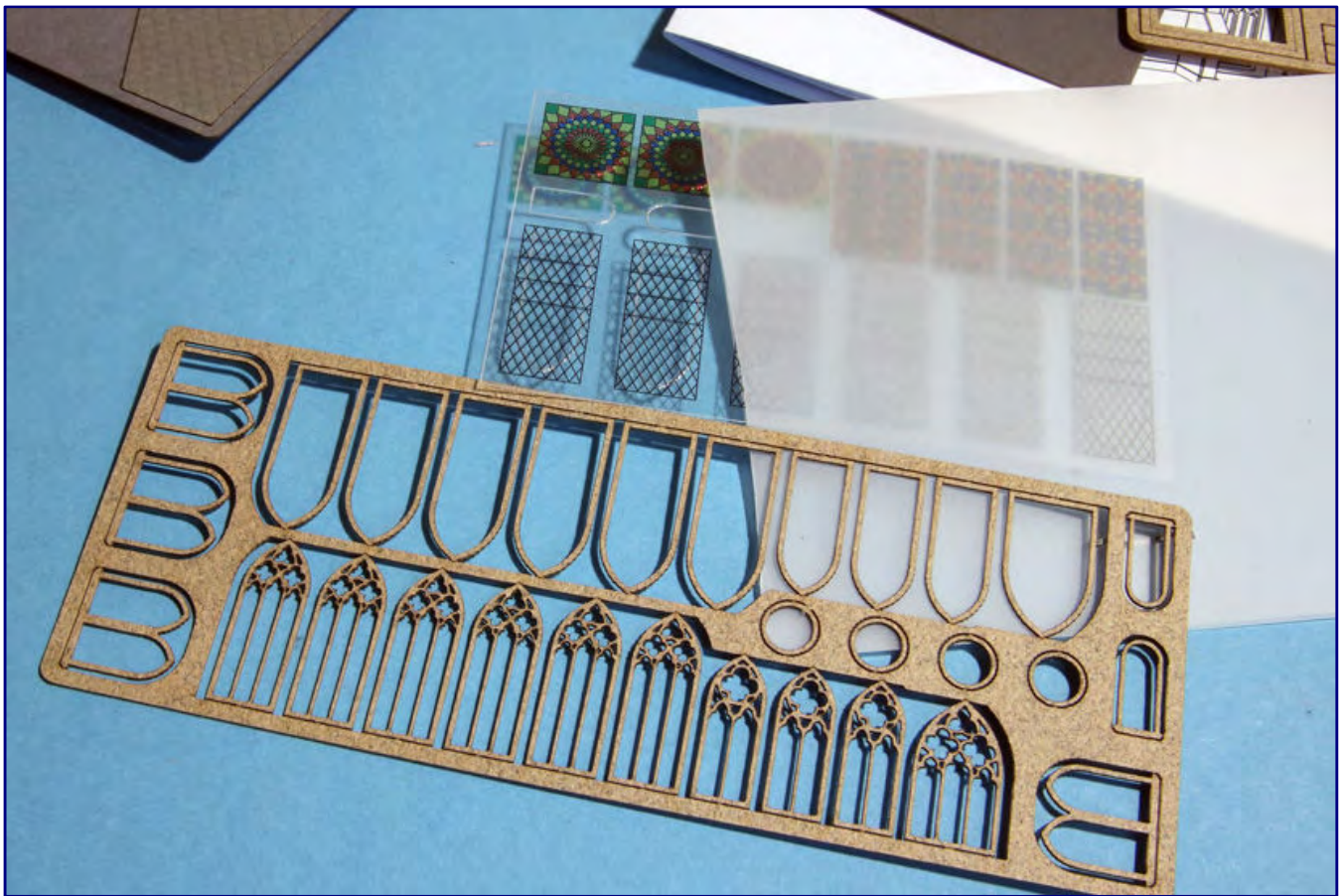
This neo-Gothic model, on the other hand, comes with massive looking walls in combination with gothic window forms. It represents thus a typical line of the neo-Gothic revival period and its frequent use of characteristic set pieces.

**Left:**  
The kit includes all pre-cut pieces from high quality coloured rigid cardboard and printed window sheets.

These types of churches are quite frequent and can be used without problem for modelling both urban and rural areas. You will need to reserve, however, enough open space around this model if you want to bring its characteristics to full effect on your layout. As always, I do recommend to prepare for your project by first having a look at prototype situations.

The wide range of layout and diorama possibilities of the "St. John Paul II" kit (Art. no. 404181) are illustrated by the first photos of the finished prototype model, which also led to the picture on the packaging of the kit (see page 5). In any case, the model fits seamlessly into the "Kallental" and "Dörpede" series of Archistories kits. That was not enough for us, however, but more about this later.

Some time after having had the chance to inspect the finished version of the model, I also received the first kit. Knowing Frank Drees from Archistories, I was already sure that all parts would fit easily and be of high quality. A first visual inspection on my photography table confirmed this assumption.

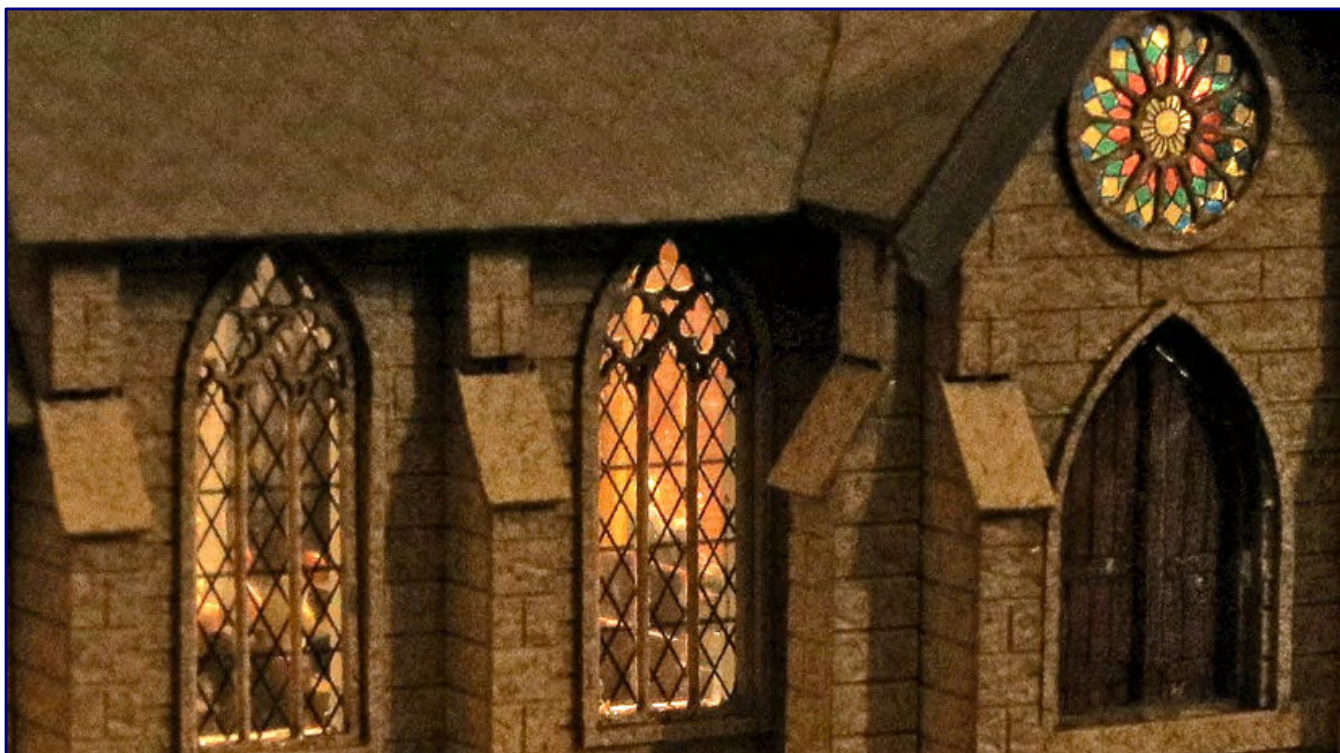


The intricate tracery and printed colour window panes are amongst the highlights of this new model.

The quality of the laser cut details is outstanding, as can be seen from the sheet with the very finely and precisely cut tracery windows. The instructions are kept in the usual way: self-explanatory and clear. A little tip for the built: I always tear out the page with the parts inventory and place it next to the page with the current stage of assembly in the instructions.

My initial intention was to show you, as usual, the construction of the church in pictures, but we have done so multiple times with similar kits in previous editions of **Trainini®** in the past. Just to say that the built is straightforward, but with lots of small parts which will give you plenty of modelling fun.

As was to be expected, I could not resist the temptation of adding some scratch built interiors to the model. Benches, the altar and the cross were made from Evergreen polystyrene profiles and painted accordingly.



A suitable interior adds value to the model (top; photo: Daniel Bittner). A few churchgoers sitting on the benches add to the realistic effect (bottom).

Some model figures and a slightly yellowish light source complete the scenery in the interior. For those of you who do not want to embark on this rather time consuming work, I can recommend the dedicated 3D-printed interiors from Noba-Modelle (Art. no. 10810).

Finally, I had the finished church standing in front of me. And as expected: everything fit without problems and no missing parts. That's how I like it! The only tiny detail which I did not use was the coat of arms with the slogan "Totus Tuus" referring to the church's patron saint Pope John Paul II.

My reason for omitting this detail was that this model be located in very different regions. Giving your church a different name with some personal meaning to you will add a unique touch to your layout.



**Archistories' new church fits well with the style of their "Dörpede" and "Kallental" series of German regional buildings. Its potential uses go far beyond that, however, and also include other European countries and even the east coast of the United States. The potential for use in multiple settings by adding just a few minor tweaks to the model is illustrated by the early 20<sup>th</sup> century postcard imitation (page 9).**

I always call this the "added value" of a kit. Whilst the prototype of the "St. John Paul II" church stems from the Sauerland region in Germany, model railway enthusiasts with a vision and a penchant for a fine, well-designed layout, will take the additional step of adapting their kits to the story they want to tell.

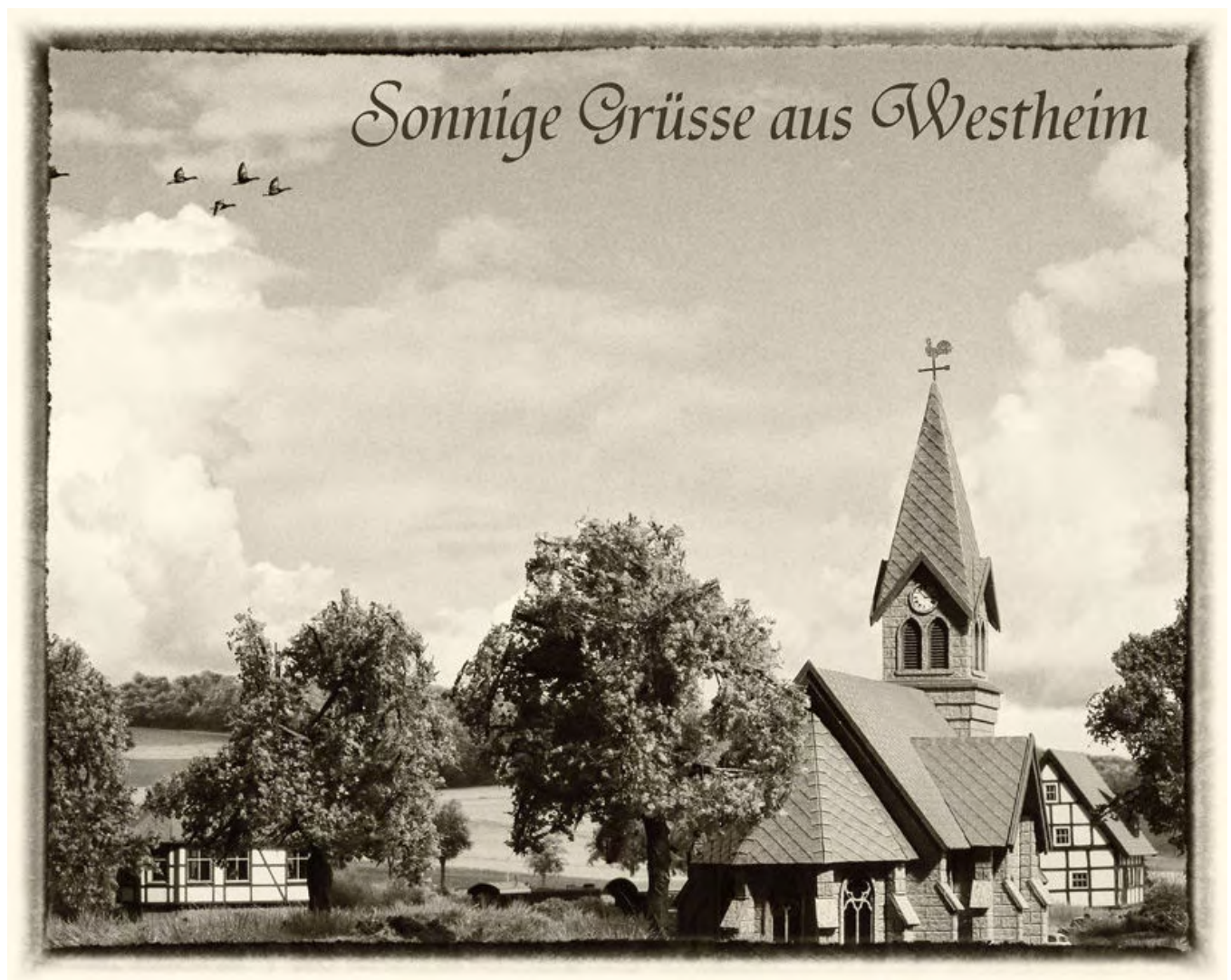
Of course, the Internet helped me with my research and I was amazed at the number of places where similar churches can still be found. Unfortunately, for copyright reasons, we are not allowed to include photos here, but I can tell you that I found examples in many European countries and even some east coast states of the US. Anyone with a certain degree of modelling skills will be able to modify this kit and adjust it to their concrete needs.



There exist also some neo-Gothic churches without a bell tower, something which could be easily kitbashed with a sharp craft knife - another advantage of laser-cut cardboard kits. And since we are at it and do have, as Z-scale modellers, a certain reputation for being wacky extreme hobbyists, the design of our own coat of arms should not be too difficult and would make for the cherry on the cake. Some might even be tempted to discuss this with a goldsmith, but let's not get overboard.

**Honour to whom honour is due**  
We nominate Archistories' church kit "St. John Paul II" (Art. no. 404181) for our 2019 awards for best new products in the accessories category..

My church will be surrounded by old trees and stand next to a small creek. A cemetery with old tombstones, completes the village or small-town setting. And if you want to further add to the scenery, you will find a wide variety of figures and accessories at Trafofuchs and Klingenhöfer.



Still not enough? Well, add some sound to your church. There are now very small but effective loudspeakers which will fit into the bell tower and which can be controlled with a suitable MP3 sound module placed underneath your layout. An original recording of your favourite church will give you that extra bang, oh, pardon me, chime.

**Manufacturer pages:**  
<https://www.archistories.com>

**Exclusive distribution of this kit:**  
<https://www.1zu220-shop.de>

**Church interiors (3D-Print):**  
<https://www.noba-modelle.de>



**Manufaktur für Kleinserien  
CMK Modellbau Klingenhöfer**

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**für Liebhaber und Sammler**

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## Series E 41 from Märklin In complete new ways

*If we think back fifteen years, then the E 41 stood next to the “crease” and a V 200 at the top of the wish lists of the Zetties. The last of these great wish models and symbols of the economic miracle on rail recently appeared to be the firecracker, to which, at first, only the members of the Insider club had access. Was the long wait worth it and does Z gauge continue to further progress with this model?*

For the first time, an annual insider model has overtaken its predecessor in terms of deliveries. The V 80 has fallen behind a lot after a tool defect occurred that Märklin communicated to its customers. Instead, we are looking forward to the E 41, which just arrived at the dealers.



In its first years of service, the E 41 012, which is based at Munich Central Station (Bw München Hbf), is under way here with a passenger train made of four-axle conversion cars still painted bottle green.

Already during unpacking it becomes clear that this model should be something special. Hopefully, we think, this is not just the often quoted exclusivity for customer club members. With this locomotive, the thermoforming insert in which it rests also has a thermoforming lid.

It protects the tiny one under the now complete standard locomotive family from shocks and falls when (carelessly) opening the outer packaging box. However, this does not make it any easier to remove the box, because now the entire insert has to be removed before the lid can be removed.

But this is a question of habits and no reason for criticism. We are curious about what awaits us with this model. Now it is in our hands and looks quite familiar, its weight doesn't seem too light or too heavy to us, and so the locomotive should be in the familiar frame of similarly large bogie models. Will there be any surprises?

No, we'll find out soon enough. There is a lot different about this E 41 than we know it from its (only in the model) older sisters in the locomotive family! So now we start the test cycle full of excitement.



For the time being, the E 41 will be reserved for members of the Insider Club. As article number 88353 it is now available in steel blue as E 41 012 in its original version.

## Exterior Design

The good, first impression is confirmed by taking the most important measurements and comparing them with the original template: All measurements have either been taken exactly or show deviations in the range from 0.1 to max. 0.6 mm, which is, therefore, more attributable to the usual measuring tolerances, than to conversion errors. We will discuss the two outliers herein.

All engravings and shapes that give the E 41 its unmistakable face are well on mark, and are sharply executed. Special features of the E 41 012 (Art. No. 88353), as delivered, are a circumferential rain gutter, five Schweiger fans with horizontal blades on each long side and the bare handrails on the driver's cab access steps.

For the first time on a Märklin Z gauge model, they are designed as separately attached metal parts. This also applies to the hand bar painted in the locomotive's colour, running horizontally under the driver's cab front windows. Both are particularly pleasant to look at from different angles. The side-mounted handrails are the cause of a dimensional deviation from the model in which the locomotive body formed the lateral boundary.

In the black bordered front windows with wiper simulations we can also see through the transparent panes mounted on the inside of the model, what are resting on the glass surfaces and protect them from fogging up.

The couplings and brake hoses are engraved only as hints, between the correctly sized buffers, so that they do not obstruct the system coupling, and it can swing unhindered through track curves.

The connecting cables on the outside of the buffers for the electrical heating of the carriages as well as the reversing train control are free-standing and individually attached.

Even their different connector shapes can be easily seen in the model.

Thus the “Knallfröschlein” (firecracker) surpasses every previous electric locomotive of this scale in the Märklin range and almost reaches the level of the Kittel steam railcar.

In contrast to it, this model even has an implied driver's cab replica, which can only be seen from the right angle.

In the light grey interior we could even see the horizontal hand wheel of the speed switch and the “boxes” of individually set-off indicator lights.

Märklin chose for first time for the original design of the headlight equipment with the headlight and taillight combined at the bottom in a lantern, while above we also find the larger original design centre head lamp of the first deliveries. A train radio antenna is not sprayed on.

## Dimensions and data of the electric locomotive series E 41

|                               | Prototype                      | 1:220   | Modell    |
|-------------------------------|--------------------------------|---------|-----------|
| Length over buffers           | 15.660 mm                      | 71,2 mm | 71,2 mm   |
| Maximum width *               | 3.060 mm                       | 13,9 mm | 13,8 mm** |
| Height above SO*              | 4.422 mm                       | 20,1 mm | 20,7 mm   |
| Overall wheelbase             | 10.500 mm                      | 47,7 mm | 47,8 mm   |
| Bogie wheelbase               | 3.200 mm                       | 14,5 mm | 15,0 mm   |
| Bogie centre distance         | 7.300 mm                       | 33,2 mm | 33,2 mm   |
| Traction wheel diameter (new) | 1.250 mm                       | 5,7 mm  | 5,7 mm    |
| Service weight                | 67 t                           | ---     | 28 g      |
| V <sub>max</sub>              | 120 km/h                       |         |           |
| Power                         | 2.400 kW                       |         |           |
| Design                        | Bo' Bo'                        |         |           |
| Years of construction         | 1956 - 1971                    |         |           |
| Manufacturer (mechanical)     | Henschel, Krauss-Maffei, Krupp |         |           |
| (electrical)                  | AEG, BBC, SSW                  |         |           |
| Number of units               | 451 units                      |         |           |

\* perimeter of the locomotive body (vehicle width) and the pressure air switch on the roof (vehicle width)

\*\* with acceptance of the original dimensions; width over handrails 14,5 mm



Even the interior of the driver's cab is partially reproduced, but this is barely recognizable through the transparent panes visible in the window surfaces. Nonetheless, we managed to make the relief of the display devices and indicator lights visible in the photo.

The bogie panels, which show the sandboxes, track clearers, Indusi magnets and suspension elements, are also sharply defined and very three-dimensional.

Only the sand pipes have not been reproduced here. The steps for the ascent to the driver's cab, which protrude downwards over the edge of the locomotive box, were mounted on the bogie panels, a sensible solution in order not to impair the model's negotiable turning radius.

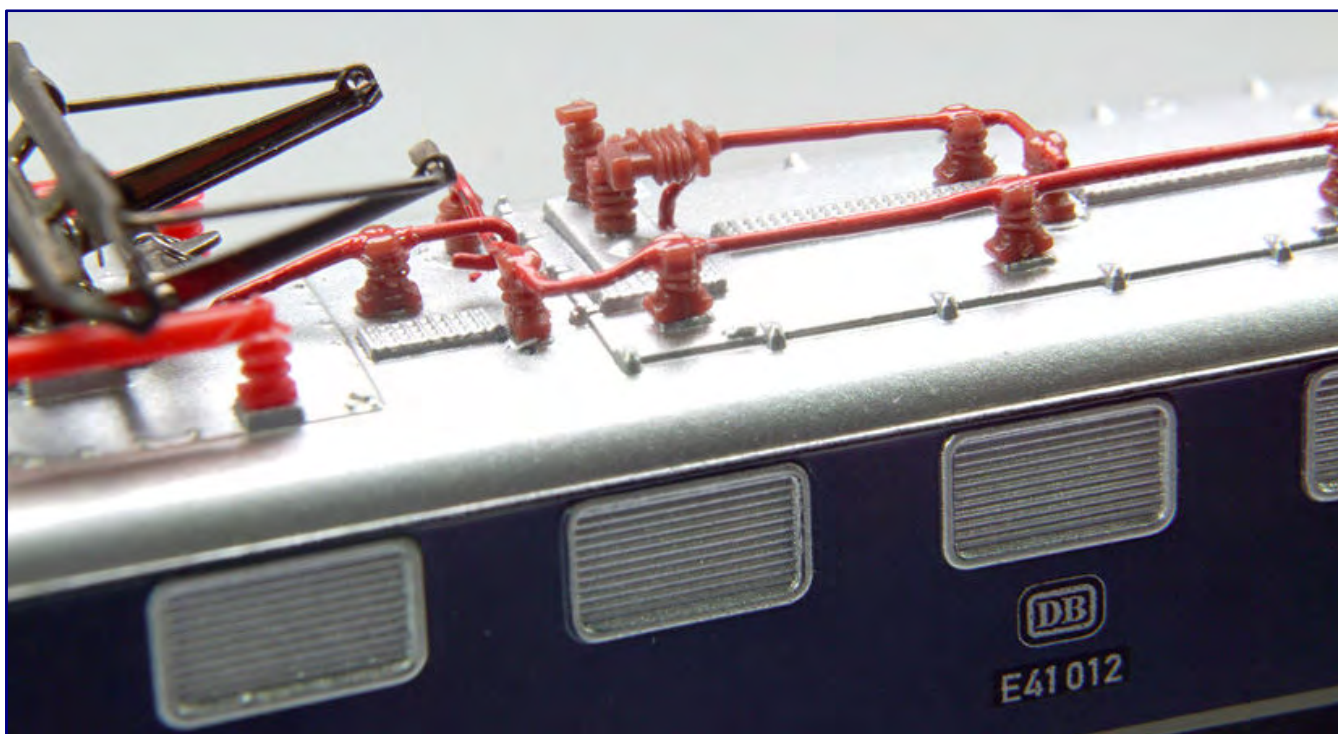
Between the bogies there are the air tanks of the brake system, the battery box and the radiator for the transformer oil.

Previously, these were included in the cast ingot in relief. Here, however, they are designed as three (black) injection-moulded parts for the first time, and only the radiator is silver-coloured.



The bogies are also finely engraved and have a good depth effect. The steps below the frame are moulded onto them (picture above). The locomotive whistle, the striking curl and the pantograph drive on the roof are also attached individually. For the first time in plastic injection moulding, the aggregates between the bogies (picture below) are also mounted: The oil cooler (above) and the battery box (below) are individually attached to the middle part with the air tanks.

The first glimpse usually falls on the roof of a model. Here, too, we find well-done details. The engravings for the removable centre of the roof to remove the transformer are as sharp as those for the roof sections, the contours on the bushing insulator or the supply lines to the current collector drives.



In addition to many attached parts, the roof is also characterized by sharp and convincing engravings of all structures, so that only the aged and not flat pantograph replicas attract attention (picture above). The roof cables reach all the way to the pantographs and have been reproduced for the first time with wires inserted into the insulators.

These no longer sit flat on the roof here, but the drives rise up like prototypes and lead up to the two pantographs. The other equipment is also complete with carrier insulation, insulators and compressed air quick-action switches made of injection moulded plastic parts.



At the front of the model, at the edge of the buffer plank, the separately attached heating cable (right-hand side of the locomotive) and the cable for the reversing train control are pleasing to the eye.

New and unusual for Märklin, however, is the installation of the roof cables made of bent and fire-red painted wire parts. We are familiar with this from Rokuhan, from small series manufacturers and from larger scales. Since the cables now also lead very close to the current collectors, we regard this as a great learning effect, which we would like to see as a new standard for the future.

The only drop of melancholy that has to lead to point extraction is the two pantographs themselves. These are the parts we have been used to since 1974. They are supposed to emulate the DBS 54 type, but are not exactly scaled and do not have diagonal braces.

Since they cannot be moved, lie flat on the ironed surface and instead protrude diagonally upwards at the ends, they are completely out of time with this fine model. The fact that Märklin has recognized this itself and has long since planned in a different direction is demonstrated by a special observation: Although, not explicitly stated in the product description, the pantographs have not been electrically connected.

The E 41 also has no adjusting screw on the circuit board. Overhead catenary line operation is therefore no longer planned, although these parts would allow it mechanically. Unfortunately, the Göppingen company did not use a fiery red paint. This only makes sense for us, if it is to be a temporary compromise.



Therefore we assume that in the course of the years the old pantograph will probably disappear and be exchanged against a more contemporary component. However, if this component is no longer designed for an electrical function, completely new perspectives for scale will open up.

Rokuhan had demonstrated this in the 181<sup>2</sup> class, which was well regarded. This has recently been proven by several conversions of Märklin models with catch-up pantographs.

But until then, the next step will be to take a liking to the nostalgic parts and wait and see. If desired, they can also be painted red by the buyer himself.

As always, the varnishing and printing are impeccable. The locomotive body is correctly painted in RAL 5011 steel blue, which corresponds to the colour scheme valid on delivery of the first machines.

The frame is finished in RAL 7021 black-grey, whereby a decorative line in RAL 9006 white aluminium marks the



Aus dieser Perspektive kommen die einzeln angesetzten Handläufe am Führerstands-aufstieg und vor den Stirnfenstern besonders gut zur Geltung.



Located in the Munich main railway station, locomotive weight 67 t and brake weights of 70 (position P) and 58 t (position G): All important operating labelling is designed to be flawlessly legible.

The test data "MF 1.7.57" refers to the acceptance test carried out by AW München-Freimann during commissioning.

colour separating edge, which is also executed exactly, precisely and sharply in the Modell. The roof above the rain gutter, the ventilators and the door handles are also in the colour of the decorative line.

Three colour shades were used for the lettering: all locomotive signs are under laid with black and printed in a silver colour.

Data that appears directly on the locomotive body was printed in white. All fonts are flawless and legible, although this reaches its limits in metallic printing due to pigment size.

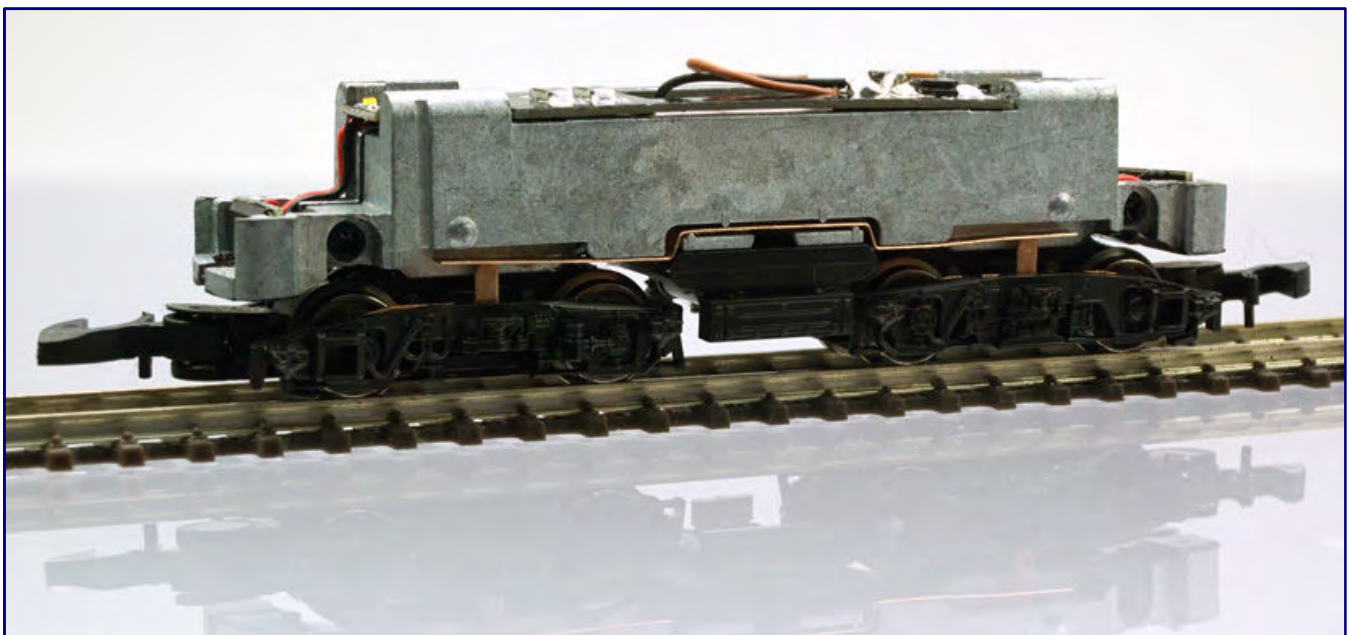
So we read that E 41 012 was built by Henschel and BBC and is located in Bw München Hbf of BD München.

Thus the operating condition corresponds to the beginning of the very first maintenance section of the locomotive with correct and historically verifiable data.

But does the locomotive also technically live up to its visual promise? Will we also find innovations under the hat? We now want to clarify this in the following section.

## Technology and construction

If we remove the housing from the locomotive, we get the impression that this is not a Märklin model in front of us. And yet, the E 41 is a so-called “butter-and-bread locomotive” and by no means a special niche product.



The construction of the undercarriage and the type of current collection resemble that of AZL and Rokuhan. That probably means a departure from a 47-year-old design practice by Märklin.

But their construction method completely deviates from what was standard in Göppingen for well over forty years. What we have to describe, we know to a large extent from H0 scale, and also from the models of the companies AZL and Rokuhan. And we don't just mean the bell-shaped armature motor with two shafts and small flywheels!

Märklin has long since divided the engine block into two halves, which are bolted together, so that when assembled, they hold the bogies in place and guide them, and they can no longer be released by removing an axle.

What has remained is the power transmission from the motor via worms to gears in the bogies, but these are no longer centred on the axle. The current from all eight wheels is not taken from the wheel flanges on the inside, but rather from the tip bearings on the axles. From there, the voltage is passed on to thick strips of bronze spring plate, which can be found on the right and left of the lower edge of the cast block parts. So this model really represents a quantum leap, because its operational safety is also convincing.

Conventional and well-known is the circuit board on the block, which is responsible for LED control. As already mentioned, Märklin has not integrated a switching screw and has not electrically connected the pantographs. At the front and at the back there is a warm white LED, which illuminates the upper headlights.

Two small lighting boards can be found further down at the ends of the bogies. Electrically connected to the main board, they are also integrated into the directional light change. They fulfil this task with one warm white and one red LED each. These lights can be clearly seen early on when the locomotive begins moving.



Small lighting boards are installed at the front ends of the chassis block. They each carry a warm white (yellow in the picture) and red SMD-LED (sitting above) off-centre. The warm white light-emitting diode for the upper top light is located in the middle at the end of the main board.

Due to the lack of breakaway torque, it starts to move very slowly at 0.3 volts, with the equivalent of slightly less than 1 km/h. The engine is now in the starting position. Due to the engine technology, this is also the slowest continuous driving speed. Safe and uninterrupted on turnouts, it travels at 1.6 volts with the equivalent of 19 km/h speed.

It easily achieves its maximum model speed of 120 km/h and although it is not a racehorse compared to older designs, it clearly surpasses its prototype at the full driving voltage of 10 volts and could even cover for an Intercity.

The smooth and quiet running at all speed levels is definitely appealing. If it accelerates gently, this is no comparison to the prototype, which made real leaps and bounds due to its banging up gears.

The tractive power of the small locomotive, which at 28 grams is roughly in the weight class of Märklin's class 218, is also completely sufficient. Their tractive power is also comparable. Typical commuter trains with five or six Silberlingen or middle boarding coaches, therefore, pose no problem on level track.

The current consumption also remains within the usual limits of a bell-shaped armature motor. With transformer position 100 we measured an average of 21 mA, with 150 this value increases slightly to 28.5 mA. This speaks for a good drive system, as well as a smooth-running gearbox.

## Prototypical use

Märklin closes a program gap with the E 41 and completes its family of first generation standard electric locomotives.

This also makes the existing gaps in the range of wagons all the clearer: the typical old building wagons, with which the model was often used as a fast train, are missing here, as are the hare box driving cars for the Silberlingen or middle boarding coaches.



**E 41 012 pushes a turning train past the photographer in the streak of the last rays of sunlight. This is probably the best known and most popular use of this series for model railroaders. Unfortunately, Märklin does not have the matching control car in the form of a rabbit box.**

The UIC-X passenger coaches in the Märklin range were not built until the early sixties. This means that Era III reversible trains cannot be built, but rather the E 41 will be used in express or even express train traffic, where at that time n-coaches (Silberlinge) and yl-coaches (middle entry coaches) were still widely used because they were considered to be of high quality.

The four-axle conversion cars are also always suitable, although in the meantime we have noticed a certain interest in the range of cars of Era III, which unfortunately leads to some monotony on the layout. They can also pull light freight trains in which fast running, modern cars may be used. With 120 km/h the E 41 had to throw something into the balance at that time.

## Summary and outlook

Since a first digital exchange board from Velmo has already been shown, Märklin's new product will probably spread quickly on both analogue and digital systems. Further variants are already eagerly awaited, of which the model has a very large number to offer, as our model report shows.

Märklin can also operate many of these from existing moulds with suitable trolleys. The question remains to what extent Märklin will be able to vary its new shape in terms of fan grilles or lamp arrangement.



Middle boarding cars were once also widely used in commuter and express trains. Therefore they also belong to the typical passenger cars on the hook of a locomotive of the class E 41, as E 41 012 of Bw München Hbf proves here.

Both visually and technically, the E 41 is a milestone whose design is fully up to date. And it did not suffer any weaknesses in the driving test either. It sets new standards and is finally a model for the scale 1:220, which is suitable without hesitation for pushed trains.

That's why we also honour Märklin's choice of role models, design, implementation and spirit with a nomination for the best new releases of 2019 in the locomotive category.

**Manufacturer pages:**  
<https://www.maerklin.de>

**Decoder solution (in development):**  
<https://velmo.de>

First standard locomotive series E 41

## A firecracker at the DB

*The E 41 was delivered in 1956 as the first unit locomotive of the new DB type range and was a nose length ahead of the E 10 at least in this discipline. For about forty years it did its job faithfully, which made all its mockers liars. Because of its typical start-up noises, it has always been remembered as a “firecracker” by many train drivers, but especially by her admirers.*

After the Deutsche Reichsbahn had already put a very innovative and ground breaking vehicle into service in the 1930s, the E 44 bogie locomotive without a drive shaft, it later became quiet about further development. The state preparing for the war of aggression had other priorities.

And so especially the Second World War and the first post-war years brought stagnation in German electric locomotive construction. Especially in Switzerland it looked different at that time: In 1944 the BLS put the Ae 4/4 developed by SLM and BBC into operation.



The Ae 4/4 of the BLS was an electric locomotive without a drive shaft, on which the DB could orient itself. In 1944/45 two units were purchased, followed by six more by 1954. Here the Ae 4/4 255 entered Kandersteg in June 1956 with express train 133. Photo: Kurt Eckert, Collection of Eisenbahnstiftung

It had a weight of only 80 tons, but 4,000 hp power, i.e. 1,000 hp per wheel set. With a top speed of 125 km/h, it fully met the requirements placed on it. Between 1946 and 1948 it was followed by a lighter counterpart at SBB called Re 4/4 with 2,480 hp and a weight of 56 tonnes. But the development of electric traction had also progressed in France.



Also the Re 4/4<sup>I</sup> of the SBB, which like its successor Re 4/4<sup>II</sup> even came with TEE honours, is in the line of ancestors of the German standard locomotive family. Before the TEE "Rheingold," the Re 4/4 10039 of the second series (built in 1950) left the Basel SBB station on 22 May 1969 to transport the train to Geneva. Photo: Joachim Claus, Collection of Eisenbahnstiftung

When the young Bundesbahn was about to set up a type program for electric locomotives, it was able to build on the project of an E 46 of the Reichsbahn, further developed from the E 44 series, but had to try to learn from the experiences and achievements of foreign countries: it was a matter of catching up on ten years of development from an international point of view.

The first plans still envisaged that a universal, four-axle E 46 would take over the light services in passenger, express and freight train traffic and that a heavy, six-axle freight locomotive E 50 would become the long-term successor of the German crocodiles.

For the E 46 a maximum weight of 82 tons for a locomotive without drive shafts had been given to the developing manufacturers.

The maximum speed was to be 120 km/h, because the 90 km/h of the E 44 did not seem to be sufficient in the long run even during the ongoing reconstruction.



E 41 026 is here in its original state at the exit from Farchant. On the hook it has a longer train of modern middle entry cars, only the old luggage car behind the locomotive is out of place. Photo: Archive Petkelis

Even during the planning phase, the DB increased the speed to 130 km/h and changed the project designation to E 10, a striking series from the number range of express trains.

A total of four different versions (E 10 001 - 004) were ordered from six companies for testing, a fifth (E 10 005) followed shortly afterwards and was identical in construction to the E 10 004. The DB drew its conclusions for the equipment of the planned series machines from the test runs and trials and set the standard for its standard locomotive range. This included the newly developed rubber ring spring drive.

## From standard locomotive to the firecracker

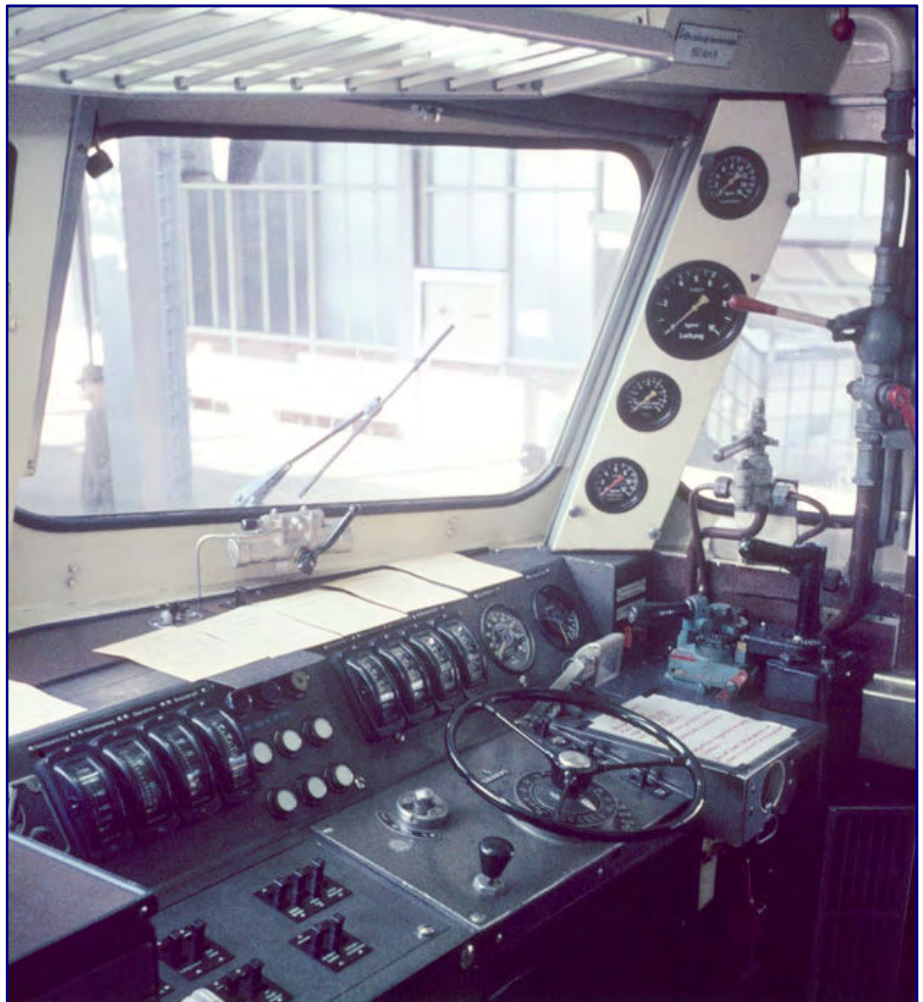
But it also became clear that not a single, four-axis series could economically meet all requirements. For some tasks, the E 10 was simply too complex and therefore too expensive. Thus the five pre-series locomotives were turned into an E 10 series, which was now clearly intended for express service (up to 150 km/h).

The other tasks were to be taken over by the E 40 for medium-heavy freight train service and the E 41 for light service on secondary and main lines, which deviated only in the transmission and the missing resistance brake.

A maximum axle load of 15 tons and a maximum speed of 120 km/h had been specified for this series.

The smallest and lightest type of the electric type program was to carry passenger trains with a weight of 500 t and a gradient of 3 per thousand at maximum speed, freight trains with a weight of 1,000 t and a gradient of 5 per thousand still had to travel at 65 km/h.

Because the trains were used in congested urban areas, a task that was becoming increasingly important due to the ongoing electrification, a reversing train control system was also planned, which all 451 machines in this series were equipped with.



**An important achievement of the standard locomotives was their sitting operation, which is why the hand wheel of the speed step switch was positioned horizontally. The driver's cab shown here as an "iron on" of the E 10 series is essentially identical to that of the E 41. Photo: Archive Petkelis**



The low axle pressure also upgraded the E 41 for some electrified branch lines in southern Germany, where there had already been an electrically operated network before the war. Here it became the successor of the E 44, compared to which it was faster, more powerful and at the same time even lighter.

BBC (electrical part) and Henschel (mechanical part) were commissioned with their development. It was the only series locomotive in the newbuilding program to be fitted with a low-voltage switchgear, as was used in the E 10 003. In principle, this had already proven its worth in the E 16 and E 32 series.



When the photographer photographed the E 41 035 in Basel Bad Bf in 1957, the still almost brand-new locomotive showed itself without dirt on the steel-blue paint and its bright roof. Good to see are the large, black edged lamps and the transparent panes, which we also find on the Märklin model. Also the signs on the side correspond to the final arrangement, as it was also reproduced on the model. Photo: Archive Petkelis

This was the reason for the typical banging of the rear derailer when the speed steps were switched on, which impressed many commuters and pupils on their daily journeys as well as the jerky starting: It soon became known as the “shooting gallery” or “springbok”.

However, the most memorable and widespread thing over the long period of use was the nickname “firecracker” for the majority of the green-painted machines. When it was dressed in ocean blue ivory, it was also called a champagne cork.

It is noteworthy that the Bundesbahn dispensed with pre-series locomotives and immediately started series production. Its experience with the five prototypes of the E 10 was enough for it, only individual components were tested in the E 44 087G and the ET 30. The latter, a multiple-unit train with then unknown high acceleration, was the origin of the further developed traction motors.

Compared to the E 10 class express locomotives and the E 40 class freight locomotive, the light E 41 had simplified technology. However, the fact that it was often referred to as a cheap locomotive treats the locomotives unfairly.

The reason for its development was that an E 10 was overpowered for this task and simply too expensive. The Bundesbahn, which was always keen on economy, had deliberately opted for a tailor-made machine. If its purchase price is broken down to one kilowatt of installed power each, it does not have to shy away from comparison with its stronger sister.

## The first standard locomotive

The E 41 001 was delivered to the DB on 27 June 1956, making this series its first standard locomotive. By February 1970, 450 more locomotives followed, the last of which were designated class 141 as soon as they were put into service. A service life of more than 40 years and an average age close to this speaks for this good and proven design.



When 141 004-2 showed herself to the photographer in Munich on 15 September 1979, she had to endure several changes. She had lost her engine room windows early on, including her steel-blue paint. The upper top light was replaced by a smaller standard lamp and the continuous rain gutter was replaced by short rubber strips. Photo: Eckerle, Archiv Petkelis

increased yet again. They were available as parts fitted into the opening (Krapf & Lex type), or later as mounted Klatte fans with frames.

The new locomotives quickly conquered the fast local traffic in the various conurbations, and were also used for light freight trains and, especially in the early years, helped out quite frequently in express service.

For this reason, the E 41 001 to 071 numbers were painted in the steel blue of the F trains, before the DB ordered in 1958 that this paint should be reserved for fast electric locomotives with a top speed of more than 120 km/h.

The F trains were also painted in steel blue. All other locomotives up to the 141 451-5 were therefore already designed in bottle or chrome oxide green ex-works.

Another special feature concerns (according to our research) only the E 41 001 to E 41 004: When they were put into service they had one engine room window on one side and two on the other.

This provided more light inside, but not enough air flow to cool the units. Therefore, these three windows were exchanged for additional fans after only a few months.

As with the other electric unit locomotives, these were initially silent fans with horizontal slats. Later, double jet fans with vertical slats were used, through which the air throughput could be significantly

In the course of their service, old Schweiger fans were replaced with more powerful Klatte fans on the locomotives. However, the DB did not remain faithful to this project and later also mounted individual Schweiger fans on the sides of some of the locomotives, which were then quite colourfully equipped.

#### Five instead of three lanterns?

The reason for turning away from the large, lower headlights and switching to the separate DB standard lamps for red and white signals was damage caused by bird strikes, which usually caused both signalling systems to fail.

With the separate lanterns, the engineer was often able to restore a correct signal pattern by changing the lenses.

This was similar to the lamps of the E 41. As with the E 10 and the E 40, large single lamps were part of the original equipment of the older machines. The upper headlight was soon replaced by a smaller one, while the lower lanterns from E 41 121 onwards were replaced by separate headlights and taillights (DB standard lamps).

Older machines also received a conversion from three to five headlights in the repair shops. Often this was done as part of accident repairs, which is why locomotives sometimes left the works with different equipment at either end.



141 027-3 is still largely in its original condition on 10 November 1974 when manoeuvring in the Starnberg wing station (Munich main station), with a circumferential rain gutter, step grating and holding bar as well as the original lamps and silent fans. Only the signage was adapted to the computer age. The sounds of the rear derailer and the chrome-oxide green colour earned the series the nickname "firecracker." Photo: Eckerle, Archive Petkelis

Other striking differences in the course of the long service life were the omission of the horizontal handle bar at the front and the circumferential rain gutter, which were replaced with short rubber strips due to their susceptibility to corrosion. The last five machines (141 447-3 to 141 451-5) also received an electric regenerative brake, which was recognisable from other roof structures and made them about three tons heavier.

## Further developments

The first unit locomotives of the class E 41 came to Bw München Hbf, where they would not play a role for a long time. As electrification progressed, Frankfurt (Main), Mainz, Cologne and Dortmund became the first home for many new deliveries. Later, Saarbrücken Hbf, Hannover Hbf or Hamburg-Eidelstedt were also added.



**141 220-4 behind a pushed local train of five Silberlings: This was the typical view of how we often encountered the class 141 in everyday life, almost nationwide. It was also on its way in the pre-run operation of the S-Bahn Rhein-Ruhr, but then marked with an S-Bahn sign at the front. Photo: Archive Petkelis**

In the Ruhr area, it was used in the S-Bahn pre-run operation (with the S-Bahn symbol on one end), 141 248-5 was finally coupled in 1978 with the Karlsruher Zug, a test train for the S-Bahn Rhein-Ruhr based on converted silver pieces. In return, the locomotive and the car were painted in ocean blue ivory, but the two colours were changed in comparison to the standard paintwork.

Another special feature was that the blue ribbon was pulled over the front and both long sides of the train, while the opposite front had a blue stripe at the level of the lower headlights. The roof of the locomotive was also painted ocean blue. The 141 378-0 in the regular ocean blue ivory also had the latter special feature.

The class 141 was to later make a major career in the S-Bahn service in Nuremberg. When such a network was also opened there in 1987, DB opted for locomotive hauled trains due to good experience in the Ruhr area. Like there, x-cars were used, but this time with covering by adapted machines of the 141 series.

continues on page 30



Two unusual variations of the series 141 can be seen here. 141 248-5 was painted according to the S-Bahn colour scheme, with the colours ocean blue and ivory reversed from the standard colours. On the upper picture it is in April 1981 with the Karlsruher Zug in Hattingen on its way. In contrast to her sisters, 141 378-0 (picture below) also received an ocean blue painted roof, which looked good on its face. Photos: Archive Petkelis

For this purpose, the Bundesbahn equipped the seven copies 141 436-6 to 141 442-4 with time-division multiplex reversing train control (TCC) and target film boxes, while adapting the exterior to the then new S-Bahn colour scheme with belly band in RAL 2012 salmon-orange and pastel-yellow settling strip in accordance with RAL 1034.



141 141-6 with time-division multiplex reversing train control was one of the seven machines destined for the new S-Bahn in Nuremberg. Here the locomotive with such a train from x-wagons waits as S 1 to Lauf (on the left the Pegnitz) on 1 October 1988 in Nürnberg Hbf for the departure. Photo: Archive Petkelis

But these were by no means all the special paint jobs that were carried out on this electric locomotive. In addition to the class E 10, the Bundesbahn also used the E 41 for smaller colour experiments. Three chrome oxide green locomotives were given a different frame colour for experimental purposes: dark grey (E 41 291), light grey (E 41 373) and ochre yellow (E 41 374).

In addition, there are the many standard paint jobs that were valid during the long service period of the E 41 / 141. Their representatives had all worn them: steel blue from 1956, bottle green from 1958, chrome oxide green from 1959, ocean blue ivory from 1975, oriental red with white bib from 1987 and finally the traffic red valid from 1996.

In all colours they proved themselves in nearly the entire Bundesrepublik (Federal Republic). Thus, on the Ammergau Railway, it created the basis for the retirement of the class 169, at that time already by far the oldest DB aircraft. It was also used in the tests with the central buffer coupling planned for introduction throughout Europe.

But when, in the seventies, the S-Bahn trains of the 420/421 series and, shortly afterwards, the 111 also started their service, the time of the 141 series seemed to run out slowly. But the dead lived longer, because that was far from being the case!

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On the Ammergau railway, the 141 series created the basis for the retirement of the 169 series. 141 006-7 (top photo) was taken near Altenau on 20 August 1977. Photo: Eckerle, Archive Petkelis

141 005-9 (photo below) the photographer caught in Nuremberg main station at track 2. The locomotive was located in Nuremberg until 1983. Photo: Archive Petkelis

Although there was an increase in relocations driven by under-utilisation or the concentration of vehicles on a few depots, stocks remained stable for a long time. It was not until 1987 that the first defective vehicles were taken out of service.

They even found a further field of work in intercity service. After the state capital Wiesbaden was disconnected from the IC network, the German Federal Railways (Bundesbahn) was covered with protests and complaints and reacted with a short-distance service called Wiesbaden-City as a replacement.



The two sisters 141 015-8 and 141 382-2 allow a direct comparison of the two faces of this series in Nürnberg main station. 141 015-8 has single lamps, while 141 382-2 shows the smaller DB standard lamps with separate headlights and taillights. However, both have already undergone extensive modernisation: This is evidenced by the rubber rain bars and the omission of step grids and the surrounding holding bar. They are replaced only by a short tread plate and the vertical UIC handle. The UIC socket next to it was also not part of the delivery condition. Photo: Archive Petkelis

The 141 series was used with specially prepared LHB local transport coaches, which had originally been purchased as test coaches for S-Bahn operation, but then did not go into series production and could hardly be used sensibly in the meantime.

When the City Railway concept introduced and tested on the Köln - Gummersbach route proved successful, further lines followed, for which less costly conversions were carried out and whose wagons also operated in the planned new standard paintwork. Here, too, the 141 series between Hamburg and Stade was the first choice, again.

It was not until the Deutsche Bahn AG was founded on 1 January 1994 that the local locomotive passed its zenith. Now it was increasingly displaced by the young class 143 and the 112 jointly procured by DB and DR. Likewise, the 110 series also increasingly migrated into local transport and received reversing train controls from the 141 that had been taken out of service. And as is generally known, the future was to include high-performance multiple-unit trains.

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141 183-4 shows us at station 210 in Rheine the oriental red colouring introduced in 1987. It is underway with its regional express on the Emsland route towards Emden. Photo: Roland Hertwig

The Braunschweig 141 336-8, parked here in Münster (Westphalia) on 9 February 2001, represents the last operational state of its series with Deutsche Bahn AG. In December 2006 this era finally came to an definitive end. Photo: Archive Petkelis

Nevertheless, the last “firecrackers”, meanwhile had been painted traffic red, and lasted until 2006. But on 10 December 2006, the last three DB Regio locomotives also came to an end, and that chapter in the locomotive's history was finally over.



The end: A long series of class 141 locomotives is waiting to be scrapped after being taken out of service in Opladen (top photo). The sister locomotive 141 006-7 (photo below) was better off. In the Dieringhausen Railway Museum in 2007, the traces of an external reconditioning could clearly be seen. In this photo it also had had new engine room windows installed.

However, several machines have been preserved for posterity, some of which we would like to list: E 41 001 was largely restored to the condition of its first years of service and can be seen, painted steel blue, in Koblenz-Lützel since 2001.



141 228-7 was until its last days in RAL 6020 chrome oxide green underway and was preserved in the railway museum Darmstadt-Kranichstein. It was on display in Korbach on 13 May 2006 at the Kurhessen Railway Festival.

141 006-7 is waiting for better times in the Railway Museum Dieringhausen, while 141 083-6 in its last painting (RAL 3020 traffic red) welcomes the visitors. The 141 228-7 on loan in Darmstadt-Kranichstein represents her sisters in chrome oxide green colouring.

**Technical information on the series 141:**

<http://www.ig-einheitsloks.de/?s=br141>

**Cumulative locomotive nicknames:**

<http://www.bahnstatistik.de/Spitznamen.htm>

<http://www.db-loks.de/tfz/spitznamen.html>

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## Mechanical signal box Home made pulley holders

*Many years ago the company D. Beier BMT offered pulley holders of sizes I, II, III and IV for Z gauge. But that was a long time ago and since this program was discontinued, there has been a big gap in the Z-gauge market. But our reader Wilfried Pflugbeil from Chemnitz is patient and knew how to help himself. And building yourself isn't nicer than buying it anyway?*

By Wilfried Pflugbeil. The time of the mechanical signal boxes with their outdoor installations is also very nice to look at on model railways. Clamping mechanisms, deflection boxes and sheet metal channels are also available in Z scale.

What we rarely see, however, are rope pull guides over pulley holders (and pressure pulleys), as they were used on open track. Today I would like to describe how pulley holders can be produced simply.

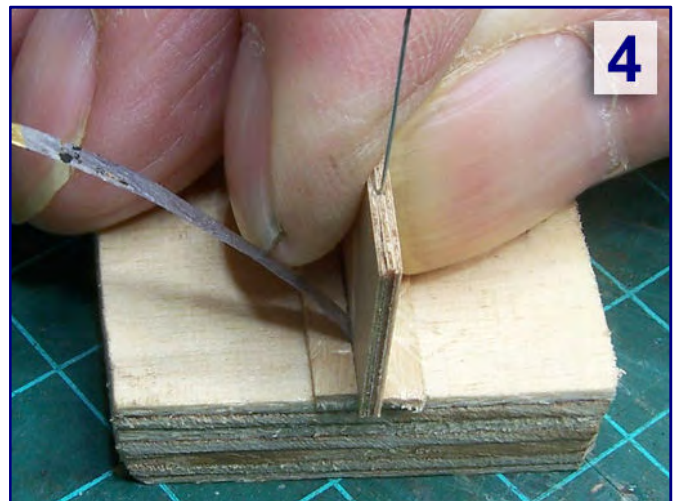
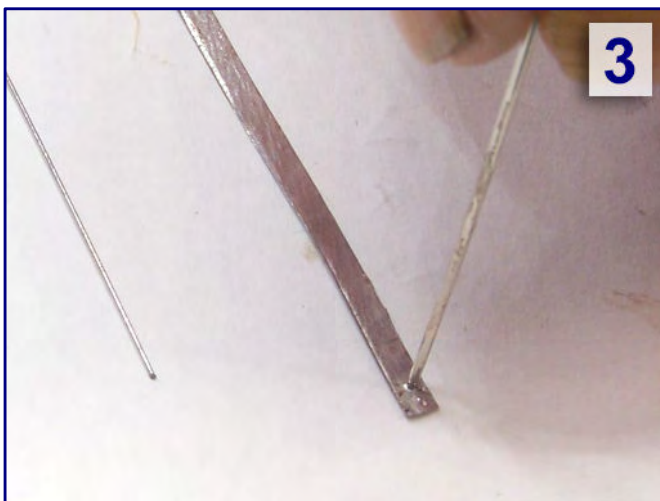
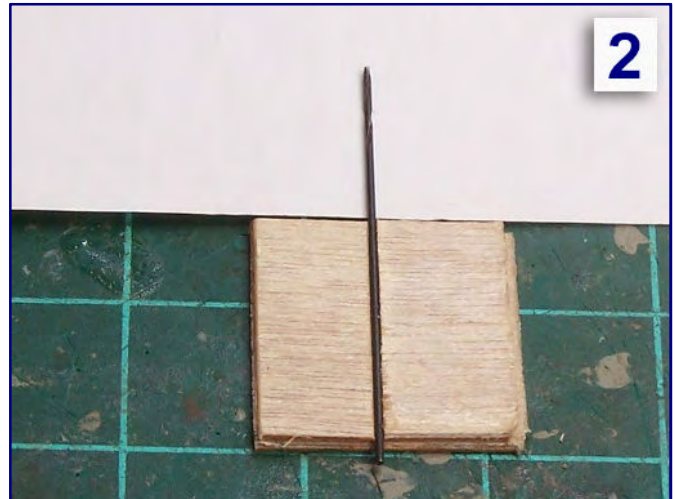
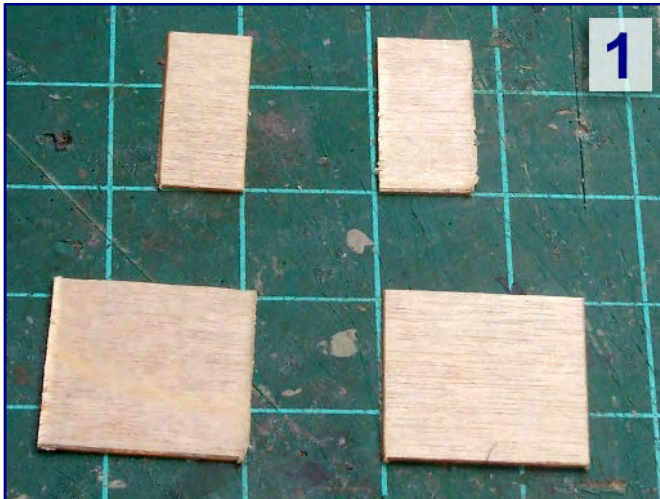


Parts of the mechanical switch tower can rarely be seen on Z gauge layouts, such as here the cable tensioning systems, deflection boxes and cable ducts near the switch tower on the layout of Wilfried Pflugbeil.

First we need a stamp to bend the covers. This should be 1.2 mm thick and have a hole of 0.4 mm diameter in the middle. For this, I glued the stamp together using 0.4 mm plywood, and with the help of a 0.4 mm drill bit as a spacer for the individual wooden parts.

For the cover, I cut a 2 mm wide strip from 0.05 mm thick brass sheet. A 0.3 mm thick steel wire is used for the mast. Both parts are now tinned and a hole is pressed into the middle of the sheet metal with the help of a pin.

Now we push the mast through the stamp and the sheet metal and form the sheet metal with our fingers to a U.



**Procedure for building your own in sub-steps:**

First, a die for pressing the defined shape is built. This consists of four plywood parts (Fig. 1) 0.4 mm thick. This is important so that the drill bit of the same diameter can be inserted seamlessly as a spacer (Fig. 2). The fourth plywood part is then glued to the top and closes the mould.

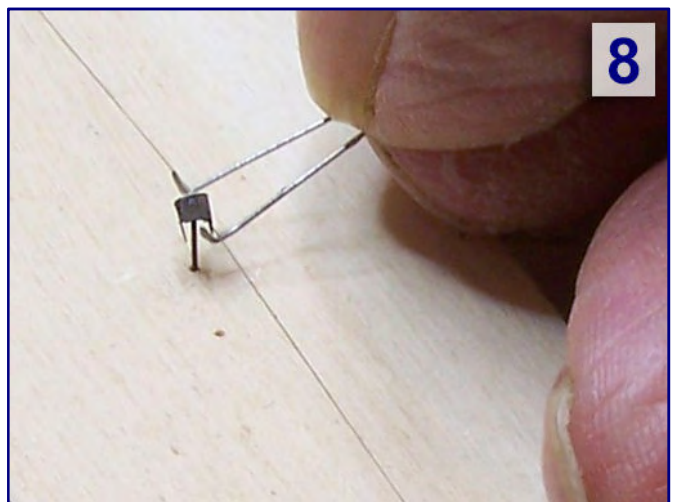
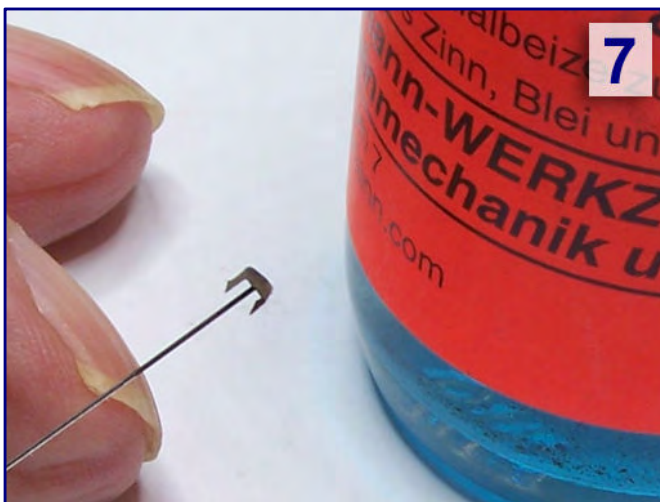
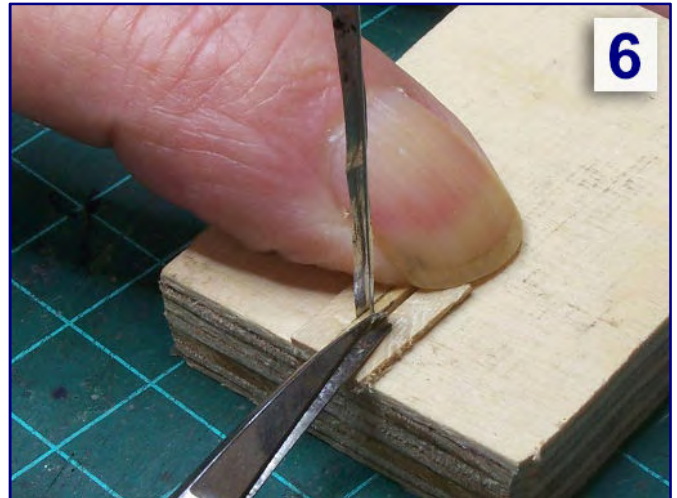
The cover is made of 0.05 mm brass sheet, cut into a 2 mm narrow strip. A pin is used to press a hole into the sheet, into which a 0.3 mm steel wire is inserted as a mast. Both parts are then tinned (Fig. 3). Now, the wire is led through the stamp and the sheet metal (Fig. 4). The later covering of the pulley holder can now be U-shaped with the fingers in the prepared form, which serves as a template.

Continuation of the series on page 39

In a prepared piece of plywood we make a hole with a diameter of 0.4 mm. Now our mast is put into this hole, before we glue 1 x 2 mm measuring sticks to the right and left as templates.

Now the mast is put through the stamp, the prepared sheet metal and the hole in the plywood. The sheet metal is aligned and then pressed down with the stamp. With a little solder we solder the mast flush with the cover. The excess solder is then filed off.

We now insert the component (without stamp) into the template and cut the sheet flush with the upper edge of the template. A small piece of wood measuring 1 x 1 mm and with a hole measuring 0.4 mm serves as a hold-down device.



Continuation of the step-by-step photos:

With a little solder, the mast is soldered flush with the cover and the excess tin is then filed off (Fig. 5). The almost finished component is now inserted into the mould again without the punch and cut off flush above it (Fig. 6). A small piece of wood measuring 1 x 1 mm with a hole measuring 0.4 mm serves as a hold-down device.

A bath in "tin and lead black" produces the desired black colour in the form of a burnishing (Fig. 7). The mast can then be cut to size and installed on the system.

The thread from dark tights or stockings reproduces the tensioning ropes. It is laid on both sides of the cable guides and fastened at its beginning and end. With a hook, it can then be pulled slightly outwards at the height of the rope pull guides (Fig. 8) and glued under the rope pull guides with a drop of adhesive.

A bath in Fohrmann's "tin and lead black" now brings us the black colour of the model without having to apply paint.

Now the mast can also be cut to size and installed. The thread from dark lady tights (stockings) should represent the tension ropes. It is laid on both sides of the cable guides and fastened at the beginning and end.

With a hook, the thread can be pulled outwards at the height of the rope pull guides, a drop of glue can be applied and glued under the rope pull guides. The finished result can be seen in the final picture. I find it very convincing. If you share my opinion, I would be happy if you would like to reproduce it.



As a small detail with great effect, the pulley holders have long since surfaced on the main line. And the attention-grabbing observer will very quickly find the rope pulls that pass through them.

All photos: Wilfried Pflugbeil

.....  
Construction reports and projects from Wilfried Pflugbeil:  
https://f.z-freunde-international.de  
.....  
Current source of supply for tin and lead black:  
http://www.glas-per-klick.de/glaser-chemie/patina-schwarz.html  
.....



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.

## Dokumentation einer Baureihe **Der Lebenslauf der E 41**

**Exakt fünfzig Jahre waren Maschinen der Baureihe E 41 oder 141, wie sie ab 1968 hieß, im Betriebsdienst der Bundesbahn und Deutschen Bahn vertreten. Sie war allgegenwärtig und bekannt, doch sie stand nur selten im Fokus der Eisenbahnfreunde. Sie war einfach zu unauffällig und doch eine wichtige Stütze des Nahverkehrs. Der EK-Verlag hat ihr schon vor zehn Jahren ein literarisches Denkmal gesetzt, das nach wie vor erhältlich ist.**

Roland Hertwig / Werner Streil  
Die Baureihe E 41  
Entstehung, Technik und Einsatzgeschichte

EK-Verlag GmbH  
Freiburg 2009

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Als das vorliegende Buch im EK-Verlag erschien, hatte sich die Baureihe E 41 bereits aus dem aktiven Dienst verabschiedet. Exakt 50 Jahre lang hatte sie zuvor dem Nahverkehr auf elektrifizierten Strecken Westdeutschlands ein Gesicht gegeben.

Verschleiß und das Ablösen durch andere Elektrolokomotiven sowie neu beschaffte Triebzüge führten zu größeren Ausmusterungswellen, bis der „Knallfrosch“ 2006 ganz aus dem Betriebsbestand verschwunden war. Ein literarisches Denkmal hat sich diese einst allgegenwärtige Lok damit sicher verdient, was Verlag und Autoren dazu bewogen haben mag, ihr dieses Portrait zu widmen.

Mit den Autoren Werner Streil (für den technischen Teil) und Roland Hertwig (für Chronologie und Betriebsgeschichte) haben sich zwei äußerst fachkundige Personen ans Werk gemacht. Von ihrem Wissen profitieren folglich auch die Käufer dieses Titels, der umfangreiche Informationen und Eindrücke auch zum vorbildnahen Einsatz der Modelle vermittelt.

Das Buch ist klar strukturiert und beginnt mit einer Einleitung zur Geschichte der elektrischen Drehgestell-Lok bis zur Mehrzweck-Baureihe E 41. Die Technik dieser Konstruktion mit allen wichtigen Merkmalen wird ausführlich auf den folgenden, rund achtzig Seiten beschrieben.



Sehr deutlich wird bis hierher das enorme Fachwissen, mit dem der frühere Bundesbahner Werner Streil zu Werke geht. Leider verliert er nur, wie auch bei einem früher an dieser Stelle vorgestellten Buch, dabei den Leser bisweilen aus den Augen.

Dies äußert sich auch hier wieder durch ein zu weites Ausholen in zeitlichen Kontexten, der allzu deutlichen Fokussierung auf persönlichen Ansichten, wenn sie nicht im Einklang mit denen der früheren Entscheidungsträger stehen, und einem Festbeißen in einzelne Aspekte. Hier läuft er Gefahr, den Leser zu überfordern und abzuhängen.

Als Beispiel für diese Ansicht möchten wir das Ansetzen bei der Vorgeschichte zur E 41 anführen: Der Autor beginnt sehr ausführlich im Jahre 1907, als über die bayerische EG 4x1/1 entschieden wurde – also fast exakt fünfzig Jahre vor Anlieferung der ersten E 41. Dass die E 44 einen wichtigen Meilenstein darstellt, ist richtig und verständlich, doch auch hier möchten wir den Umfang der Abhandlungen in Frage stellen.

Deutlich besser wird der Lesefluss in den Abschnitten, die Roland Hertwig erarbeitet hat. Er beginnt mit einer Chronologie der Baureihe, die er eng in den Zusammenhang mit den laufenden Elektrifizierungen der Bundesbahn stellt.

Das ist insofern optimal, als dass diese Lok tatsächlich genau davon profitierte, denn längst wurden nicht mehr nur die großen Magistralen mit Fahrdrabt versehen. Der Bedarf an einer E 41 entstand genau daraus und auch die anfangs nicht mal zu erahnende, große Stückzahl war deren Folge.

Ausführlich behandelt werden anschließend die letzten Monate der Baureihe 141, die sich stellenweise wie ein „Tod auf Raten“ lesen. Bevor es dann mit den Heimat-Betriebswerken zu einem weiteren Hauptteil des Buches kommt, werden betriebliche Besonderheiten wie die Ammergau-Bahn, die S-Bahnen Rhein-Ruhr und Nürnberg behandelt.

Einen inhaltlichen Ausklang des Titels bieten Blicke in Betriebsbücher, Umlaufpläne, ein Lokführer-Bericht und Lebensläufe aller 451 Maschinen. Eng verbunden mit dem Vorbild ist auch deren Ausbesserung nach festen Instandhaltungsstufen. Deshalb haben sie auch noch Eingang in den Titel gefunden, was ein wenig wie ein (nicht erforderlicher) Lückenfüller wirkt, weil das ja baureihenübergreifend relevant ist.

Ein im Vergleich zur Gesamtseitenzahl kleiner, aber völlig ausreichender Farbbildteil rundet das insgesamt gut gelungene Werk ab. Beziehen wir auch das Buchdeckelfoto mit ein, so sind nahezu alle Zeitabschnitte der Einsatzgeschichte und Betriebszustände der Baureihe E 41 darin abgebildet, inklusive aller Farbgebungen und Sondergestaltungen. Ein Teil davon fällt noch in eine Zeit, als kaum ein Fotograf Farbfilme verwendet hat.

Auch das macht dieses Buch für den Vorbildfreund und Modellbahner so wertvoll. Vergleichbaren fachlichen Tiefgang bieten andere Verlage zudem selten bis gar nicht, weshalb auch an diesem Band wieder kein Weg vorbeiführt.

Erheblichen Anteil am guten Gesamteindruck haben auch die vielen Zeichnungen, Abbildungen und schwarz-weißen Fotos, mit denen die Textaussagen vollständig, aussagekräftig und perfekt dokumentiert werden. Auch sie sind folglich gut ausgewählt und wieder einmal bestens wiedergegeben worden. Und so möchten wir in Summe keine Seite und keine Zeile missen!

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Photo memories of the steam locomotive

## A long forgotten epoch

***True steam friends think they've seen almost all the shots made by their favourite machines and ever released. But what did the Deutsche Bundesbahn look like from the point of view of railway enthusiasts from other European countries? The Transpress publishing house is currently demonstrating this to us, as we would like to point it out here. And we can already reveal so much: You certainly don't know the photos shown there yet!***

Andrew Fox  
Dampfloks im Wirtschaftswunderland  
Die 50er, 60er und 70er Jahre

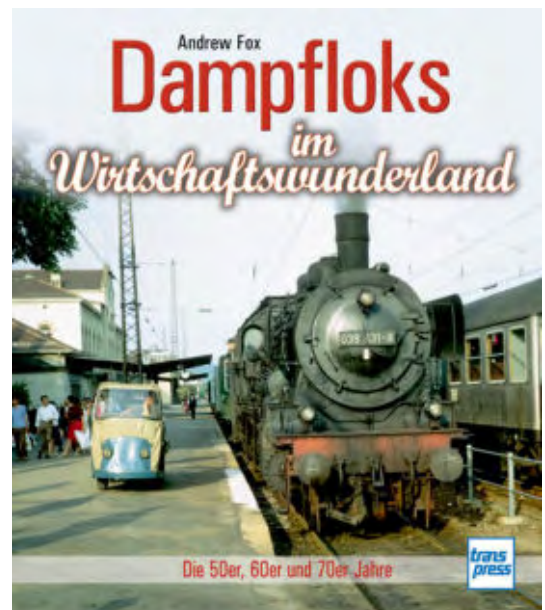
Transpress Verlag  
Stuttgart 2018

Hardcover book  
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160 pages with 220 color photos

ISBN 978-3-613-71570-7  
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Available directly from the publisher  
or in the specialist book stores

This book is one of the great discoveries of the past year. More than forty years after the end of the steam locomotive era at DB, pictures still appear that German readers had never seen before - and all in colour!



Long gone are the times when the elegant class 01 had found its last refuge in Upper Franconia, but coal and steel trains in the Ruhr area were still transported with steam as a matter of course. In the Weserbergland the sound of the class 44 through the valleys was still heard daily and the Emsland route was still dominated by “king steam.”

But in 1977 all this was irrevocably over, in the Federal Republic an epoch had finally come to an end. Before the time came, many steam enthusiasts from other European countries also made the pilgrimage to the last places of use. This illustrated book by Andrew Fox summarizes many of these impressions and pays tribute to the last decades of steam traction in West Germany.

This is also a special feature of this book, because the few years after 1970 are by no means to be found again in it, in which the variety and number of the series used had already shrunk considerably. At first, the subtitle, which focuses on the fifties to the seventies, still had a very exaggerated effect on us.

It took a long time before we came across a picture while leafing through it that dated before the mid-sixties. Then we thought the cover of the book had promised too much. But far from it, because there was still a lot to come that pleased us in this respect.

And so we found in the sum a very balanced volume, which captured moments from three decades and was able to reproduce them consistently by regions and topic headings. Such themes are the development phases of German steam locomotives according to the Länderbahn, Einheitsbauart and Neubaullok (Länderbahn, standard design construction and newly built locomotive) of the DB or the use of normal and narrow-gauge steam locomotives for private railways.

The result is an abundance that is admirable and makes this book so unique, because hardly anyone seemed to be using up their film material to the left and right of the DB at the time, even less so with colour films which were still enormously expensive at the time. A little melancholy arises when the last chapter shows discarded machines that have to follow the path of all old iron. But that was to be guessed at the latest, when we met 10 002 as a heating locomotive in Ludwigshafen.

Without exception, the photographs were taken by English railway enthusiasts who had submitted their entire photographic collection to the Online Transport Archive, so that it could be preserved there for posterity, comparable to the German Railway Foundation.

In this respect, it may come as no surprise that there is also an English original of this book, which was published by Unique Books in the same year under the title "West German Steam in Colour 1955 – 1975" (ISBN 978-0-9957493-3-7).

Is there anything to criticize? The photos show their age almost throughout, which is of course due to the celluloid material. This includes the fact that the colour films, depending on the manufacturer, had a typical colour cast. This could have been reworked in the image processing, but here we are of the opinion that this would have damaged the authenticity of the images.

However, it would have been worthwhile to edit a few pictures with only a few exposures, in which no details can be seen in the chassis area of the steam locomotives photographed. Sometimes this also affects the immediate surroundings.

A slight brightening would have significantly improved the image reproduction here and made the motifs concerned much more appealing. This is clearly demonstrated by the reading sample provided by the publisher on the Internet. All other photos, on the other hand, fit well under this rating point.

The readers are also always given some information about the pictures as well as the routes that are currently being treated in a sequence of pictures. This is to be emphasized particularly, because straight the private railways and also many branch lines of the Federal Railroad are today long ago history, and to a large extent have been forgotten.

This title is not only an ordinary documentation, but also a testimony of contemporary history. For Zetties especially valuable are surely the many photographs, which show railway vehicles, which were or are offered to them also as models.

Particularly current is the recently delivered 064 136-5 from Märklin (see news in this issue), which was photographed in Lauda on August 5, 1970. The blue Ford freight car, which they were presented with in 2009 as an Insider-Jahreswagen (Insider's Club annual car), was a curiosity that is still strange for many today.

The fact that there is a model for this and what it looked like exactly can be seen in two coaches that were captured for posterity, driving behind a class 44 freight locomotive on the also well-known double-decker bridge at Bullay.

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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 see 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 image is our goal. Likewise, here we note any events or meetings with a significance to Z gauge reference, if we are informed in time.*

**Important addition to an FR new product from Trainini® 2/2019:**

For additional information and consideration: The Freudenreich ribbed wagons presented here Z-Stammtisch-Wagen Wien (Z Club Vienna wagon). The wagons are of a new construction, for the first time with a drop window and therefore fit most appropriately into epoch III. They complement our half luggage wagons of last year. They will appear with two company numbers and as smoking or non-smoking wagons.

Orders via the Stammtisch Wien are already possible (by e-mail to [Spantenwagen\[at\]gmail.com](mailto:Spantenwagen[at]gmail.com)). Delivery is scheduled for the 2nd quarter of 2019. I would like to thank you for taking this information into consideration

Helmut Engelbrecht (Z-Stammtisch Wien), per E-Mail

**Enthusiastic reactions to the pink bullet train:**

It does not happen very often that our readers get as excited about an article as they did about our report on the Hello Kitty Shinkansen 500 which entered service in Japan nine months ago. Even though we did





It is an instant hit, wherever it appears: The Shinkansen 500 in Hello Kitty design is simply one of a kind. We can now also show you one of the regional motifs on the sides of the carriages, here the example of Fukuoka (bottom right). Photos: Raffaele Picollo

not receive any letters from readers, we had animated conversations, personal feedback and enthusiastic contributions in forums on the topic, also fuelled by genuine surprise amongst some readers that there actually is a real-life prototype behind the Rokuhan model.

West Japan Railways, the train's operator, also sent us an explicit message of their enthusiasm for this article through a European representation.

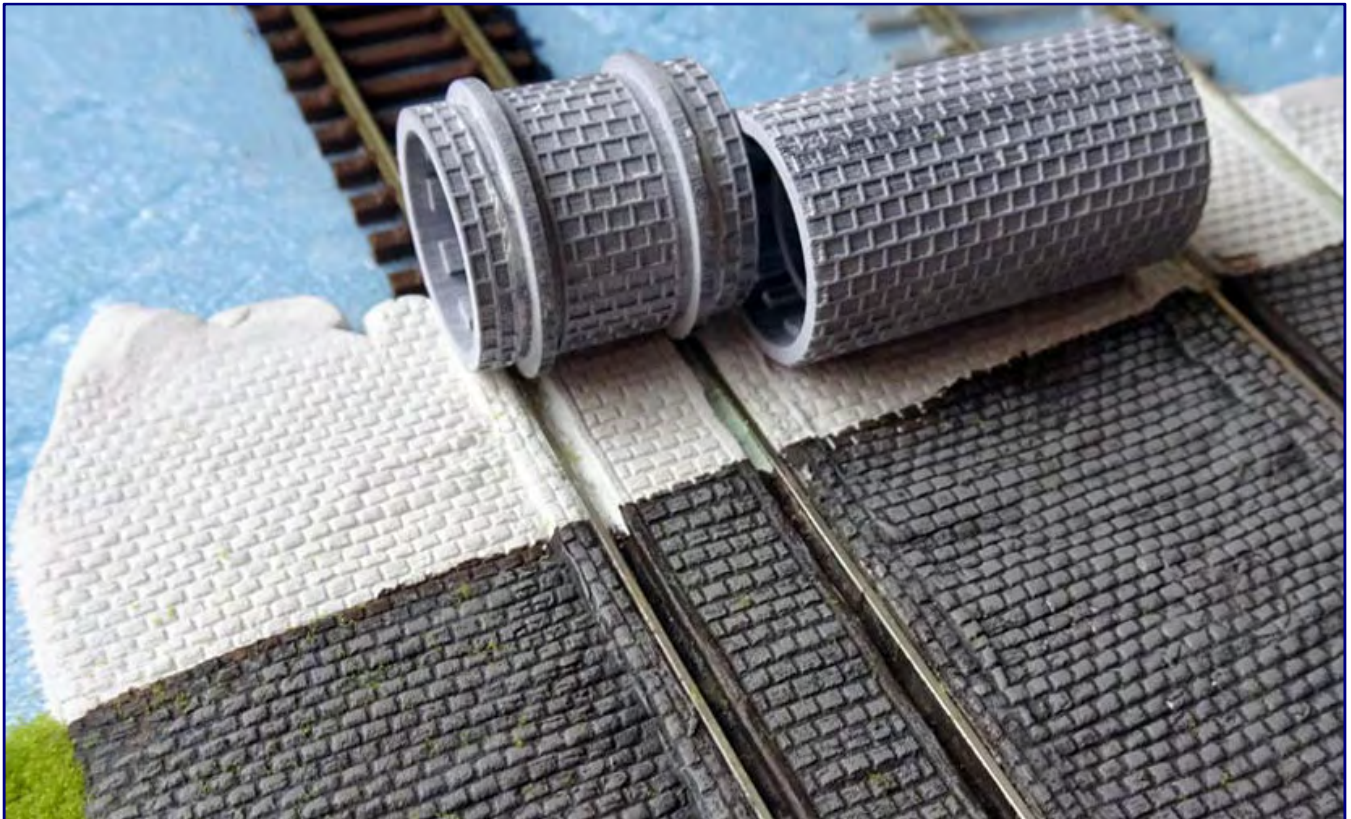
Similarly impressed was our reader Raffaele Picollo from Genoa, who sent us additional images of this high-speed train.



**Innovative tool from Modellbahnunion:**

Modellbahnunion (<http://www.modellbahnunion.com>) presented a clever innovation shortly after the International Toy Fair. The road roller for various sizes comes from Rainscale, but the tool is manufactured by DM-Toys in Germany.

For the Z and H0f tracks, a combination of a roller for 28 mm wide roads and another for 22 mm with an embedded track of 6.5 mm gauge (Art. No. H9535) is intended, for example, to simulate a tram line or an industrial track.



With the road rollers from Rainscale (Art.-No. H9535; picture above) you can also create attractive Z gauge roads with paving. Recommended as a working material is the modelling clay from DAS (photo below left) in white or terracotta. Photos: Modellbahnunion

Individual stone pavement streets can be easily created with this tool by embossing the structure into a rolled out modelling clay by rolling it. Modellbahnunion recommends the air-drying DAS modelling compound, which is also available in white (150 / 500 / 1,000 g) or terracotta (500 / 1,000 g).

Since there is nothing connecting the tracks H0f and Z apart from the track gauge, the size of the paving stones embossed on the roller is also important:

with a size of approx. 0.9 x 1.2 mm, it is optically well suited to the scale 1:220.

The following MTL models are currently arriving:

Micro-Trains is already delivering the second wagon of the Farm-to-table series. The brown 40-foot refrigerated wagon with wooden walls (Art.-No. 518 00 720) has yellow side walls and advertises the products of Joan of Arc.

The two covered cars with sliding doors of the CSX are much more modern in construction (510 00 431 / -432) and 50 feet long in the model. The externally visible box struts are striking. Without catwalks on the roof, they were in use around 2010 in this blue paintwork and with yellow lettering.

The yellow 70-foot carrying wagons of the TTX are in the range with two different company numbers (540 00 013 / -014) and previously ran under the name Trailer Train before the company renamed itself in 1991. A version of this car type is also available without painting and lettering (540 00 000) for your own designs.



The covered wagon from Railbox (Art. No. 510 44 017) is designed differently on both sides. While one side was sprayed with a portrait of the writer Edgar Allan Poe, the other side shows traces of operation and various graffiti. Photos: Micro-Trains

Also in the series of specimens delivered with patina there is a very attractively designed specimen in the most recent deliveries: The covered 50-foot "Edgar Allan Poe" by Railbox (510 44 017) is technically identical to the CSX car already mentioned, but has a different design on both sides.

One side shows the regular, but operationally drawn, rail paint, smeared with various graffiti, while the roof shows only rusty traces of operation. The other long side has been sprayed all over and shows the portrait of the famous writer between two crows.

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

**New product already available:**

Bernd Heißwolf (<http://www.modellbahn.heisswolf.net>) previously announced the availability of the new GFR1500 speed controller for analogue operation of bell-type armature motors. We presented it only last month as part of our trade fair report.

Maximum output voltage and the behaviour of short-circuit monitoring can be set by configuration, while over-temperature protection and the fan control ensure safe operation.

The speed controller consists of a handy control unit and a power unit, which is available with or without housings. A control unit holder, extension cables and a safety transformer are also available as accessories.





**Association award for Noch:**

The "Idee + Spiel" toy association awarded the Wangen-based accessories manufacturer a prize at the International Toy Fair on 2 February 2019.

The awards honoured the trade-friendly Internet ordering platform, the sponsorship for "25 years of Eurotrain," the active holding of model building seminars and the very good sales development in 2018.

**Sebastian Topp (Noch Managing Director), Jürgen Leiter (Noch Sales Director) and Andreas Schäfer (Managing Director Idee+Spiel). Photo: Noch**



Photos of the single wagons from the artillery train for the railway gun K 5. Photo: Z-Panzer, Andrew Hart

**Photos of the latest products from Z-Panzer:**

Unfortunately the photos of Andrew Hart (Z-Panzer) came too late to show the complete artillery train from his production in the magazine. In the meantime the photos are available (see page 49) and so we would like to introduce the camouflaged units around the railway gun K 5, led by the German Army diesel locomotive WR 360 C 14, at this later point..

**Lahnstein Model Railway Days 2019:**

As soon as all the carnival revellers had packed their costumes, the Oberlahnsteiner civic hall opened its doors to present a model railway exhibition for the 17th time, which is now very well known throughout Europe.

The international mix of exhibits confirmed this repeatedly and revealed a look at alternative possibilities for the design of a model railway layout. Currently, layouts from publications of various specialised magazines were announced again and could now be viewed on site.

Furthermore the MEC (Model Railway Club) Lahnstein under Gerhard Lehmkuhler organises every year the biggest exchange market for model railways and accessories in Rhineland-Palatinate. The always high numbers of visitors confirm the concept.



The maritime diorama layout "Marienfeld" by Dietmar Allekotte was one of the highlights of the Lahnsteiner Model Railway Days 2019.

Of course, one of the displayed layouts stood out. The "Rimkov" locomotive test stand by Rik Martens on a scale of 1:32 really attracted visitors with light and sound. This video is recommended for those who want to know more about the model roller test bench:

<https://www.youtube.com/watch?v=210xRoIUz6k>

Other excellent layouts, like the "Saufbähnchen" ("Guzzle train") with the station Mühlheim in H0 by Rainer Frank and the 1:87 coastal layout "De Kempen" of the Modelspoorgroep Valkenswaard from the Netherlands impressed us.



Meanwhile more and more editors from different model railway magazines are on the exhibitions as “simple” model railroaders. This year, Martin Knaden was quite a familiar face, especially since he holds the position of editor-in-chief of Miba.



The locomotive test bench “Rimkov” (page 51) by Rik Martens and the “playpen for the Tssd” (picture above) by Martin Knaden represented the large scales. Dirk Kuhlmann had among other things moved to the track H0e and showed the “Durlesbacher Weg” (Durlesbach trail, picture below).

Of course, the scale 1:220 was also well represented. On the ground floor, Birgit Foken-Brock from Trafofuchs stood with her layout and had brought a large selection of model figures for sale. There were also products in the scales H0 and 0. Often the booth was overpopulated, we are happy about that!

In the foyer of the theatre hall our editor Dirk Kuhlmann stood with two diorama layouts ("Contra Costa" & "Le viaduc sur la vallée") in scale Z and the "Durlsbacher Weg" in H0e. His meanwhile quite rare appearances are now already "small events", as the "crazy dog" presents again and again an innovation or other ways in landscaping for our gauge.



This FREMO-arrangement by Patrick Bopp after US-American motives in scale HO could also be seen in Lahnstein.

In many conversations with the audience he explained the basic "modern" landscaping and the general design. At times he was supported by the well-known Miba author Bruno Kaiser.

Dietmar Allekotte celebrated his premiere with his maritime "Marienfeld" layout. The small peep-box, of course brought to a good viewing height, thrilled the visitors and a flurry of flashing lights chased the next one. He is on the right track to represent our scale worthily in Europe.

The scenery is absolutely harmonious and invites you to take a mental stroll in the harbour area. We will soon be reporting in more detail about the "Marienfeld" in **Trainini®**, as this operating diorama layout will also be shown at the Intermodellbau exhibition in Dortmund.

#### News from American Z Line:

The light passenger coaches presented as part of our trade fair report follow in March in a further variant. Now the Southern Pacific is being considered, which had unpainted and therefore metallic shiny cars with a striking red stripe with a white company logo above the window ribbon.

This wagon type is offered as 4-4-2- (Art.-No. 73004-1 to -3), 6-6-4 sleeping cars (73104-1 / -2), dining cars (73504-1 / -2), luggage cars (73604-1 / -2), seating cars (73704-1 / -2) and observation cars (73804-1 / -2), each with different operating numbers.

The covered 40-foot AAR freight cars are on the road this month for the Nickel Plate Road and are available individually (904310-1), in double (904380-1) and quad packs (914310-1).

You can find more manufacturer photos of the current deliveries at <http://www.americanzline.com>.

**Current Märklin deliveries:**

The freight wagons of the package “DRG-Flüssigkeitstransport (liquid transport)” (Art.-No. 82318) have arrived at the dealers. Included in this Era II compilation are two acid pot wagons and another two-axle tank wagon of the replacement type. All three models have a brakeman's cab.

The tender steam locomotive of class 064 of the Deutsche Bundesbahn (88742) with bell-shaped armature engine has also been delivered. Like its predecessors, the first model of the universally usable locomotive for secondary lines of era IV has welded water boxes and no Indusi equipment. The running characteristics have increased enormously with the change to the new drive.



Märklin has now delivered the Epoch IV version of the Bubikopf as class 064 of the Deutsche Bundesbahn (Art.-No. 88742) with bell-shaped armature motor, but unchanged without window inserts in the driver's cab side windows.

It is a pity that the side windows are not equipped with pane inserts ex works. Fortunately, this can be remedied with Ratimo spare parts. The smoke chamber support was sprayed red for the first time, because many model machines in their years of service below the smoke chamber were very generously provided with red paint.

If you want to have it exactly, you should paint the steps of the lateral ascents and the central one to the smoke chamber black, as well as the running surfaces of the short circulation black, until only a red side edge remains.

The museum steam locomotive 80 030 (88001) has a heavy brass housing. Its model comes from the Bochum-Dahlhausen Railway Museum, where for many years it carried a photographic coat of paint with Reichsbahn addresses, which Märklin converted into the model.



Looks like epoch II, but it is not: 80 030 (88001) is part of the museum locomotive series and externally reflects the last operating condition at the RAG. It was painted by the DGEG as operator of the railway museum Bochum-Dahlhausen but in photographic paint.

Technical equipment of the locomotive reflects the last period of operation at Ruhrkohle AG (RAG), to which the welded water boxes and the alternator to the left of the chimney belong. This also corresponds to the museum model. Optically, it belongs to the Epoch II with the colouring and the two-light peak signal.

**Instructional film of the accessory company Noch:**

On 22 February another instruction video was put online that had 31,000 hits within a short period of time. In just under 35 minutes, the accessory manufacturer presents the construction of a model railway layout with Noch products and other new products.

The demonstration object is the current trade fair layout, which will be open to visitors on many occasions this year. It was shown for the first time at the International Toy Fair 2019 in Nürnberg. The film can be viewed free of charge at <https://youtu.be/LzJ75hW8OCQ>. If you don't want to miss any of the future films, you can also subscribe to the Noch channel.

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