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for railroad enthusiasts
in the scale 1:220
and Prototype

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Digital interaction

**Excursion to Dörpeder Land
A successful model turns 80**

Introduction

Dear Readers,

as so often before, a June issue of **Trainini®** heralds the start of summer.

Many model railway fans tend to let their hobby rest during this season, are out in nature or are already longing for their annual holiday. But stop! Right now, in a shady spot with a cool drink, the long-delayed model house can now be perfectly assembled.



Dirk Kuhlmann
Editor

The whole thing then, of course, only alternates with reading this issue. In my case, on the fine days, I had a special research in mind: the "Alwegbahn": The test track of the monorail rapid transit system was in Köln-Fühlingen until the end of 1967.

I wonder if there are any remains of this construction. An on-site visit will clarify this.

But you've certainly stood on an old railway embankment or spotted a piece of residual rail in the middle of nowhere. Curiosity is there and sometimes a long-forgotten railway line is reborn, then at least in a model, perhaps even on a scale of 1:220?

Let's just stick to our summer and holiday mood. Who should be this year in the north of Germany on the way, these houses will find again and again. So we built and tested the "Dörpeder Hof" from 1zu220shop / Archistories for you.

How often was a Boeing 707 discussed in the past? As holiday pilots we remember it less, but as the vehicle of the sixties for faraway journeys it remains unforgotten. Herpa has now released it as a model.

Air travel used to be almost priceless, but many Germans already had their VW Beetle. I wonder where it carried its owners everywhere or where it drove better. Over rough and smooth, ...and high mountains. This car was available in an unbelievable number of variants. On its 80th birthday, we will show you the previous models available in Z gauge.

Of course, it should not be forgotten in the end that we will also be bringing the next part of our annual focus in June. This time Andreas Hagendorf gives an overview of the various digital components and explains how they interact.

Have you found your shady spot in the meantime? Is there a cold drink ready?

Then I wish you a lot of fun reading and also handicrafts.

Yours,

Dirk Kuhlmann

Editorial

Introduction 2

Model

Everyday car of bygone times 4
Time for jet aircrafts 17

Prototype

Currently no items

Design

North German half-timbered art 24

Technology

Assembling a digital puzzle 32

Literature (not translated - only in German)

History of the successful car 42
Excursions into regional railway history 44

News

Zetties and Trainini in Dialogue 46

Imprint 52

We thank the Modellbahn-Union for providing digital control panels for our photos and Manfred Forst and Sven Rohmann for their image support as well as other readers for providing information.

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Cover photo:

Digitally controlled, the 181 214-8 "Mosel" runs with an ore train its rounds on the layout. Switches and some road traffic can also be integrated into digital control systems. This requires interaction of various components.

The VW Beetle turns eighty years old Everyday car of bygone times

With more than 21 million units built, the VW Type 1, better known as the “Beetle”, became the most produced car in the world. At the end of 1938 the first production vehicles were built, which means that the Beetle is now eighty years old. Until the 1970s, its chassis platform was the inspiration for almost all Volkswagen designs. Its great importance in everyday life worldwide has resulted in Z gauge always having many available models.

The VW Beetle originated during the Third Reich. On 22 June 1934, Ferdinand Porsche received the development order for the prototype of an economical and inexpensive car for the German population that Adolf Hitler had demanded a year earlier as a Volkswagen. However, this term was then replaced by the KdF car (“power through joy”).



For the public, the Volkswagen, later referred to as Type 1, could only be purchased via ration coupons from 1946 onwards. It was offered there in its original basic form as “pretzel beetle”, by the way still without turn indicators. Source: Deutsches Museum Verkehrszentrum, Munich

also seems untenable, and Béla Barényi had legal sanctions imposed in 1952.

He was able to prove that he had explained in detail to Porsche the Beetle concept developed in the 1920s. However, it was not sufficiently protected by patents. The components were the air-cooled four-cylinder boxer engine in the rear, the transmission in front of the rear axle, the longitudinal crankshaft and also the streamlined, humped shape.

The construction of the successful model began in larger quantities only after the end of the Second World War, during which numerous changes were transferred from production for the Wehrmacht into series production. Production of the car, renamed Volkswagen, for the occupying powers and Deutsche Post began in the summer of 1945. By the end of the year, 1,785 units had left the workshops, some of them on the chassis of the bucket car.

The vehicle was to be manufactured in its own plant in Fallersleben, today's Wolfsburg. However, since it was not completed until after the start of the war, it was no longer delivered to customers.

At the end of 1938 the production of pre-production vehicles began, which were used as demonstration cars and for exhibitions. In the course of their testing, some details were still changing.

However, his concept was not entirely new and is influenced by other constructions, including Tatra.

The rear-wheel drive and the rear pen-axle are among the features adopted by other vehicles. Ferdinand Porsche's role as the Beetle's sole father

In the following year, it was also acquired by Germans for the first time with a subscription ticket, which represents a first step into the later success story, which culminated in the mid-sixties to the beginning of the seventies.

Its popular name Bug is attributed today to a 1938 New York Times report.

It found its way into the languages of many export countries, which is why VW partly adopted it as an official model name.

In Germany, this name only appeared in advertising campaigns in 1968.

But for almost five years it initially remained Volkswagen's only car, which is why it was only to be given its own name when the VW transporter was released.

From then on it was called VW Type 1, because the "Bulli" was Type 2, and when someone said he was driving a VW, it was clear that he meant a Beetle, as Type 3 did not yet exist.



With the model year 1954 the Beetle lost the rear window bar. After the factory holidays in 1953, it appeared as "Ovali", however, the new one-piece rear window retained the same external dimensions.



"Ovali" was followed in 1957 by "Dickholmer" with a larger rectangular window. The Wolfsburg coat of arms above the front canopy handle remained characteristic. This model also has the so-called ram bumpers.

Seven basic shapes

All three vehicles mentioned so far adopted the design features of the small mid-size car: air-cooled engine at the rear, drive on the rear axle and platform frame with bolted body (not type 2).

Although the self-supporting body and a little later also water-cooled engines had already prevailed around 1960, Volkswagen stuck (far too) to these concepts for a long time.

General Director Heinrich Nordhoff only wanted to continue to improve the Beetle and make it more and more reliable, but kept production economical and did not want to offer any other

types. "There are forms that cannot be improved," said Volkswagen's contemporary advertising.



Popular, but quite rare, were the four-seater Beetle convertibles built by Karmann for VW in Osnabrück until 1980.

This conservative model policy put the Group into a serious sales crisis, which it was only able to overcome with the Passat (1973) and the modernly designed successor to the Beetle, the Golf (1974).

However, the world's most produced car had changed its appearance only slightly, the vehicles from 1938 and 2003 (final end of production in Mexico) show only a few differences. The basic concept was even retained until the end.

The changes during the long construction period in Germany (1938 to 19 January 1978), South Africa (1951 to 1979), Brazil (1956 to 1986) and Mexico (1954 to 30 July 2003) and some other countries, including Australia (1954 to 1976), often consisted only of increases in output and engine capacity or improvements that were not immediately apparent from the outside.

Externally, the Beetle has produced seven basic forms: "Brezelkäfer" (basic form 1938 to 1953), "Ovali" (1953 to 1957), "Dickholmer" (1957 to 1964), "neue Form" (1964 to 1974), short (1974 to 2003) and long front end (VW 1302 and 1303; 1970 to 1975) and the South African "Superbug" (VW 1600 S; 1975 to 1978).



This VW 1300 from 1966 belongs to the "new form". The iron (as in iron for pressing or ironing) tail lights now decorate the rear. Photo: Lothar Spurzem, CC-BY-SA-2.0-EN

The most important external changes and developments concerned the glazing and lights of the vehicle as well as the bumpers.

When larger glass panes could be produced more cost-effectively, the two-part rear window initially disappeared in favour of a single paned one with the same outer dimensions, from the oval of which the colloquial name of the second basic shape was derived.

It was further enlarged in the following years, which also affected the windscreen and side windows. The front hinged side window was finally omitted.

The highlight of the beetle development in this respect was the heavily curved windshield of the VW 1303, also known as the panoramic windshield.

The ram bumpers with horns made way for angular specimens, which finally also took the front turn signals. Since the time of the blinkers on the side of the passenger compartment was over, they had sat on the top of the fenders for many years.



The Beetle was also used by the police, fire brigade or, as here, the German Federal Post Office. This VW 1200 shows the "elephant feet" of the last Beetle era. The vehicle remained in the depot of the Museum für Kommunikation, Frankfurt (Main). Photo: Urmelbeauftragter, CC-BY-SA-3.0,2.5,2.0,1.0



The highlight of the Beetle's history was the VW 1303 with its curved panoramic windscreen. It had the long front car and belonged to the sixth basic form. The vertical headlights are also clearly visible. Photo: Murphy1303, CC-BY-2.5

The headlamps were inclined at an angle at the beginning and only stood vertically in the fenders during the later generations of beetles. Also the rear number plate was finally upright with changed tail lids.

The size of the combination rear lamps increased steadily. From the small single-chamber rear light, ones with several chambers developed, in order to be able to include also indicators and later the reversing light. The larger design was known as the "iron" and finally replaced by "elephant feet".

Impressive success story

Volkswagen was able to export the Beetle to many countries and partly produced it locally. Its sales in the United States of America, for example, where it was virtually the antithesis of the great road cruisers, are impressive.

VW worked persistently on the proverbial reliability and knew how to emphasize it in advertising. Another argument in favour of this car was the great customizability for the buyer, which began with the well-known flower vase, but did not stop there for a long time.

The great success is also impressive against the background that the Beetle concept was technically outdated as early as the late 1950s and there were also alternatives for customers in the 1960s, which offered considerably more space thanks to better use of space. The small boot under the front hood always remained a big shortcoming, the even smaller one at the rear could only be reached from the inside via the parcel shelf.



Of the 16,300 VW 1200 special model "May bug" models produced in light orange, exactly 5,555 vehicles were sold in Germany between April 15 and June 16, 1972. Photo: Alf van Beem, CC-Zero

In spite of all this, his production figures increased constantly: on March 4, 1950, the 100,000th copy was produced, and on August 5, 1955, the million mark was reached. In September 1962 there were already 5 million Beetles, a good five years later there were 10 million. The absolute production record dates back to 1971, and since 17 February 1972 it has been the most produced car in the world.



The 1996 VW Beetle 1600i (GL) "Harlekin" was one of the special models from Mexican production. Photo: Sven Darfschlag, public domain

The car had its heyday between 1960 and 1974, after which it quickly went downhill before a small renaissance from 1989 onwards ensured its survival until 2003. At the end of production, 21,529,490 copies were in the books, a world record in terms of unit numbers that is still held today.

Their importance as a model for the railway system is also derived from them: The beetle determined everyday life, including advertising and movies (e.g. "Herbie"). Hardly anyone who had a driving licence in the seventies did not drive one on at least one occasion.

If you didn't drive a Beetle privately, you might have got to know him at least in the context of its work. It was a popular government car and served faithfully with the ADAC, the German Federal Post Office, as a patrol car for the police or as an emergency command vehicle for the fire brigade. Its community of fans was also kept in good spirits with special models that captivated with special features or special colours.

The VW Beetle in the Scale 1:220

At first glance, the Beetle story in Z gauge seems no less long than that of its model. Probably because of its great popularity, the vehicle was one of the very first cars to be built in a scale of 1:220.

The honour of the first is due to the Z-scale inventor Märklin. Together with a Porsche 911 Targa, an Opel Manta and the BMW 1500, it also sent the Beetle into the 1973 race for customers' favour. Under article number 8973, these four different models were delivered unsorted in small bags of six each and were later also loaded on the DDm 915 car transport wagon.

Because of their soft and flexible material, the models became known to customers as "rubber cars". At that time, they were very finely detailed, which was to remain unrivalled for a long time. But they also showed some weaknesses in the scale or a high mould separating edges, which were visible along the entire length of the vehicle. The VW Beetle to be treated here, based on the models of the early seventies, was clearly too narrow.



The era of Märklin's "rubber cars" (two untreated cars on the right) also produced the first Beetle on a scale of 1:220. Offered (from left to right) Opel Manta, Porsche 911 Targa, BMW 1500 and also the Volkswagen.

The Zetties obviously got along better with the missing colour designs. The models were produced in one colour, but not painted. Known material colours are white, red, orange, light orange, yellow, blue-grey, light blue, blue and green, probably also depending on the respective production period. Customers usually painted the windows, tyres, hubcaps, lights and license plates themselves.

This was followed by the era of three-piece plastic injection moulded cars as a continuation of the product range of H. Fischer GmbH. During these years Märklin did not further improve its models of the VW Beetle. Instead, it returned to the range in 1999 as a loader for the Off 52 car transport double wagon. In this version it was made of metal and had more clearly harmonious proportions, but was again only single-coloured, and this time was lacquered in a basic colour.

Together with other car models, it appeared as cargo, for example in the Westerland train pack (81428), or also in car accessory packs (89022). It has always been the pretzel beetle; the well-known colours are red, blue, black and grey as well as may green with a "hug ball" as a trailer. With a little rework, a handsome model could be created from the blanks.



Märklin's second generation of Beetles was created by means of metal casting. The pretzel Beetle served as a model. The single-colour painted models from the 86221 wagon package give an impression of the delivery condition, while the May green model with caravans from the Westerland package (81428) was subsequently finished.

Again and again, the old rubber cars in particular invited us to perfect them with paint, which was not so easy, or to upgrade them to other versions and then design them to fit. After all, these models marked a time in which the Z-scale range was still very sparse.

A. Tröger was a well-known supplier of such modifications at the time, offering painted variants not only as civilian vehicles but also as fire department cars and police cars with flashing lights. Some of them are still used today, so the "Police car 2 pieces (car)" ran at that time under the article number 002.

Until the 1980s, a not insignificant small-scale model car range was available from Noch. It consisted primarily of truck and van models, but some passenger cars were also offered from Wangen. One of them was the VW Beetle, which was listed in a pack of two (4727).

With catalogue number 4720 there was also a compilation of all four passenger car models: Mercedes-Benz Estate, Volkswagen Beetle, Volkswagen Golf 1 and Porsche 911. This does not facilitate the proper time classification of the originals. But it dates from the seventies.

Today, Mercator's metal models are only available on the second-hand market. They were once offered in simple, as well as in detailed finishes. The VW Beetle carried the article number 1001 and showed the following features: large rear window, straight windscreen, iron rear lights, indicators on the mudguards and, as the only one of all replicas made to date, a replica with the left exterior mirror.



True additions to the Spur Z range were the unusual Beetle models from the idea magazine, here the "Pick-up" (left) and the version with open front and rear hoods (centre). On the right, the convertible completes the scene. Photo: Manfred Forst

Ideen Magazin also attracted attention with its miniatures. In addition to a convertible (LW1), the range also included a Beetle with open boots or hood at the front and rear (VW2), making it ideal for breakdown, repair and loading scenes. Only here was the characteristic of the Volkswagen as a popular basis for conversions taken up: These included a "pickup truck" with a loading area (VW4) and a "double beetle" (VW3) with two front hoods.

Around 2006, a provider from Belgium drew attention to itself. Various car brands were transferred to the 1:220 scale under the TCM.Z brand. Among them was the Volkswagen with its successful Beetle model.



Picture above:

This photo shows special models. In the front you can see the unpainted pretzel beetle by Graham Jones (Z Club GB), framed by two lacquered models with rectangular windows (TCM.Z). In the back you can see a pretzel beetle under a tarp, a sold out item from Küpper. Photo: Manfred Forst

Picture right:

This Limited police Beetle was also the subject of the very first **Trainini®** issue from August 2005.



It was sold in two body series forms and with the model colours available at the time: Beetle '57 (mango green, Indian red, Arctic blue, fjord blue and black) and Beetle '74 (Marino yellow, Indiana red, polar white, oceanic blue and silver). Under the initiative of Graham Jones, the Z Club GB also occasionally offered an unpainted VW Beetle among its white metal cast metal models.

A fir green police beetle (4310101), the subject of our very first issue in August 2005, was published by Limited as a novelty in 2005. In terms of time, it should be classified between 1970 and 1975. It was subsequently also offered to the fire brigade as a fire service vehicle (4310015) and was a new form variant thanks to the blue light.

The basic model of a civilian vehicle had already appeared under the previous brand Liveminiaturen and was continued under Limited. We know the following colours (with old article number in brackets): light blue (2), black (2.1), red (2.2), May green (2.3) and grey (57). Also known are brown and dark blue specimens (Art. No. not known), for the colour beige we have the article numbers 1 and 4310001, respectively.



The VW Beetle from Limized was available in identical design and the same colours even under the predecessor brand Liveminiaturen with different article numbers. Here you can see the versions marked as light blue (probably by mistake), black, red, May green and grey. Also known are beige, dark blue and brown models.

Seven years after the turn of the millennium, MWB Modellbau Wolfgang Baumann developed into the largest supplier of the Beetle for our gauge. The first variants in the program were pretzel windows and oval. In addition to the common steel roof, both were also available in the much rarer folding (convertible) roof design.

The pretzel Beetle was finally added as a fir-green police and fire-red and white emergency vehicle with blue light. But the oval rear window was also a variant of an emergency vehicle: on this version, an ADAC breakdown assistance vehicle was modelled.



The convertible in its 1951 version remained a dream for many at the time: Karmann from Osnabrück, who had produced the open version for VW for many years, was probably the godfather of the four-seater. With the model available in several colours, dreams could still be fulfilled very late.

In September 2011, MWB announced the last versions 1200 and 1303 of the seventies.



Pictures top right and bottom:
MWB had various Beetle models in its range, which are now only sporadically offered via electronic auction platforms. On offer were among others the "Ovali", among others with closed or fabric sliding roof (picture above) and the convertible from 1951 (picture below). The "Herbie" is a varnish variant of Rolf's laughter on this basis. The placement of the front indicators is not correct here: From 1960 they were mounted on the fenders and later in the bumper. Photo (below): Manfred Forst

The delivery of these quite modern success story cars followed shortly afterwards. The original model was the standard model at that time and the last model from German production with curved front screen.

The MWB resin castings served as a template for other suppliers for their own color and lettering conversions. Rolfs Laedchen still offers a hippie design of the pretzel beetle, temporarily the film beetle Herbie and a "ladybug" were also offered.



Picture above:
Car models are also popular finishing touches. Here you can see three not yet completely finished "Ovalis" by MWB as ladybirds as well as Herbie and in postal service. The decals were supplied by SW-Models.

Picture below:
The green rally beetle with the start number 62 comes from Simon Artz from Hungary. A yellow copy number 67 is also available, both of which can be obtained from internet auction houses. Photo: Dr. Sven Rohmann

Simon Artz from Hungary is competing here with his own Herbie, but rounds off the theme with two further rally beetles, which carry the starting numbers 62 and 67. The models have a pretzel window, the model basis remained unclear to us so far. It is possible that it originates from its own forms.



Thanks to Jens Wimmel, Swiss Post is also on the road with a VW Beetle in a scale of 1:220. Photo: Zett Zeit

Of course, you can also create your own models based on MWB with skillful hands. Matching decals for the Herbie or a post vehicle were offered by SW-Models until about a year ago. In terms of scale and readability, this solution remained the most attractive, as expected.

This view is certainly shared by Jens Wimmel, who is just as skilfully involved in this round dance. At ZettZeit, it offers the VW Beetle from Swiss Post (ZZ04015), which is based on the Ovali from MWB.

It is elaborately painted by hand in two colours and provided with a decorative strip on the hood, number plates and the typical post logo. At the moment the model is not in stock, and subsequent production depends on whether Wolfgang Baumann's health allows for production of additional casts.

The same body variant is also the model for one of the few Beetle models that is currently safely in production. A2 Models from the Netherlands took the 1956 model as a model and offers this very successful 3D conversion in various basic material colours.



The colour of Trafofuchs' new Beetle is reminiscent of the May beetle from spring 1972. Photo: Trafofuchs

Following the market launch of the latest Beetle model, Trafofuchs (KL05), which is based on the models of the early sixties and also belongs to the current product range in various colours.

The 45 years of Z-gauge history is rounded off by a Beetle under tarpaulin, offered in a collection as a cargo load from Josephine and Helmut Küpper.

Webpage references to available models:

- <http://www.a2-models.nl>
- <http://www.rolfs-laedchen.de>
- <http://www.trafofuchs.de>

Can be ordered for a following edition:

- http://zettzeit.ch/shop/index.php?cPath=8_10

Information and pictures of models not shown here:

- <https://www.sammeln.z-insider.de/category/mercator-1220/>

We were involved in this, because these epoxy resin models were developed as our project and got off the ground with sponsor support. Sold through Z-scale cargo loads producer Josephine Küpper, her net proceeds were earmarked for the project "Model Railroad(ers) for children", which delivered model railways to kindergartens and schools.



**We are currently looking for
a translator (m/f)
on a voluntary basis.**

Trainini is a free, non-commercial magazine for all friends of Z gauge model railways and their big role model. Beginning with the year 2018 Trainini will also be published in an English edition. It is produced by a volunteer editorial staff and many volunteers who work regularly or on projects. Our motivation is the common hobby, our motivation the satisfaction of our readers, good contacts with model railroaders and manufacturers as well as a friendly solidarity of the whole team. Become a part of it!

You should have these skills:

- be able to translate articles in German in their sense
- a basic technical understanding
- confident language and spelling skills (German and English, English preferred as native language)
- Collegiality and good teamwork skills due to active coordination with the editorial staff and your translator colleague

Our editorial staff consists of three persons, one translator for the translation of the "International Edition" is currently assisting us. You will have decide for yourself how much time you wish to invest here. It is important that you fit in with us and we fit in with you. If we have aroused your interest, if you would like to spend your free time in a meaningful and enjoyable way, then write to us or ask us what else you would like to know: Editorial Office Trainini, Mr. Holger Späing, Am Rondell 119, 44319 Dortmund; E-Mail: [redaktion\[at\]trainini.de](mailto:redaktion[at]trainini.de). We are looking forward to hearing from you.

Boeing 707-400 from Herpa Time for jet aircraft

The Boeing 707 revolutionized air traffic at the end of the 1950s and, together with its competitors, turned propeller aircraft into phase-out models. Herpa has now released exactly the aircraft with which this era began at Deutsche Lufthansa as a 1:200 scale model. It can also be used to complete airport scenes during the economic miracle period.

The Boeing 707 is one of the types of aircraft that ushered in the jet age and brought about a change in civil aviation. At Lufthansa in 1960 it replaced the four-engine Lockheed L-1649 "Starliner" (referred to there as the "Super Star") in transatlantic traffic, which in turn had taken it over from its predecessor, the L-1049G "Super Constellation," just three years earlier.

As one of the first jetliners, the Boeing 707 and its competitor models became a prestige object for airlines. During its heyday in the 1960s, it was regarded as the standard on long-haul flights.



The Boeing 707-400 was the first jet aircraft of the re-founded Lufthansa. With it, the airline finally decided on a design scheme after experimenting with the "Super-Connie" (in the picture at the back). The Boeing 727 behind it shows a transition paint job from the "parabola" to the almost 30 year later paint job.

Its original type was the pattern 367-80 developed for the military, which rose into the air for the first time on 15 July 1954. The 707 finally received an 11 cm larger fuselage cross-section, which enabled seating with up to six seats per row, separated by a central aisle.

The first customer for the new four-engine narrow-body aircraft was the Pan Am: On October 13, 1955, it ordered 20 copies, but at the same time 25 of Douglas' competing model, the DC-8.

After the first Boeing 707 had left final assembly on 28 October 1957, the phase of flight testing followed. The first flight dates December 20 of that year. Just one year later, Pan Am was able to start line operation with version 707-100.

This was followed by versions -138 (special version for Qantas, Australia), -100B, -200, -300, -300, -300 Intercontinental, -300B, 300C and the 400th Boeing four-engine, which is available as a model today, developed into a successful model and was used by almost all large and also smaller airlines worldwide in long-haul traffic.



According to the article number assignment, the new item discussed today would only be a reprint with a changed registration number. This is why we also show here for comparison the Boeing 707-400 with the identification D-ABOC (Art. No. 557818): It has an additional keel fin and already the higher fin. Photo: Herpa

The Boeing 720 (originally called Boeing 707-020), which was developed for short-haul flights, also belonged to the 707 family, but in contrast to its sister was not successful for short-haul flights. The reason for this was the direct competition from the cheaper Boeing 727, which was available from 1964 and also had the same fuselage diameter.

The crew of the 707 initially consisted of captain, first officer, flight engineer and navigator on transatlantic flights. More modern navigation systems soon made the fourth man superfluous.

On 24 April 1956, Deutsche Lufthansa ordered four copies of the 707-400 variant developed at the request of the British Overseas Airways Corporation (BOAC, predecessor of British Airways) and thus even before it. The -400 version featured the larger vertical stabilizers, which became the standard in all versions, and the very distinctive British Rolls-Royce Mk 508 engines, which were signed by Lufthansa on January 23, 1957.

On 25 February 1960, the first of the four machines arrived at the customer. The first to land in Hamburg-Fuhlsbüttel on 2 March 1960 was the D-ABOB, the prototype of the Herpa model, and scheduled service was taken up about two weeks later on 17 March 1960.

Nevertheless, together with the -300 version, it dominated long-distance traffic for almost 20 years. On routes with higher passenger volumes, however, it was replaced by the Boeing 747 "jumbo jet" as early as 1969. On medium and long-haul routes, it finally found its successors in the Lockheed L-1011 Tristar,

the Douglas DC-10-30, the Airbus A300 and A310 as well as the Boeing 757 and 767. The DC-9, the already mentioned Boeing 727 and 737 dominated the short-haul routes.

Like many old aircraft, the Boeing 707 experienced a second spring after its conversion into freighters, provided it was not sold to developing countries. Lufthansa, too, continued to deploy its units, which were taken out of service in 1984, as German Cargo for several more years, which later merged into Lufthansa Cargo. Today, passenger aircraft of this type are no longer in use due to their high noise levels and high kerosene consumption.

The new model from Herpa

The jet aircraft era began not only at Lufthansa with the delivery of its first Boeing 707, so it was foreseeable that a model of this type in the -400 version would sooner or later appear in the 1:200 scale Herpa program.



The Herpa innovation was the very first aircraft of this type to be delivered to Lufthansa. The Boeing 707-400 with the identification D-ABOB (557818-001) therefore still shows the original characteristics of this aircraft type described in the text.

Initially this was the second aircraft with the identification D-ABOC (Art. No. 557818) added to the fleet in 1960, which was christened by the mayor and later Federal Chancellor Willy Brandt in the then divided city of Berlin.

Characteristics of the model were the higher fin, which was introduced with this version, as well as an additional keel fin to increase the flight stability. The miniature thus marked the final condition in which it was to become the standard for subsequent deliveries.

Today's new edition (557818-001) is different from the article number, but not a pure registration variant with a new identifier. Of course, with D-ABOB it carries a different registration, namely that of the very first Lufthansa aircraft, but also its appearance was changed for this additional edition, making it a new form variant.

The novelty still carries the short rudder, as it was usual from the previous versions. Also the very striking keel fin under the hull end is still missing. It thus reflects the original state in which this aircraft joined the fleet of Germany's largest airline in 1960. Later it was also rebuilt according to the following Boeing 707-400.

Here lies a special attraction to use this model at the edge of the model railway system. At that time, airports still had a considerably more attractive appearance than today, which can be reproduced with commercially available kits.

Connoisseurs of aviation history will be able to classify the machine, its surroundings and its installation into the early sixties with the aide of this model.

This section of Era III is one of the most popular of the model railroaders, not only in gauge Z.

Supplemented by standard model railway accessories such as platform trucks from HOS-Modellbahntechnik and contemporary car models from MWB, A2 Models or MO-Miniatur, a harmonious backdrop is quickly created. At the same time, it illustrates how cars and airplanes are threatening to outstrip the railways.



In the condition of 1960 the Boeing 707-400 still has a short rudder. Another striking feature is the Kranich company logo in the yellow parable, which Lufthansa had finally decided on.

Size and Data for the Boeing 707-400 and the Herpa-Modell, Art.-Nr. 557818-001

	<u>Prototype</u>	<u>1:200</u>	<u>1:220</u>	<u>Model</u>
Length	46,61 m	233,1 mm	211,9 mm	234,0 mm
Wingspan	43,41 m	217,1 mm	197,3 mm	222,0 mm
Height	12,75 m	63,8 mm	58,0 mm	62,9 mm
Engines	4 x Rolls-Royce Conway Mk 508 Turbofan-jets with 77,8 kN thrust each			
Max. take-off weight	141.700 kg			
Flying speed	885 km/h			
Service ceiling	59 kW / 80 hp			
Construction years	1959 – 1963 (Version -400); 1957 – 1978 (all Versions*)			
First flight	May 20, 1959			
Quantity built	37 copies (version -400); 917 copies total*			

As expected, the dimensions of the new Herpa model deviate from the scale of the Z gauge: For example, the model on a scale of 1:200 is very close to scale, but just over 2 cm too long in relation to our scale of 1:220 and thus also has about 2.5 cm too much wingspan.

Nevertheless, this is easy to accept even with a relatively large model, because it is the vehicles and figures in the immediate vicinity that are the yardstick for

the eye. We have already commented on suitable vehicles; the differences in the sizes of miniature figures are so small that they can even be combined from both scales.

In terms of detail, the Boeing 707-400 also fits perfectly into the familiar image of our model railway. With the antennas on the right wing, on the fin and on the first third of the fuselage, Herpa shows the achieved high standard of its aircraft models of this scale.

The reproductions of the landing gear including rubber tires and the engines further prove this. The latter in particular are an unmistakable feature of the first Lufthansa aircraft. The appearance of the Rolls-Royce

Conway Mk 508 engines differed considerably from that of the other series. The star-shaped outlet is not to be overlooked even in the reduced size of the model.

The paint is clean and flawlessly applied to the heavy metal model. The material used purportedly contributes to this good image, because the fuselage is mirrored in metal under the window hinge as well as large parts of the supporting surfaces.

This correctly corresponds to the image that Lufthansa has strived to maintain. After an initial differentiation in painting schemes, it chose parabolic painting, which was also used on the Boeing 707, as the first uniform paint scheme for its aircraft.



The name was established because of the geometric shape, which dominates both the company logo on the rudder and the lines on the front nose. Many still consider it to be the most beautiful rendering of the crane line.

The striking Rolls-Royce engines also stand out in the model because of their shape.



Herpa has also convincingly reproduced the shining steel surfaces below the window hinge. Together with the fine and elaborate printing, they make the model particularly attractive.



Photo above:

The Boeing 707 is one of the few four-engine aircraft that still maintains layout friendly dimensions. This makes it ideal for airport displays in layout corners.

Photo below:

The perspective from the slanted back allows another view of the rear of the imposing yet not too large aircraft. The coloured contrasts between wings and flaps are clearly visible here.

The large Lufthansa logo above the blue, yellow bordered ribbon of windows also belongs to this scheme. It shows only blue capital letters in the then current serif typeface. This brings us to the evaluation of the printing, which was applied using tampon printing.

As with all younger Herpa models, it is very elaborate and provides additional reproduction of many important details. Very important for the overall effect are the rounded windows of the cabin highlighted by frame pressure. Herpa has also skilfully lowered the emergency exits in the area of the wings and the doors of the machine.

Tips for airport model building:

Herpa offers special apron plates for the design of model airports on a scale of 1:200. These are printed and show all lines and markings of an original.

Our model photos were taken at the beginning and end of this article
With the aid of the two new Scenix apron/tower floor plates (Art. No. 558969), each measuring 50 x 50 cm.

the fuselage as a solid casting.

However, elements of aircraft lighting, including the side position lights and the landing lights on the front edge of the wing, were also simulated using pressure. The only thing Zetties are not used to is that windows including those of the cockpit were not reproduced with transparent parts. But this is also due to Herpa standard and the construction of

This does not detract from the appearance of this striking and epochal aircraft. And so we cannot avoid explicitly mentioning the printed text: On the glossy fuselage just before the wings we read the two-colour lettering "Boeing Intercontinental Jet." It all too clearly points to the pride of the manufacturer and the operating airline.

The jet age had just begun. For the first time, they can also be used for long distances across continents without intermediate stops. The great belief in progress that shaped mankind at the beginning of the



With the Boeing 707-400, and alternatively also further contemporary airplanes from the Herpa program, realistic scenes can be created, which will provide a further eye-catcher at the edge of large layouts. Matching accessories can also be found in the manufacturer's program, which can be supplemented with figures, vehicles and luggage carts of the model railway accessories.

sixties, together with the growing wanderlust and a burgeoning prosperity as a consequence of the economic miracle, cannot be better portrayed than with this aircraft model.

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

Dörpeder Hof from 1zu220-Shop North German half-timbered art

Archistories produces fine architectural models from high-quality cardboard. That is why the 1zu220 shop relies on the specialists from Hanover for its exclusive building series. Today we show the assembly of the Dörpeder Hof, which can be located not only in Westphalia but also in the Old or Oldenburger Land. And almost incidentally, the packaging photo for this successful product is also created.

Several times we have already reported about the fine laser-cut models of Archistories. This time we will go one step further, because after the assembly we will show the creation of a photo for the later packaging.

In continuation of the building series for the 1zu220 shop Archistories has produced the two new models "Kallentaler Hof" (Art.-No. 405171) and "Dörpeder Hof" (406171). Kits for the northern area of Germany are repeatedly and well produced again.



The kit is unpacked, we're ready to go!

Fortunately, the buildings can be used in many different regions with few changes and modifications, by which I mean so-called "Kitbashing."

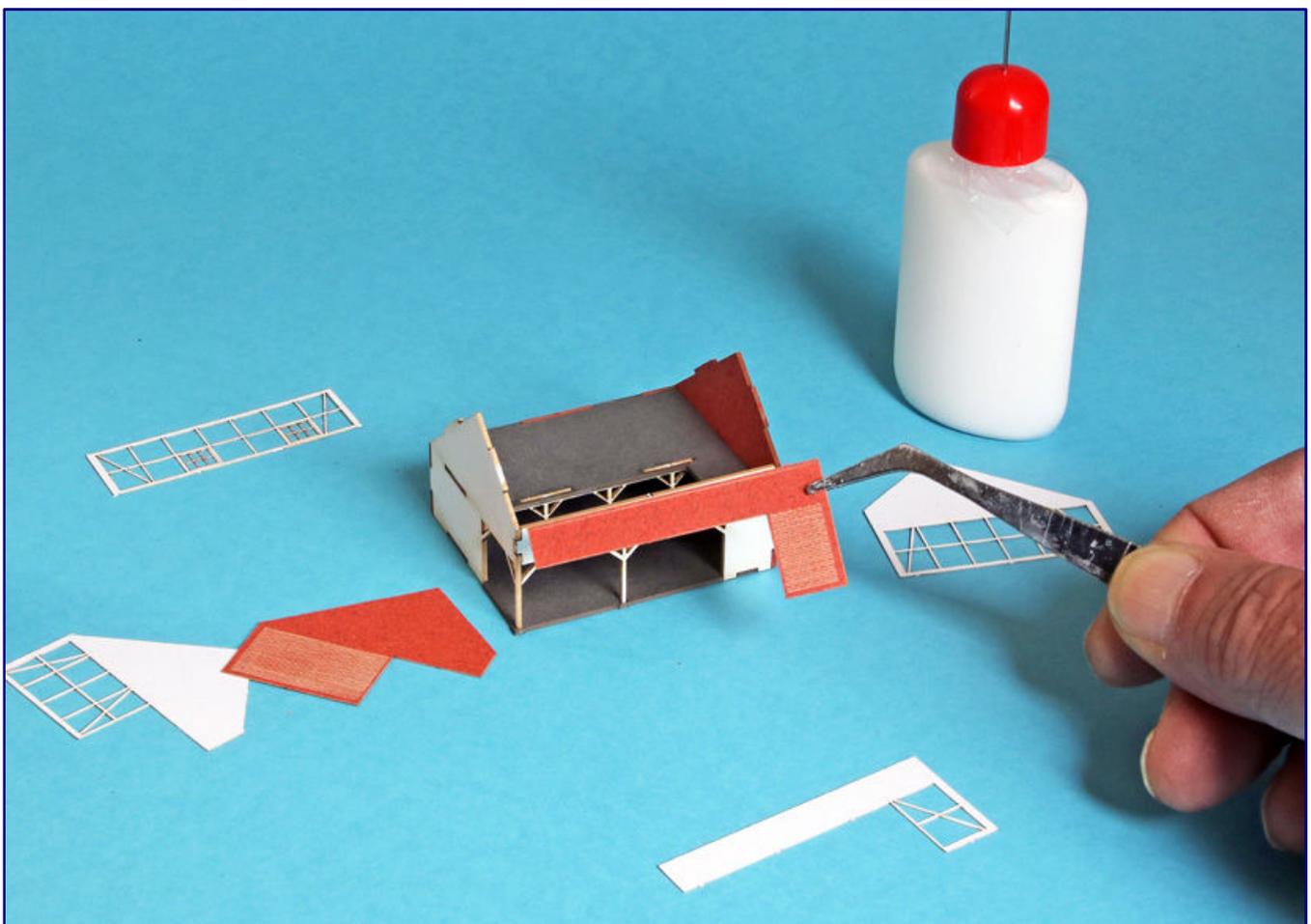
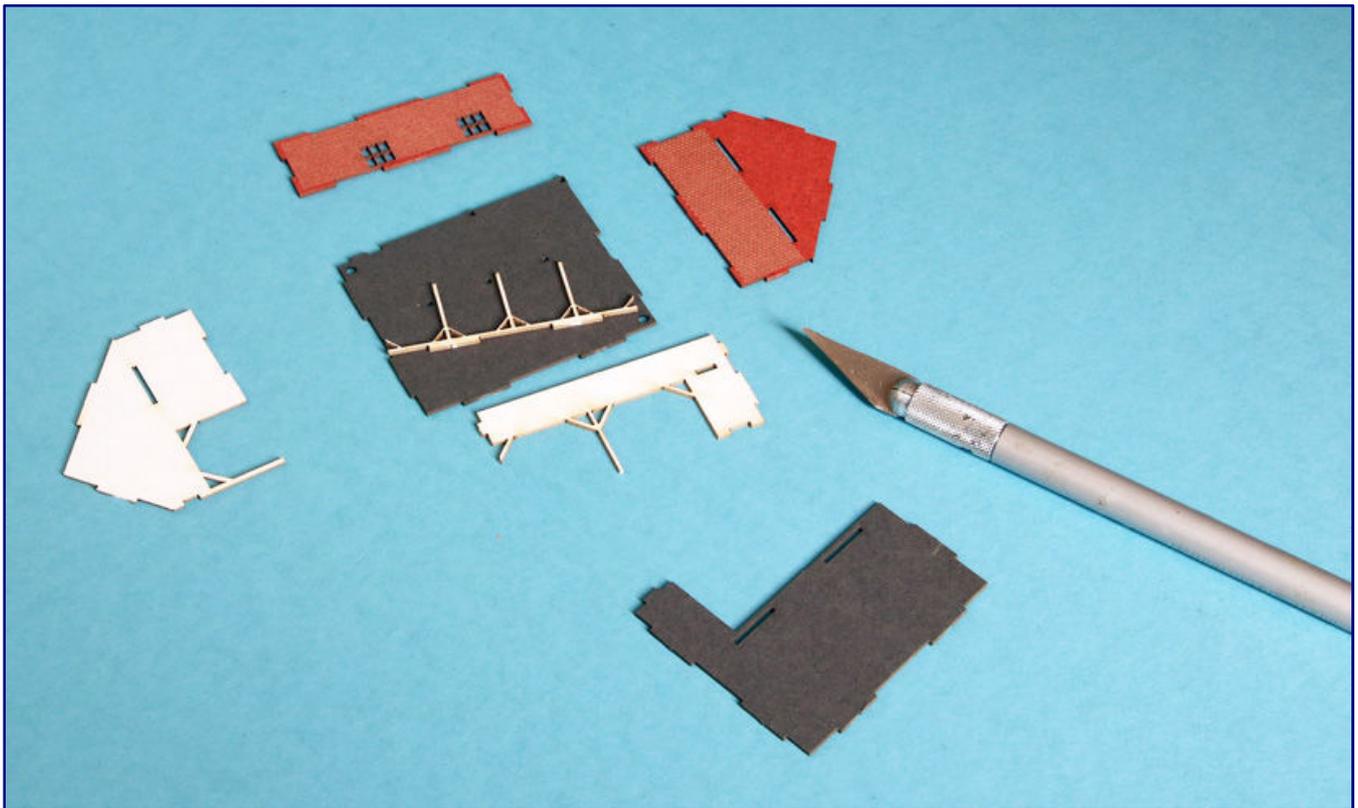
But we will report about this in a later **Trainini®** issue. I will now assemble the "Dörpeder Hof" for this article following the instructions.

As usual, the transparent bag contains the laser-cut cardboard sheets, window film and an instruction sheet with detailed instructions and tips in German and English, as well as a list of the necessary tools and adhesives for the assembly.

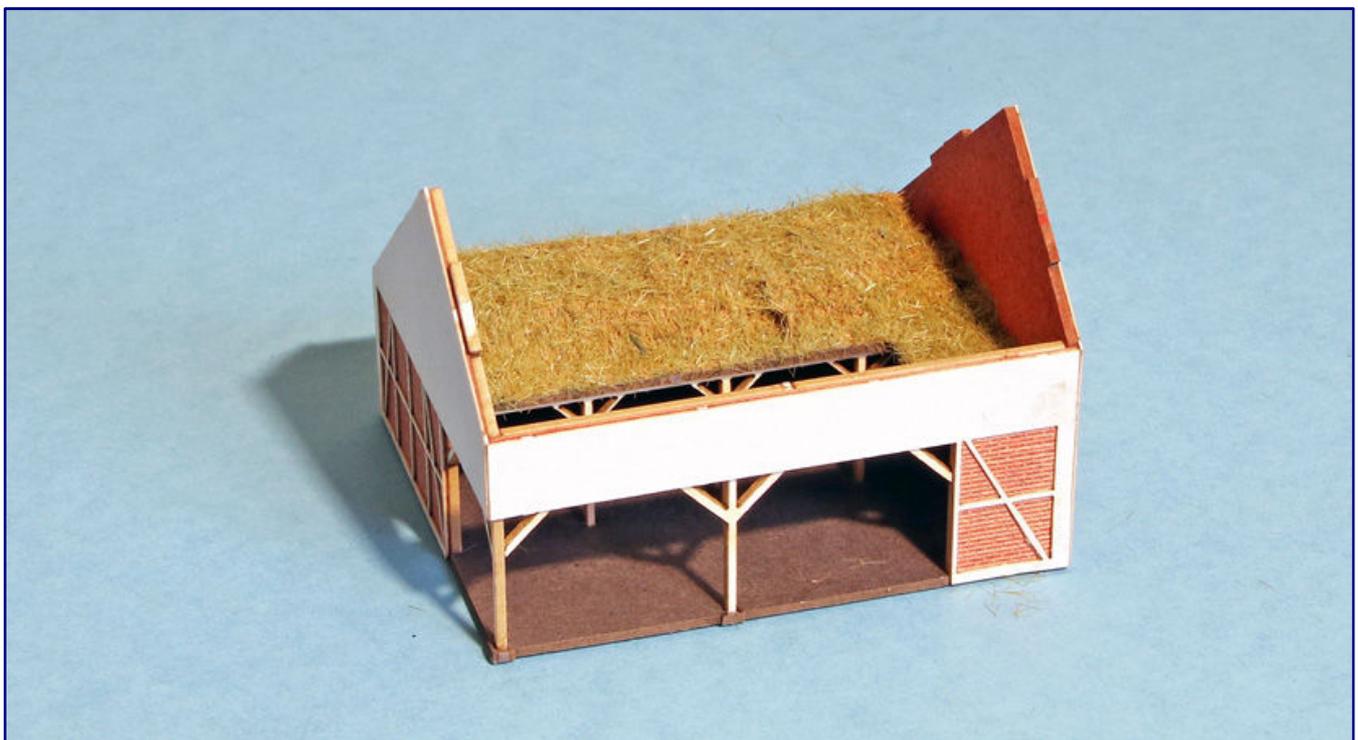
The components are clearly numbered and the assignment of the illustrations to the physical parts is readily comprehensible on the basis of the explanations in the construction plan.

However, I will show you the assembly somewhat modified in comparison to the sequence planned by the manufacturer, so that the typical "layered construction" of a model made of hard cardboard becomes visible.

Text continues on page 26



Let's get started! All window panes are glued onto the components while they are still fixed in the cardboard sheets with the proven and clearly hardening eagle owl force. Of course, the dimensions of the individual windows must be available in advance so that the corresponding parts can be cut out of the transparent film. Of course, a fresh blade for the scalpel is also recommended here.



Depending on the viewer's perspective, the hayloft of the barn can be seen. This is why it is finished with hard foam, colour and pale green fibres (top photo). The result is convincing (photo below).

If you wish, you can then add curtain masks which can be downloaded free of charge from the Viessmann/Kibri website or alternatively found via a free search on the Internet.



With the outer boarding and the roof parts, the barn is already heading towards completion. Light glue application is required so that all parts rest flat and do not smear.

Now I cut out the first components for the barn and lay them out according to the plan. These are the first four wall parts, the supporting bales and the “hayloft.” No need to pay attention to accuracy of fit with these products, they have been well planned and cut with high precision!



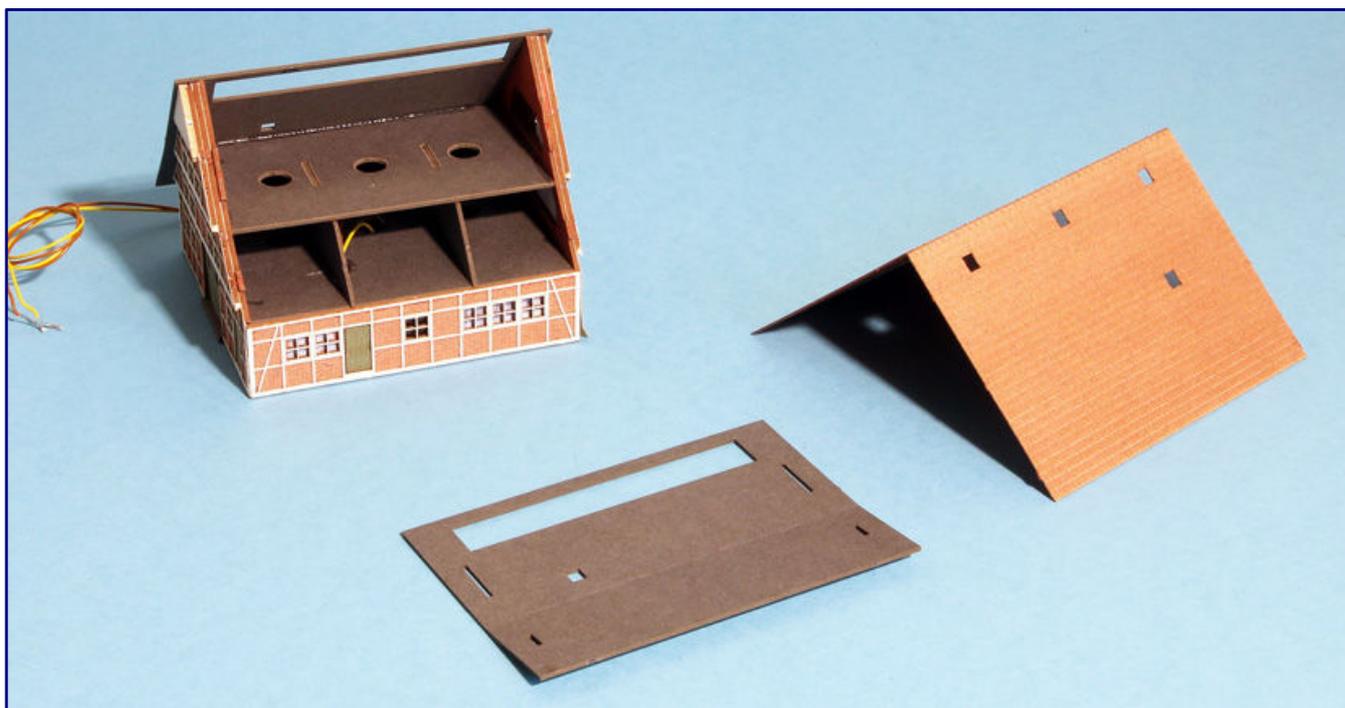
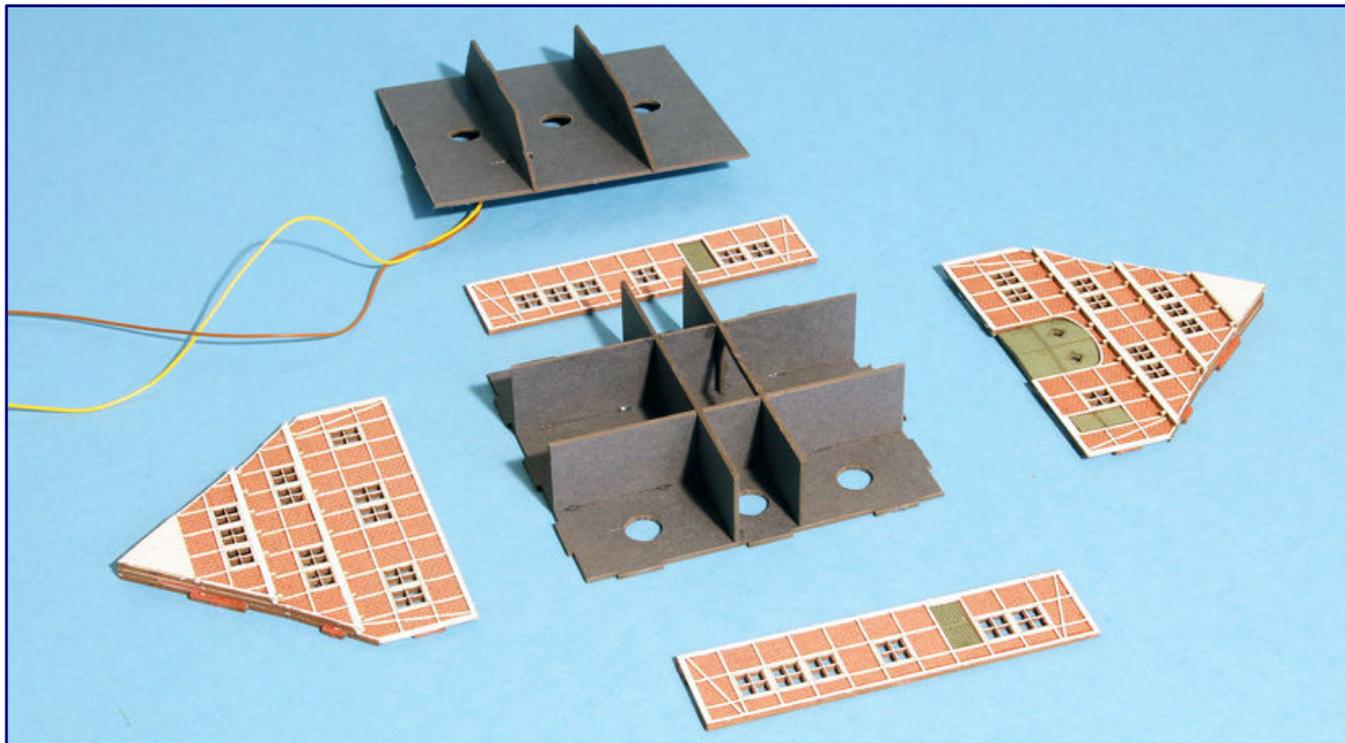
The designed hardboard parts of the residential building illustrate the structure and construction method of the architectural kit.

gets a real hay floor, shown here with pale green 2 mm grass fibres, which are applied to a previously prepared hard foam panel with glue. The bare floor was treated with a suitable colour, in advance.

With with some water mixed wood glue, the parts are glued. An additional layer of glue is applied to the inner corners, which will no longer be visible. This provides further stability and rigidity.

Now we cut the final wall parts out of the corresponding cardboard sheets and present them accordingly. For some time now I have also been using a paper glue stick for the attached framework, so some care is required against smearing of glue on the components.

Now I will deviate for a short time from the building plan. Of course, our barn



The transverse and longitudinal walls form a honeycomb structure that stiffens the house. The finished outer walls are then attached to it (see picture above). This is accompanied by an interior layout that allows individual room lighting (bottom picture). Thus many windows remain dark later. Light only shines out of some rooms.

In the final step, the roof, which consists of two parts, is put on. A thicker cardboard forms the substructure on which the outer skin with the shingle reproduction is glued. A little decoration later completes our barn, ...finished.

Now we come to the main building: On the lower picture on page 27 you can see the typical construction of the laser-cut models, on the left is an already finished part. The result is a very impressive three-dimensional structure made of eight layers of cardboard.



The Dörpeder Hof is finished and already spreads a fresh appearance outside a suitable setting.



This is how the packaging photo was taken: The kit is placed in a suitable diorama as a backdrop, which is completed with figures and vehicles. A suitable background image provides for depth effect. Natural light can then be used to create a harmonious and realistic overall effect.

fun. We only decided on a light source, because later only the planned living room would be lighted at a late hour.

But first we have to cut out and glue the parts for the building core according to the construction plan. Here, I would like to point out the unique selling point of Archistories once again:

Typical for this supplier are the many interior walls, even pre-cut doors are available.

This invites the installation of interior fittings and enables individual lighting in every room. And by the way, this also brings additional stability to the kit.

If you want, you can of course create and illuminate such interiors with a lot of handcraft

As before with the barn, I glue the roof construction consisting of various parts together. Here, too, stability and rigidity are maintained. After completion, it happened: The main house fell 2 meters to the ground... But actually nothing happened. We now have completed the involuntary crash test.

Many model railroaders have a second, very nice hobby, namely photography. Today's digital camera models are perfect for our scale. In the most different forums I got to see results, which would always have "the stuff" for a little more.



The farm in Dörpede does not miss its planned effect. The size, clear structures and appealing colours of the main and adjacent buildings are impressive. On page 31 we show two further views from the photo series for the packaging design of the Dörpeder and Kallentaler Hof (the latter on the lower photo on page 31).

A small, greened but undeveloped diorama is an ideal model for a wide variety of models. A suitable background scenery is photographed quite quickly and is printed by photo or copy shops - also on the Internet - in the desired poster size. We had already shown the instructions in **Trainini®** 12/2017.

After some rehearsals I am satisfied with the situation and a few trees are still planted. The last decorative elements are added to the scenery with "out-and-away stickers." Then it goes out together with a background picture.

Only a very few amateur photographers have the lamps necessary to illuminate a scene—here, natural light is the best alternative. Now, more than 50 photos are made quite rapidly and the work continues with an image editing program. Just give it a try!

Do you want to know more? Then write to us! If interest is high, the editorial staff could prepare a corresponding article on "Photography and further processing." In this context I would also like to refer you to the booklet "Modellbahnschule 38" by Markus Tiedtke mentioned and discussed in **Trainini®** 5/2018.

Exclusive supplier: <https://www.1zu220-shop.de>

Internet addresses for this kit:

<https://www.archistories.com>
<http://www.bindulin.de>
<https://www.faller.de>
<https://www.noch.de>
<https://www.uhu.de>
<https://viessmann-modell.com>



Digital model railway control (Part 2) **Assembling a digital puzzle**

Choosing a digital system is not easy. Each manufacturer praises the advantages of its system and presents it as the perfect solution. But is it also suitable for our Z scale? Are components from different suppliers compatible with each other? In this and the next part, we first get an overview of the individual components of a digital system and their interaction. Problem areas and comfort issues facilitate purchasing decisions.

By Andreas Hagendorf. Just as every model railway system is unique in itself, there is no digital model railway control for every need. Each system must be adapted to the design of the model railway (system) and the wishes of its operator.



For smooth operation, all components must fit together perfectly and should work in harmony with one another.

It consists of more or less many individual parts, which interlock with their functions like a puzzle, starting with the control centre, over amplifiers (boosters) and speed controllers, the tracks up to the locomotive with decoder.

The individual parts do not necessarily have to come from the same manufacturer. If the component from another manufacturer offers more functionality or has other advantages, it can almost always be used without major problems.

Digitalization is very easy for layouts whose construction has not yet begun. Here, all components can be planned and everything should fit perfectly into the finished model world.

However, the demolition contractor does not have to move in immediately for layouts that have already been completed or are under construction; here, a step-by-step change can be made. At first only the train operation is switched to digital, the switching of turnouts and signals can remain analogue for the time being.

This will also follow successively until the desired stage of expansion has been reached. Digital and analogue mixed operation of track sections must be absolutely avoided if they are not structurally and cleanly separated from each other. There must be no track connection!

Digital locomotive models still run on analogue tracks without problems - many decoders recognize this and switch to analogue mode. Analogue locomotives do not like the digital signal and very quickly acknowledge their service with "smoke signals."

As I already mentioned above, a digital control system for the model railway consists of individual parts, i.e., at least the following basic components:

- the control centre,
- the booster (amplifier),
- the input device (speed controller) and
- the locomotive with decoder.

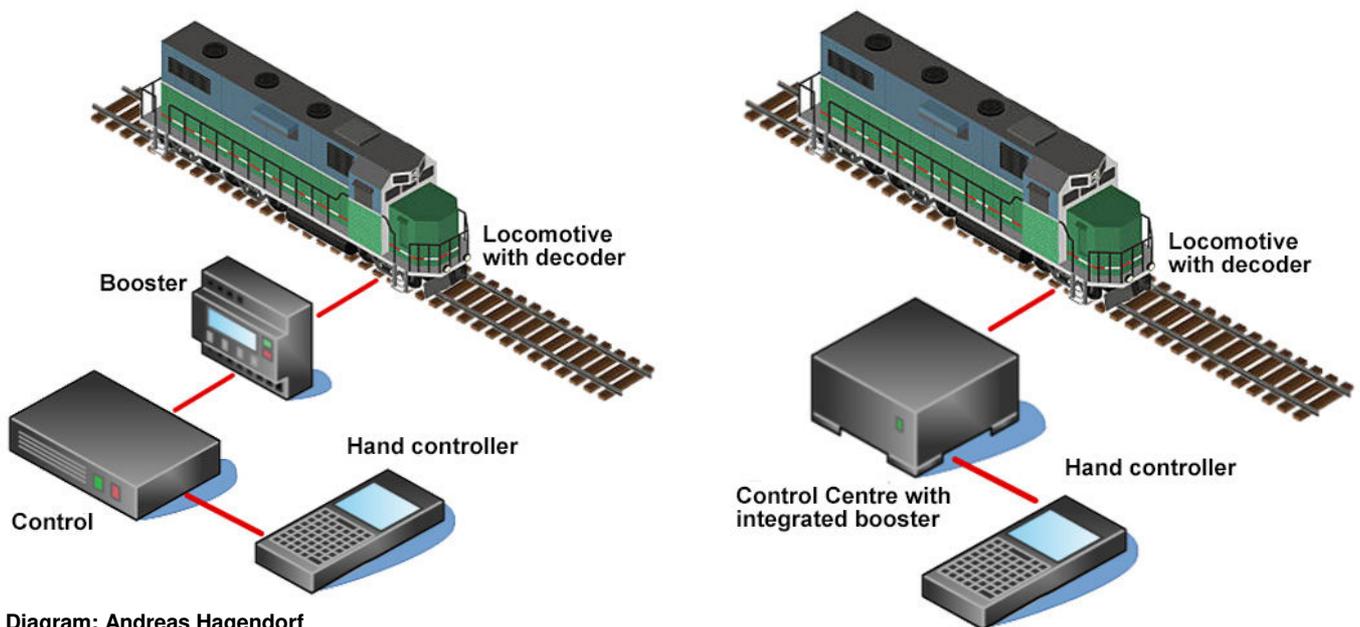


Diagram: Andreas Hagendorf

Minimal digital system

To save space and reduce costs, the first two or even three components are combined in one device. Almost all control panels on the market have an integrated amplifier and very often there are also input options, i.e. a speed controller and function keys, as well as a display.

Märklin offers the Central Station 3 (CS3), for example, an already huge system with two speed controllers and a touch-sensitive screen.



The FCC (Future-Central-Control) from Doehler & Haass is one of the digital control centres to which a handheld controller with display or a computer must be connected separately. Photo: Andreas Hagendorf

On the other hand, there are “black-box systems” such as the FCC (Future-Central-Control) from Doehler & Haass or the Z21 from Roco, to which at least one handset with display or a computer must then be connected. But they are very universally applicable because of the many connection possibilities.

Depending upon the model railroad layout size, gauge and configuration level, this basic equipment is supplemented by further components:

- additional boosters,
- stationary decoders for switches, signals and functional tracks,
- feedback and busy indicator,
- a signal box and
- a computer for monitoring, semi-automatic or fully automatic operation.

Extensive digital system

Modularity and integration have advantages and disadvantages. Thus, individual components from different manufacturers can be used to tailor the functional scope completely to the model railway system.



The conceptual difference of a “Black Box System” becomes clear when comparing the Z21 from Roco (photo left) and the Central Station 3 from Märklin (photo right) with screen and two hand controllers.

The devices are placed invisibly underneath the system where they are needed or where there is space.

The handset control unit or controllers can be remote from the control centre and distributed around the system, in some cases staying wireless with the “locomotive driver” accompanying the train. If a defect occurs in an individual component, it can be quickly replaced. The connection to each other is made via interference-proof bus cables (more on that), but the components may need their own power supply.

Integrated components work together without any problems, your manufacturer is already taking care of that. Also here only one power supply unit is required. However, space is required on or next to the system and in the case of the already mentioned CS3 this is not a little. If one of the integrated components fails, the entire system is unfortunately also affected.

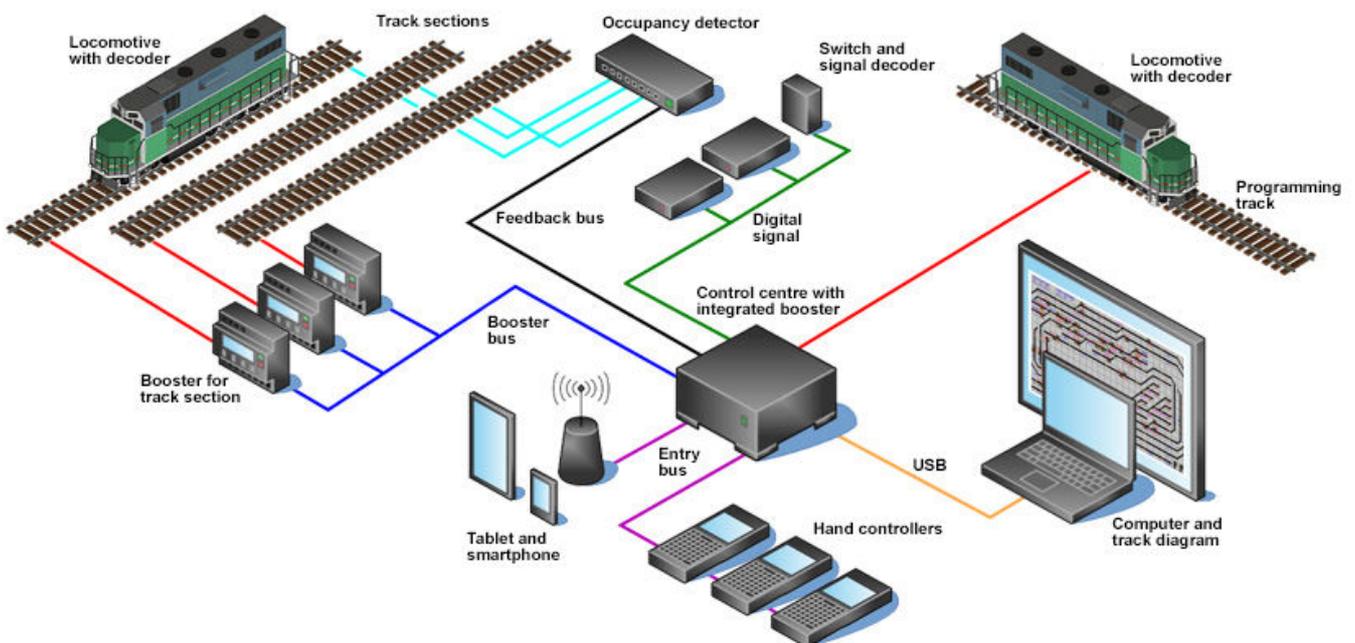


Diagram: Andreas Hagendorf

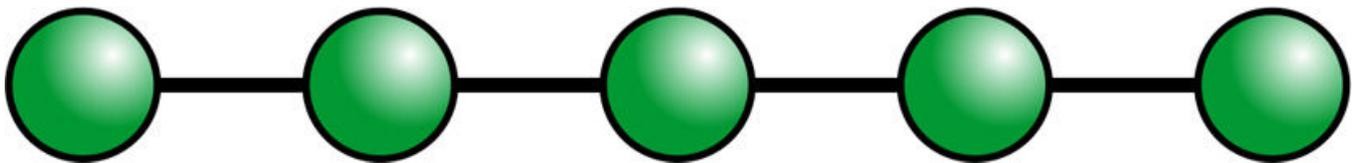
Trams and buses

Individual components are usually connected via a special data transmission system - the so-called bus. Its name comes from connector systems for circuit boards and other components for 19" rack systems developed in the seventies and meant "Back Panel Unit Sockets".

Nowadays, the term is used for all data connections and networks to which several components - the bus devices - can be connected simultaneously. Each connected device has a unique address and can be identified and addressed via it.

Depending on the network protocol, a device is the "master". The others are "slaves" (for slaves; hierarchically subordinate devices) or each device has equal rights and can automatically initiate a communication ("peer-to-peer" or P2P). For this reason, the protocol must include appropriate security functions, such as collision control, and must guarantee data security.

The cabling of the devices to each other takes place according to a certain spatial arrangement, we speak here of topology. There are line, star and tree topologies, mixed forms thereof and others that may not be used or used in the model railway sector.



Bus topology tree. Illustration: Andreas Hagendorf

Apart from Selectrix with its buses SX (not to be confused with the abbreviation) and PX already defined in the protocol, almost every manufacturer was looking for its own solution for a while, which eventually resulted in many bus types. Other providers use buses from the industrial environment (CAN and I²C), some buses can also supply the power to operate components.

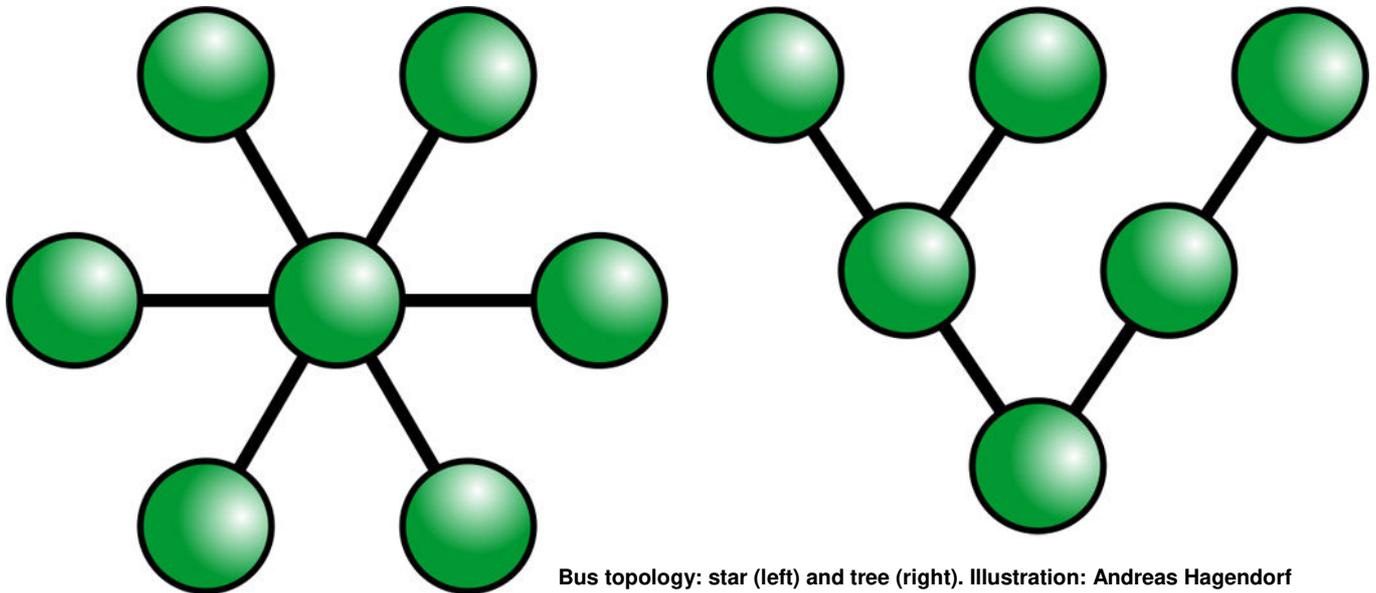
Better control panels support several bus types and there are also adapters, which mediate from one bus to the other, for example the X2X-Box from Doehler & Haass (SX and ExpressNet).

The abbreviation CAN stands for "Controller Area Network" and is an industry standard bus (ISO 11898). Developed by Bosch for the automotive environment, it defines everything from cable to data format, but not the significance of the transmitted data (payload).

The transmission speed must also be uniform; "high-speed CAN" (ISO 11898-2) and "low-speed CAN" (ISO 11898-3) are not compatible with each other. However, very long transmission lines of up to 500 m are possible. The line topology is permitted, the bus subscribers are connected via short stubs.

Since the meaning of the transmitted data is not defined, or the known protocols are not sufficient for the model railway sector, the manufacturers have defined their own protocols. As a result, not every CAN device may communicate with others. CAN is currently used by Märklin, ESU and ZIMO.

I²C (the "Inter-Integrated Circuit") is actually a bus developed by Phillips for internal device communication between the ICs on printed circuit boards without connectors and electromagnetic interference and explicitly only for short distances.



Märklin uses it as input and output bus for the control unit and Uhlenbrock for connecting Märklin components. The protocol used is very simple and has no special security features (e.g. without "timeout") and is therefore susceptible to faults. However, the devices can also be connected and disconnected during operation ("hot-plugging").

LocoNet (Locomotion Network) is a bus system similar to Ethernet and was developed by Digitrax for inputs and feedback. Robust telephone cables (for technicians: RJ-12/RJ-25 6P6C connectors) and all types of network topologies except the ring can be used.

LocoNet is an open standard, therefore many compatible components are offered on the market (such as the Intellibox from Uhlenbrock). The Fremo (Friends of European Model Railways) uses it at their meetings.

The SX-Bus is the input and feedback bus of Selectrix. Since the protocol is limited to 112 addresses, SX-capable control panels partly implement a second SX bus for switches and feedback devices. Then a full 112 addresses are available for locomotive control. The PX bus is the associated bus for amplifiers.

Lenz offers two buses: XpressNet, also called X-Bus, for the connection of input devices and the RS-Bus as a feedback bus. XpressNet is an RS-485 interface that is hot-pluggable and is also supported in variants from other manufacturers.

The network uses four-core cables. Two of these wires provide the power supply for the connected devices. The other two are used for data transmission. Except for the Ring, all network topologies are permitted. Networks up to 1 km in length have already been set up. Roco uses a slimmed-down version of it and calls it Mouse Bus (also called RocoNet, X-Bus Light or MZS-Bus).

Märklin's S88 is by definition not a bus. The occupancy detectors connected in series with six-pole ribbon cables can only be queried by the central unit like a long shift register. The data (occupied / free) thus

reach the control centre unit all in succession and are provided with a base address and position in the chain for assignment.

If we want to know the status of the last occupancy detector (a maximum of 31 modules are permitted), all previously connected modules must also be queried. Direct addressing is not possible. If modules are removed or added from the chain, the address assignment in the controller gets interrupted and must therefore be created again.

Because the whole system is technically very simple, it is easy to rebuild. The range of modules is therefore quite large. The only problem is the cabling between the modules, as it is very sensitive to interference from power or data cables laid next to it (danger of "crosstalk").

The S88-N standard is intended to remedy this by prescribing standard network cables with corresponding connectors (RJ-45). In addition, technical parameters such as clocking were standardized across manufacturers. Nevertheless, care should be taken to lay the cables neatly.



If the communication is bi-directional, this means that the locomotive decoder in the system is not only an information receiver, but also reports data back to the control centre itself. In this way, he can also log on to it on its own.

BiDiB stands for Bidirectional Bus and should become the standard bus for the digital control of a model railway. BiDiB is only the protocol technology, physically the bus can be realized on different cabling, for example Ethernet, USB or the specially optimized BiDiBus.

The developer community comes from the model railway sector and wants to create a manufacturer-independent platform for the development of user-friendly components with BiDiB. According to its own statement, there is a steadily increasing demand for devices, and the number of supporters should also continue to grow.

Technically, BiDiB combines all modern positive features, such as automatic registration of the devices on the bus, a high degree of transmission security and minimal cabling effort.

Conclusion to date: The bus confusion still makes the use of just one digital system more complicated than user-friendly. Manufacturers would be well advised to finally agree on a system, the modern variant BiDiB is a good candidate.

An alternative would be CAN, provided the data layer is unified. Especially since CAN has been used successfully in the automotive sector for decades, the required hardware is available at low cost and in large numbers, and mature and equally affordable development tools exist. Or even BiDiB via CAN...?

Central Controller

The central controller is the heart and brains of the system. Their most important task is to generate the control commands for the locomotive decoders, the track signal. Depending on the stage of expansion and technical equipment, further tasks are added:

- Generation of control commands for switches and signals
- Setting the decoders via CV (DCC) or parameter (SX)
- Managing the decoder addresses (in a locomotive list)
- Receiving feedback signals
- Receiving Railcom messages
- Storage and control of roads
- Representation of track patterns
- Communications with a computer system



The number of different interfaces, shown here is the FCC of D&H, is an important decision criterion when choosing the digital system. Photo: Andreas Hagendorf

In order for the control centre to be able to fulfil all these tasks, it needs further connection options to the other components of the system in addition to the rail connection.

In addition to the internal connections for integrated components, there are external plug connections, which are called "interfaces" in the technology.

Especially the number of different interfaces is an important criterion when deciding on a digital system.

In many central control centres, the track signal is also present at a second exit, which is held for a programming track. The programming track is a track section completely separate from the rest of the model railway, on which the locomotive/vehicle decoders can be programmed.

The existing settings can also be read out from the decoder and, if required, saved and archived in a file using an appropriate computer program. For this purpose, the decoder remains installed in the vehicle. The safest way to set the decoder address is on the programming track, as no decoders can be accidentally changed on the model railroad due to the separation. Some systems only allow the change of this address on the programming track.

The most important interface for the user is the interface for the input devices. Wired and now wireless handheld controllers (communicating via WLAN or infrared) can be connected, in some cases in addition to a permanently installed operating option. If the interface - and thus the bus - matches that of the preferred manual controller, a decision for the central control centre unit may already have been made.

Not yet important for a simple system, but indispensable for a semi- or fully automatic system and for staging yards is the possibility of connecting simple feedback devices and those with integrated occupancy detectors via the various system buses mentioned.

With its higher capacity a computer can take on considerably more extensive control tasks than the specialized control centres can usually. A semi-automatic or fully automatic system can be managed much more comfortably with the computer and a suitable program.

The display of signal boxes is clearer on large computer monitors, especially since we can simply scroll and zoom with the mouse there. The interface to a computer (USB) can also be used for necessary firmware updates of the internal control program of the central unit and the connected components.

Input device (speed controller)

The input device, or rather the speed controller, receives the model railroader's wishes for driving and shifting and passes them on to the control centre. It can also display more or less detailed information about the current status of the system, the model railway and the vehicles.

The following main types of input devices can be discerned:

- From the simple handset control, where the address, the speed and a few functions can be set, to complex, almost overloaded devices, to the wireless system, everything is included. Personal preferences play a major role here
- Pure turnout control consoles with an abstract track pattern, control consoles with driveways and train number displays, and systems modelled on the real thing are also offered.
- Computers with special programs that combine all of the above functions and offer the possibility of automatic operation are an alternative.

The way in which manual controllers are controlled plays a major role in their operability and functional sequence. Most hand tools have a large rotary knob as a speed controller, which can be easily reached with the thumb of the holding hand.

Among them are knobs that can be turned in one direction from speed step 0 to the maximum speed step, with noticeable click stops or without, as well as with limit stop or without.

For controllers with a limit stop, the approximate speed level and thus the speed can also be read from a distance from the position. For controllers without a limit stop (incremental controller), a look at the display is required.

However, it is not possible to go past the zero position, so no vehicle changes its direction immediately. For this purpose, one or two additional buttons are provided for changing the direction of travel or the rotary knob itself can be pressed. For shunting, both are rather uncomfortable.



The other type of knob has a firmly defined centre and thus zero position, sometimes even without vision as a clear detent to feel. The direction of travel can thus be changed without additional key actuation, unfortunately also unintentionally. This type of controller is ideal for shunting tasks.

Here a Mobile Station 1 from Trix has been connected to the FCC as a hand controller. On its own, it also works as a small control centre, but only for the power train.

A big advantage of incremental encoders is that another locomotive is taken over without a speed jump if the controller is not set to the correct speed level at the time of transfer.

“Touchscreens” of central control centres, multifunctional mobile phones and tablet computers should supposedly be more ergonomic.

Unfortunately, it is always necessary to look at the display to find the correct button on the indicated controller. The real knob and, with a little practice, the real keys can be operated blindly. Then, the locomotive can't do any nonsense when no one is looking.

Internet addresses of component manufacturers:

- <https://amw.huebsch.at>
- <https://doehler-haass.de>
- <https://www.maerklin.de>
- <https://www.roco.cc>
- <https://www.velmo.de>

Information about RailCom:

- <https://www.lenz-elektronik.de/digitalplus-railcom.php>

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

Das meistgebaute Auto der Welt **Geschichte des Erfolgswagens**

Nach 21.529.490 gebauten Exemplaren war Schluss: Die Erfolgsgeschichte des VW Käfers endet am 30. Juli 2003 im mexikanischen Puebla nach immerhin 65 Produktionsjahren. In diesem Jahr wird dieses Sinnbild des deutschen Wirtschaftswunders und beginnender Massenmotorisierung folglich achtzig Jahre alt. Im Motorbuch-Verlag erfährt dieses einmalige und besondere Auto eine Würdigung, die auch Zetties eine Hilfe sein kann.

Nicolas Rosenow
Volkswagen Käfer 1938-2003

Motorbuch Verlag
Stuttgart 2018

Gebundenes Buch
Format 17,0 x 24,0 cm
144 Seiten mit 79 S/W- und 115 Farbbildern

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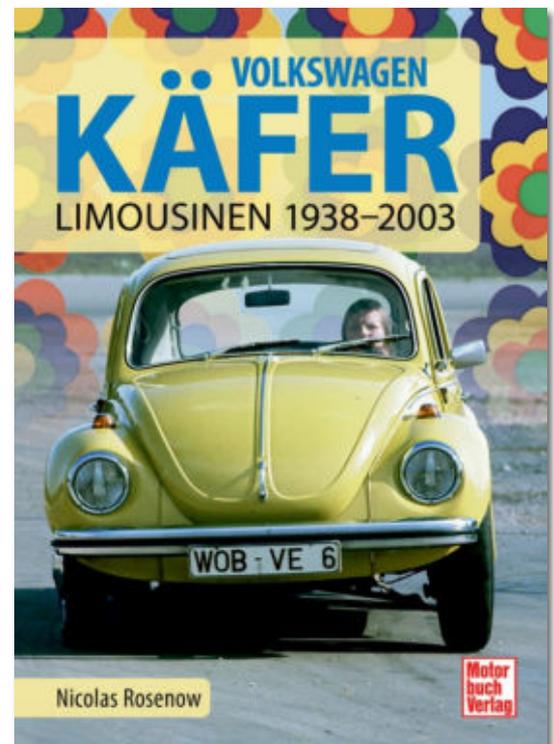
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Der VW Käfer wurde über 21,5 Millionen Mal gebaut und weltweit verkauft. Er galt als robust, zuverlässig und war für so ziemlich alles zu gebrauchen. Das machte ihn zum Symbol für das deutsche Wirtschaftswunder und die Massenmotorisierung nicht nur in Deutschland. Sein Erfolg ist in der Automobilgeschichte einmalig.

Pünktlich zum achtzigjährigen Jubiläums dieses Synonyms für einen wahren Volkswagen legt der Motorbuch-Verlag ein Buch auf, das sich an die Liebhaber dieses urigen Fahrzeugs richten möchte. Es ist das Werk eines Käfer-Freunds für Käfer-Freunde. Autor Nicolas Rosenow hat akribisch die Fahrzeug- und Modellgeschichte von 1938 bis zum endgültigen Produktionsende 2003 aufgearbeitet.

Strukturiert ist der Titel in eine Einleitung, ein Kapitel über die Grundformen dieses Typs und eine folgende Erläuterung der abgrenzenden Merkmale aller Produktionsjahre. Ein Epilog und Anhang mit Daten zu Stückzahlen und Produktionsorten schließt sich an.

Ein nicht fachkundiger Leser bekommt aber kaum einen ausreichenden Überblick, weil alle sehr technisch orientierten Erläuterungen eine hohe Vertrautheit mit der Vorlage voraussetzen. Vielmehr handelt es sich um reine Modellbeschreibungen, eine Käfer-Chronik will dieser Band nicht sein. In diesem Zusammenhang verweisen wir auf eine vierteilige Reihe im selben Verlag.



Geschrieben sind alle Texte verständlich, sie erläutern kurz und bündig die wesentlichen Eigenschaften des jeweils vorgestellten Modells. Technische Kenntnisse sollten aber vorhanden sein, um diese einordnen zu können. Auch die zu den Texten ausgewählten Bilder gefallen uns hinsichtlich der Aussagekraft und umfänglichen Dokumentation sehr gut, ebenso bietet die Wiedergabequalität keinen Anlass zur Kritik.

Und doch vermissen wir einige Punkte, die wir hier ansprechen möchten: Eine Begründung des Käfer-Erfolgs durch das gezielte und sehr wirksame Marketing des Volkswagen-Konzerns fehlt ebenso wie ein Verweis auf seine Funktion als Symbol einer Gegenbewegung zu den Straßenkreuzern jener Jahre in den Vereinigten Staaten.

Da auf das Motto „Evolution statt Revolution“ und das damit verbundene, stete Streben nach Zuverlässigkeit explizit verwiesen wird, hätten wir uns auch kritische Worte gewünscht. Der Käfer war nicht nur das Erfolgsmodell für VW, sondern wurde mit dem langen Beharren auf luftgekühlte Heckmotoren und Heckantrieb entgegen allen Fortschritts schließlich auch zu einem Problem für seinen Hersteller.

Sehr passend finden wir hingegen den kurzen Geschichtsabriss zum Werk in Puebla (Mexiko) und zur Produktion in Brasilien. Immerhin ging die Fahrzeuggeschichte in Südamerika zu Ende und feierte dort den letzten Stückzahlenrekord. Doch kaum jemand dürfte wissen, wie früh dort die Käfer-Geschichte mitgeschrieben wurde.

Interessant für Modellbahner sind neben den Beschreibungen die vielen Fotos, die beim Einsortieren von Miniaturen in die Zeitgeschichte der Anlage helfen. Einen besonderen Reiz üben besonders auch einige der häufig sehr attraktiv lackierten Sondermodelle aus.

Begeisterte Käfer-Fahrer werden hier aber einige Lücken schmerzlich wahrnehmen: Mal fehlen die entscheidenden Ausstattungsmerkmale (z.B. „Mai-Käfer“ aus Mai 1972) oder die zugehörigen Stückzahlen (z.B. „Firebeetle“ von 1994 oder „Harlekin“ von 1996). Letztgenanntes Manko betrifft vor allem die jüngeren Versionen aus mexikanischer Fertigung.

Dennoch ist dieses Buch zum Jubiläum ein Muss für Liebhaber des Erfolgswagens und eine wertvolle Hilfe für Modellbahner, die auch auf den Straßen ihrer Anlage Wert auf historische Authentizität legen.

Publisher pages with reference possibility:
<https://www.motorbuch.de>

Weitere ansprechende Dokumentationen

Ausflüge in regionale Bahngeschichte

Bereits in der Januar-Ausgabe zeigten wir uns begeistert von den ersten beiden Teilen der Filmreihe „Die Eisenbahn in Nordrhein-Westfalen damals“. Nun haben wir und auch die Teile 3 und 4 angesehen und sind nicht minder beeindruckt. Wen zuvor das Format ansprach, nicht aber die darin behandelten Regionen, der sollte jetzt ganz aufmerksam weiterlesen. Heute werden weitere Wünsche bedient!

Suder Film Production Frieding
Die Eisenbahn in Nordrhein-Westfalen damals
Teil 3 – Aachen, Köln, Bonn

EK-Verlag GmbH
Freiburg 2017

DVD-Video
Bildformat 4:3
Tonformat Dolby-Digital 2.0
Sprache deutsch
Laufzeit ca. 45 Min.

Best.-Nr. 8426
Preis 19,80 EUR (Deutschland)

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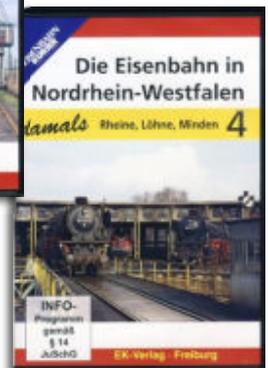
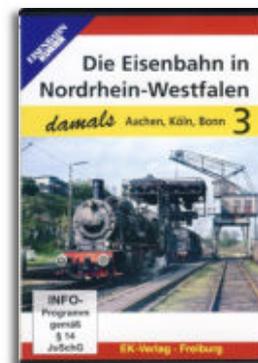
Suder Film Production Frieding
Die Eisenbahn in Nordrhein-Westfalen damals
Teil 4 – Rheine, Löhne, Minden

EK-Verlag GmbH
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DVD-Video
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Auch bei den Teilen 3 und 4 gilt das bereits Geschriebene: Irgendwann ist wohl jeder der Auffassung, alle historischen Eisenbahnfotos und -filme bereits einmal gesehen zu haben und zu kennen. Doch die privaten Archive bieten auch heute noch viel Material, das vierzig Jahre und länger unveröffentlicht geblieben ist.

Der EK-Verlag und dessen Filmmanufaktur haben sich hier wohl gezielt auf die Suche gemacht, solche Schätze aufzuspüren, professionell zu digitalisieren und aufzubereiten und den Interessenten in einem neuen Format zu präsentieren. Und so verstehen sie es, nahtlos an die ersten beiden Teile anzuschließen.

Im Fokus stehen dieses Mal der Osten und Norden des größten deutschen Flächenlandes. Einen Schwerpunkt bildet das einstige Zechenrevier um Aachen, in denen einige besondere Lokraritäten wie die Baureihe 56 oder ehemalige pfälzische T 5 anzutreffen waren.

Besuche bei der Siegener Kreisbahn, der Jülicher Kleinbahn oder auch der Krefelder Eisenbahn zeigen nicht nur längst vergangenen Eisenbahnalltag, sondern vermitteln auch Eindrücke vom einst so bedeutenden Zuckerrübentransport, der ein beliebtes Modellbahnthema darstellt, oder den engen Straßen und Gassen, in denen Auto und Bahn konkurrierten. Auch diese Enge ist eine dankbare Vorlage für Modellbahner mit Platzproblemen.

Ein weiteres Thema bildet der Betrieb zwischen Köln und Bonn. Hier erleben wir nicht nur den Hauptbahnhof der früheren Bundeshauptstadt, sondern auch die Vorgebirgsbahn, die Rheinuferbahn und einmalige Rangier- und Güterzugleistungen. Nur dort kam noch die Baureihe 55 zu Einsatz, die ursprünglich als Streckenlok konzipiert war und schon lange nicht mehr den Anforderungen des schweren Güterzugdienstes genügte.

Nicht minder wertvoll ist der vierte Teil der Reihe. Bilden die Aufnahmen von Rheine und der Emslandstrecke mit den Baureihen 042, 043 und 044 ein vertrautes Bild der letzten Dampfjahre, so

runden Sequenzen mit den Baureihen 110, 152, 210, 220, 236, 270, den Triebzügen 403, 601, 614, 624 und dem „Gläsernen Zug“ 491 die Vielfalt ab. Die Baureihe 094 verdingt sich im Rangierdienst.

Hier sind doch einige Fahrzeuge zu finden, die nicht unbedingt in diesem Film zu erwarten waren. Dies liegt vor allem am thematischen Schwerpunkt auf Minden (Westfalen), wo das Bundesbahnversuchsanstalt angesiedelt war und immer wieder besondere Lokomotiven oder Züge zu sehen waren.

Außer Acht lassen sollten wir aber auch auf dieser DVD die vertretenen Kleinbahnen nicht: Beispielsweise tat auf der Mindener Kreisbahn eine Kittel-Dampflokomotive mit Stehkessel (württembergische KL) Dienst, die gut zum Hauptthema der letzten Ausgabe passt.

Zu erwähnen sind ebenso die Dampfkleinbahn Mühlenstroth und vor allem die Teutoburger Wald-Eisenbahn, die neben ihrem Regelbetrieb übrigens auch durch Dampfzugfahrten auf ihrem Netz von sich reden machte.

Empfehlen können wir beide Filme daher neben den Interessenten regionaler Eisenbahngeschichte auch allen Liebhabern der erwähnten Baureihen und Modellbahnenthusiasten, die sich ihre Anregungen gern aus authentischem Geschichtsmaterial holen und dabei gut unterhalten werden wollen. Moderationen durch die Filmurheber und die Qualität des Bildmaterials sind, wie wir es gewohnt sind, wieder von erstklassiger Qualität.

Publisher pages with references:
<https://www.eisenbahn-kurier.de>
<https://www.ekshop.de>

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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.

The town hall Alsdorf meets with interest:

With great interest I read in one of the last Trainini about the indirect lighting of the town hall Alsdorf. At that time I wasn't ready with my project yet. I wanted to light up my town hall from below, too.

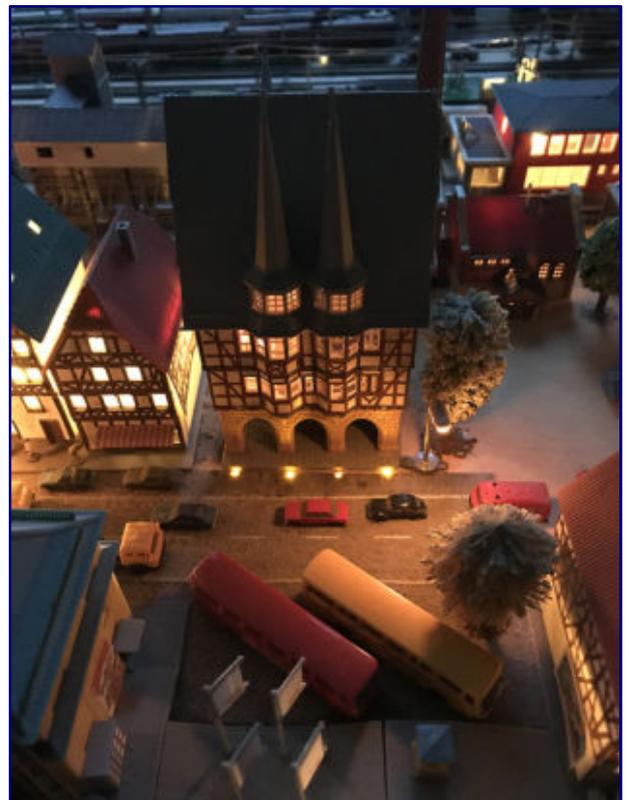
Here I came across the optical fibres from Schönwitz Modellbau, which can be purchased in different cross-sections. I have chosen a diameter of 1.5 mm. The material can be easily cut with a side cutter.

If you insert the leads into an appropriate hole and attach an LED under each one, you get a very good light output. If the LEDs are not switched on, the lighting is very inconspicuous and dark when flush mounted. As an attachment I added an illuminated sign. Maybe this tip is interesting for you.

Rainer Hecker, Düsseldorf

Interesting new products announced by SMZ:

SMZ's small series specialists seem to want to outdo themselves again. The ÖBB diesel railcar 5147.003-004 has now been announced, which is shown in the usual ultramarine blue/traffic red/agate grey colour scheme for railcars. The vehicle still carries the typical and popular "Pflatsch" of the Austrian Federal Railways for the nineties.



Headlight irradiation by means of optical waveguides. Photo: Rainer Hecker



The model will feature SMZ's (<http://www.sondermodellez.at>) well-known high-quality finishes for details, paintwork and lettering, which also include flush-fitted windows with attached frames (made of etched parts).



ÖBB's Rh 5147 diesel multiple unit will continue to contribute to SMZ's well-known high standard. As the first series model on a scale of 1:220, it is equipped with a scene-guided short coupling and will thus also provide a closed image in curves. Photo (also on page 46 below): Sondermodelle Z

The developer also decided on something very special and an absolutely new feature for a standard model of gauge Z: A special challenge was the construction of a special kinematic short coupling, which was to be functional as well as guarantee realistic wagon spacing.

The standard distance for straight sections therefore corresponds to the original; when cornering, the distance is increased to such an extent that radii of up to 195 mm can be transited without any problems. Theoretically, the 145 mm radius would still be possible. This makes SMZ the first manufacturer to convert and use a 1:220 scale, scene-guided short coupler.

Technically, the diesel multiple unit is based on the proven chassis of the Rh 5047 and, like this, has a Next18 interface. Since both halves have the interface, different equipment/combination variants are possible. The new decoders are already capable of all digital modes as well as analogue operation ex-works.

ÖBB has only used ten vehicles exclusively in this paintwork. Therefore, in the near future only the GySev-5147 variant will appear in yellow/green.

New speed controllers available:

The new speed controller SPC2200 and the USB interface SPC from Heißwolf Modellbahnzubehör are now available (<http://www.modellbahn.heisswolf.net>). The matching Windows program SPCsoft, with which the speed controllers can be controlled via PC, is available for free download.

Bernd Heißwolf now offers holders for the control units of the SFR300, SFR1000, SFR1500 and SFR2000 speed controllers, a surprise innovation not previously announced.

The latest new products from American Z Line:

As announced last month, a nostalgic version of the GE P42 Genesis diesel locomotive from Amtrak will be delivered in May. This is company number 66 with phase II design (Art. No. 63508-1).

Another nostalgic finish follows again from the GE ES44AC. The locomotive with the company number 8114 (62411-10) used on the NS carries a historical colour scheme of this railway company.



Die GE ES44AC der Juni-Auslieferungen trägt eine Nostalgielackierung der Norfolk Southern. Foto: AZL / *Ztrack*

The brand-new covered 40-foot AAR freight cars from 1937 are undergoing their first edition for the Western Pacific. They are available as single wagons (904315-1), in packs of four (914315-1) and in packs of two (904385-1). The models were already fitted with steel walls, but were fitted with bogies that did not prove their worth and had to be replaced in the fifties.

Equipped in this way, they were on the road until the seventies, but then finally disappeared from the main lines. The models have sliding doors that can be opened.

They also receive 40-foot long, covered carriages with outer box ribs. They are labelled for Rock Island and are offered in the same packaging as the above models (903109-1 / 913109-1 / 903179-1).

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

Useful clamping tweezers at Modellbahn-Union:

Various tools, among them from the British manufacturer Gaugemaster, are available from Modellbahn-Union (<http://www.modellbahnunion.com>). We have selected two of them as examples, which we would like to present here:

The straight clamping tweezers with handle (Art. No. Gaugemaster_GM626) is particularly helpful for soldering, as it fixes the parts to be connected without the risk of burning your fingers during removal. This is ensured by the wood coating on the grip surface. It has a powerful grip and a fine tip. The length of the tool is 165 mm.

The straight clamping tweezers (Art. No. Gaugemaster_GM627) of the same size do not require a handle support and are only slightly stronger. Their tips are slightly wider than those of the above model. Small parts or figures can be fixed in it without constantly exerting pressure on one's own fingers. This allows small parts to be processed, inserted into models or painted without tiring the fingers.

If you do regular tinkering or soldering work, you will soon find that two or three such tweezers are a good set of tools for many craft challenges. In addition, the metal mass of both tools also acts as a heat sink and dissipates a lot of heat from the model during soldering.

The Märklin deliveries of the last weeks:

Now also the motor car VT 989 has been delivered for the rail bus (88166) and completes the model of the control car presented last month. The new product is driven by a bell-shaped armature motor with flywheel, which is almost invisible in the interior fitted body of the car.

The running characteristics have improved considerably as a result of the drive changeover, because the flywheel mass also contributes to passing over contact-critical track sections. As with the control car, three warm-white LEDs provide light in the interior; other models also control headlights depending on the direction of travel.



The VT 989 rail bus motor car (Art. No. 88166) for Era III, together with the control car already presented in the last issue, is now also presented with interior fittings.

Two new products on the subject of steel transport are now also available on the market. Both are heavy goods vehicles SSym 46 of the Deutsche Bundesbahn, only they are loaded differently with T-profiles (82341) and thermal hood (82342).

The harbour crane Duisburg Innenhafen (Inner Harbour) (89769) also arrived in the specialist trade as a complete surprise. This hardboard kit, produced by Laffont Modellbau for Märklin, was originally not expected until the 3rd quarter, i.e., much later.

Delays with Micro-Trains:

Micro-Trains informed us that the delivery of the EMD SD40-2 will be delayed. The entire production of the undercarriages had to be returned to the supplier after a problem was identified which now had to be corrected.

MTL is currently unable to give a new delivery date, but would like to provide this information as soon as it becomes available.



The modernized, six-axle passenger coach 113 of Union Pacific was delivered.
Photo: Micro-Trains

The heavy, modernized passenger coach with the Union Pacific company number 113 is currently being delivered (Art. No. 556 00 060).

From the wooden 40-foot refrigerator car of the Great Northern for the Western Fruit Express two car numbers are offered (518 00 591 / 518 00 592). The 10th freight car model (518 00 550) has now been delivered in the Heinz advertising series based on real models.

In Germany these models can be purchased at Case Hobbies (<http://case-hobbies.de>).

Herpa aircraft for early autumn:

Herpa (<http://www.herpa.de>) is already looking into the early autumn and announces new aircraft models for September and October. We are pleased to note that among the system-compatible models with a maximum length of 30 cm and a possible application on European systems, this time some rather tiny implementations can be found:

Luftwaffe Airbus A400M Atlas – LTG 62, Flugplatz Wunstorf 54✕08 (Art.-Nr. 557207-002),
Helvetic Airways Fokker 100 – HB-JVF (559324),
Flybe ATR-42-500 – G-ISLF (559331),
CSA Ceskoslovenske Airlines Yakovlev Yak-40 – OK-FEI (559348) and
Airberlin Bombardier Q400 „Albino Colors” – D-ABQQ (559355).



The Albino Bombardier Q400 with the identification D-ABQQ from Airberlin (Art. No. 559355) is one of the new Herpa products for September and October 2018. Photo: Herpa

For the simplified Snapfit models, the following, in two cases already larger models are announced in flight position:

Nordwind Airlines Airbus A330-200 – VP-BYV (612012),
Pegasus Airlines Airbus A320neo – TC-NBA “Demokrasi” (612029),
Cyprus Airways Airbus A319 – 5B-DCW (612036) und
Airberlin Boeing 737-800 “Coming Home for Christmas” – D-ABML (612050).

German Magazine for Z Gauge

Historical issues also at DNB:

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Since we also fear a bottleneck with regard to storage space and data traffic in our licensed archives and do not want to put any of them aside, we have decided to make all issues generally accessible via the DNB as well.

All previous issues of the German (ISSN 1867-271X) and English editions (ISSN 2512-8035) can be accessed via the archive search at <https://portal.dnb.de> using the term **Trainini** or the ISSN numbers of our magazine. New issues are posted there with a time delay, the International Edition has now been assigned its own ISSN by the registry.

Faster and more comfortable location should work mostly via the licensed archives, which are always up-to-date in the link list of our Internet pages.



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