# 1 CLUB NEWS 2012 INSIDER





Launch of the Insider model 2012\* in HO: the express electric class 403 railcar in authentic formation - the stylish era IV Intercity presents its futuristic and unique appearance. \* The models illustrated are hand-finished samples

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In the Club mailing 01/2012 you will find the following enclosures: Märklin Insider News 01/2012, Märklin Magazin 01/2012, Märklin new products brochure 2012, 2 order forms (1 order form for Club model and Annual Car, 1 order form for museum car), DVD Märklin TV "Best of 2010/2011".



Successful CAD project: continuous processes improve efficiency at Märklin.



Annual Car 2012 in HO: liquid acids and chemicals were transported in the Degussa acid transport car and now Märklin is producing the delicate model as it ran in era III.

### Your service numbers

#### **Customer Service**

#### Club hotline:

Telephone Monday-Friday from 10 a.m.-6.30 p.m.

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### E-mail: insider-club@maerklin.com

### Queries about technology, repairs and spare parts / complaints:

Telephone Monday-Friday from 10 a.m.-6.30 p.m.

Telephone inland: 0 90 01/6 08-2 22 (0.49 euro per minute from the German fixed phone network, mobile tariffs may differ)

Telephone from abroad: +49(0)71 61/6 08-2 22

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### Internet

www.maerklin.de club.maerklin.de

### Moving?

Please inform us in good time of your new address so we will know where we can reach you. A forwarding address at the Post Office unfortunately will not suffice.

Thank you for your cooperation!

### Dear Insiders,

The Insider models for 2012 which have been awaited with such excitement and eager anticipation have been wholeheartedly welcomed by our Club members. Above all the express electric class 403 rail car in H0 has scored with its unusual design and its smart equipment. Designer Gottfried Stock and H0 Product Manager Karl-Heinz Grässle give exclusive insights into the refinements in developing the stylish Intercity. The other Insider model is naturally in the limelight as well - the class 001. The filigree Z gauge loco offers the most exquisite technology in the smallest gauge.

Insiders can also look forward eagerly to two freight transport classics, being produced as exclusive Annual Cars in 2012: the Degussa acid transport car in H0 and the He 14 stock car in Z. We take a look behind the scenes at Märklin on the completion of a major innovation project: with conversion of the design software a standard data-world comes into being across the entire company. As a further highlight of this issue, we introduce a Club trip to Switzerland: the trip behind the legendary "Rhaetian Crocodile" takes in the picturesque Grisons, one of Switzerland's most beautiful cantons. In the service section, punctually for the start of the year, we offer you a complete summary of the Club year 2012 and we also introduce the current varied seminar calendar for the first half of the year.

Have fun reading the latest Insider News!

### Your Insider Club team

### **Imprint**

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Insider Club year 2012

# It's worth being an Insider

Being in the know – for Club members, that's not a problem: what you get includes the Märklin Magazin, included six times a year with the Insider mailings - as well as the Club News, which brings in-depth reports on models, the Märklin company and the Club community. Current information is sent out by Märklin TV as well, while only Club members have access to the Märklin-TV archives. And for a look back, twice a year every Insider receives on DVD a chronicle of the more important event to do with Märklin and the world of the railroad. It's worth it for the models too to be one of Märklin's premium customers. Every member can, as part of the Club services, order an Annual Car in H0 or Z exclusively manufactured for Club members from his specialist dealer. And naturally with the mailings all Insider members are sent order forms for the exclusive Club models, of which each Insider may order one example of each offer. Loyalty is also rewarded: the offer of special models for membership anniversaries are of course also exclusive. With the June mailing, Insiders receive an order form with which they can order the lavishly-illustrated catalog from their authorized dealer. The







Club card is sent to all members with confirmation of membership for the Club year just starting. For all new members, the password to log in to the Club pages under http://club.maerklin.de is printed in the covering letter. Members continuing from the previous year need not alter their password. With the Club card you receive discounts on events and from the many cooperation partners of the Club – there will be a summary of these in the Club News 02/2012.

### Schedule 2012\*

No.	Publication date	Enclosures
1	Start of February	DVD Märklin TV "Best of 2010/11" Order forms • Club models (H0 + Z) / Insider Annual Cars • Museum cars 2012
2	Start of April	
3	Start of June	DVD "A year with Märklin" I Order forms • Kids' Club Annual Car • Anniversary models (5, 10 and 15 years) • Current catalog
4	Start of August	
5	Start of October	
6	Start of December	DVD "A year with Märklin" II

\*Subject to alteration. Please refer to the precise dates given in the respective latest issue.



### And you obtain the benefits like this:

Our "Insider-Post" is sent to you regularly at the start of February, April, June, August, October and December. It is always dispatched to all members simultaneously, so that no-one is treated better - or worse - than anyone else. The exact date of dispatch will be found in on the Club's web-site under http://club. maerklin.de. Please note that the postal service takes from two to five days from dispatch date for addresses within Germany. Complaints about missing issues or enclosures can only be accepted by the middle of the following month. Should you move house, please notify us in good time. Mailings are sent as news material, so an order to the post office to forward your mail will not be enough.

### Contents of the mailings.

As soon as you receive our mailings, please first of all check the contents. On page 2 in the Insider News you will find a list of all the items which should be enclosed. Do not throw the envelope away before you have checked, as enclosures may be caught in it. If anything should be missing, please report it without delay. When claims are not received until sometimes months later, the enclosure stocks have often run out or else important dates (product ordering deadlines etc.) have already passed.

Important: If you want to order back issues of the Märklin Magazin or would like magazine binders, please apply direct to:

Märklin Magazin PressUp GmbH

Postfach 701311 Tel.: +49 (0) 40/4 14 48-467 22013 Hamburg Fax: +49 (0) 40/4 14 48-499

Germany E-mail: maerklin-magazin@pressup.de



# **Exclusive: museum car 2012**

Traditionally, companies from Göppingen and the surrounding region are partners of the Märklin museum cars. This year, it's the turn of Mink Bürsten – one of the major manufacturers of industrial brushes in Germany. Every year, the company manufactures more than six million brushes. They are also transported by rail. The museum cars 2012 show you how that works. And the best of it? This year, Insiders can order the museum cars direct from their specialist dealers – the order form is enclosed with this mailing.

In H0 there is a stake car Kklm 433 with sheeted goods of the company Mink Bürsten (item 48112) and a model truck in metal. Of similar design, but without the road truck, the car appears in Gauge 1 (item 58499).

Z-gauge enthusiasts can look forward to a stake car with a 20-foot container and a VW tilt truck lettered "Mink-Bürsten" Göppingen-Jebenhausen (item 80023). The delivery vehicle is a VW bus in metal, in realistic livery with flatbed designed with removable and lettered tarp. The set is packed in a highly-decorative tin box.













# New in 2012: "Kids – the Märklin Fan Club"

Enjoyment in a new design: the Kids Club News appears 12 times a year

Since the start of the 1990s, the Märklin children's Club "1.FC Märklin" has been enthralling children with its reports, games, comics, events and its wide range of services on offer for the younger generation. Over the years, there have been a number of alterations, all helping to fix the wonderful world of the model railroad in the hearts of the children. But now the time has come to start on a new chapter with the Märklin children's Club. It was the launch of the new product series "Märklin my world" which gave the impetus for a new concept. Starting into the model railroad world will now be even more attractive. The former "1.FC Märklin" is now known as "Kids - the Märklin Fan Club". It offers children educationally-valuable entertainment and is persuasive with its fresh, clear design and colorful range of subjects. Apart from the entertainment and information values previously enjoyed, there will be attractive new content from outside the railroad and model fields. Four new heroes will in future be involved in exciting new adventures in the Kids Club - the cool comic figures will be taking the members with them on their fabulous adventures in the Fan Club. Not only will the Magazin be

> New concept, new contents: "Kids – the Märklin Fan Club" this year is taking over in the children's rooms with four new heroes and some superb adventures.

appearing in a new design, but the web-site too. Under www.maerklinfanclub.de the new Club contents will be appearing from February 2012: games, information, entertainment, interaction – all presented in a clear and easily-understood manner. There is a password-protected area for members. The new Club magazine appears twelve times a year – that is twice as often as previously, and there will be 20 pages in each issue. Every member will receive a new Club card which can be used to obtain discounts from our cooperation partners. There are interesting supplements to the magazine and once a year each member has the opportunity to acquire an "Annual Car". The Märklin H0 annual catalog rounds off the comprehensive package.

Annual subscription for the new Kids Club is 12 euro.





Unique elegance: as the Insider model 2012, the class 403 will grace any layout.

Insider model 2012 in H0: all about the design of the class 403

# First class rail car train

Exclusive first class running pleasure: the class 403 express rail car stands for top technology and pioneering design – and realized as the Insider model for 2012, it sets new standards. The four-car new tooling with its complex details and its authentic color scheme is truly a jewel of era IV.

### Notes on ordering

Every Insider Club member can order one example of the Club model by submitting the enclosed order form to their authorized specialist dealer. We expressly state that the order forms are not transferable. The model will be produced in 2012 in a once-only series exclusively for Insider Club members. A certificate is supplied with each model.

**Important:** please note the closing date for orders as given on the order form: **March 31, 2012**. Deliveries are scheduled to start in the 4th quarter of 2012.

"The overall impression of the model is very coherent. I think we have succeeded with an authentic model of the characteristics and design of the class 403", says Gottfried Stock, designer at Märklin. "We always aim to find the best balance between scale modeling and model railroad operation – and authenticity enjoys top priority with us". Here above all, the special shape of the end cars was a particular challenge to the designers. For their work on the model they were able to make use of prototype photographs, data sheets and copies of the original drawings in the company's own archives. "And I had the op-



portunity to measure up and sketch a withdrawn class 403 and to photograph it", says Gottfried Stock reporting his meeting with the legendary rail car train. A concept for production of the Insider model was devised with all the necessary fringe conditions on the basis of all the assembled information. The two outstanding features of the model, which give the train its charisma and attract the eye on first seeing it, demanded the greatest care: the striking end design and the modern livery in special colors. "The data are converted at a scale of 1:87 before we make a 3-D model on the computer", says Stock, as he describes the next steps. On the basis of the simulation the designers can then simulate a wide variety

Running between Munich and Bremen: the electric rail car train made an excellent impression for speed and comfort on its 1st class passengers on its regular route.





# The Märklin Insider model 2012

### **37778 Electric Express Powered Rail Car**





### **■** Model highlights 37778

- Completely new tooling.
- Heavy metal construction.
- Many separately applied details.
- 2 controlled high-efficiency propulsion drives, each with a flywheel, in the open seating intermediate car.
- mfx decoder with extensive sound and light functions.
- Factory-installed cab lighting with LEDs.
- Factory-installed interior lighting and table lighting with LEDs.

Digital functions	Control Unit 6021	Mobile Station 60652	Mobile Station 2 60653	Central Station 60215
Headlights	•	•	•	•
Table lamps	•	•	•	•
Electric loco running sounds	•	•	•	•
Signal horn	•	•	•	•
Direct control	•	•	•	•
Brakes squealing off		•	•	•
Conductor's whistle		•	•	•
Doors closing		•	•	•
Station announcement		•	•	•
Switcher whistle			•	•

**Prototype:** German Federal Railroad (DB) class 403 electric express powered rail car, 1st class. 4-part unit. 1 class 403 001-1 powered end car, type Avüm, with compartments. 1 class 404 101-8 intermediate car, type ARüm, with a galley, dining area, and open seating area. 1 class 404 001-0 open seating intermediate car, type Apüm. 1 class 403 002-9 powered end car, type Avüm, with compartments. InterCity paint scheme of "gravel gray" and black brown. The train looks as it did in 1973.

**Model:** The model is a 4-part unit. The model has an mfx digital decoder and extensive sound functions. It also has 2 controlled high-efficiency propulsion drives, each with a flywheel, in the open seating intermediate car. Both axles in both trucks are each powered by a motor. Traction tires. The model has factory-installed interior lighting, cab lighting, and lighted table lamps.

The triple headlights and red marker lights change over with the direction of travel. They, the interior lighting, and the cab lighting will work in conventional operation and can be controlled digitally. The lighted table lamps can be controlled separately in digital operation; they change between on and off by means of a random generator. The lighting is maintenance-free warm white and red LEDs. The model has special multiple-conductor current-conducting couplings with guide mechanisms between the cars. The model has a power pickup changeover feature with power picked up in the end car at the front of the train. The model has many separately applied details. The roof equipment is finely detailed. The pantographs work mechanically but are not wired to take power. There is a reproduction of a Scharfenberg coupler (non-working) at both ends of the model. Minimum radius for operation is 360 mm / 14-3/16". Train length over the couplers 118 cm / 46".



Closing date for orders: March 31, 2012



of running scenarios and can recognize any possibly critical running behavior. So that the model can run on existing layouts, it is actually produced in a scale length of 1:93.5. "As early as the concept stage, we simulate such occurrences as possible collisions in curves", explains Stock and refers to the technical consequence: each five-pin current-conducting coupling is rigidly connected to the next with the job of ensuring that there is no contact in running operations on the layout. The designers "virtually install" motor, gearing, loudspeakers and wiring on the computer. On the Club model there are two motors high-efficiency drive units with flywheel - installed in the saloon car. The loudspeaker sits close to the motors and current is transmitted through a five-pin coupling. Weight and center of gravity of the model are very carefully calculated and have a big influence on the smoothness and running behavior of the fourcar unit.

"The overall impression is totally convincing and underlines the quality of the Märklin brand", is H0 product manager Karl-Heinz Grässle's assessment of the 2012 Insider model. "The quality of the class 403 is guaranteed by the zinc die-casting, one of the most important features which sets Märklin apart from the others". The production process is complicated, but it does pay for itself in terms of authentic detailing – to the delight of the Club members, who have eagerly been awaiting this rail car train as an Insider model.

### Great appearance in pop colors

Development also set great store by authenticity in color design. After all, its new-fangled and peppy appearance was one of the things which made the rail car train so popular. In 1969 the German Federal Railroad decided to give its rolling stock a fresher, friendlier look, and thus the pop-color scheme concept was born. The passenger cars and locos, until then rather restrained and even drab in color, would receive a modern coat of paint – including the class 403 rail cars. To emphasize the elite status of these vehicles as 1st class express rail cars, they received a prominent livery. Basic coloring of the car body is pebble gray (RAL 7032) – that corresponds with the base

Sophisticated detail: two pantographs are part of the delicate roof equipment of the class 403, and they can be raised mechanically.





First class: The streamlined multiple unit, with its length of 118 cm (46-1/2") as an Insider model, can also run on smaller layouts.

color in the "pop colors" concept. The livery drawings of the prototype specify this and other colors: valance black-gray (RAL 7021), window-strip black-brown (RAL 8022) brightened with vermilion (RAL 2002) in a ratio of 50:1, decorative strips above and below the window-strip vermilion and pure orange (RAL 2004) mixed 1:1, traction motor resistances on the roof blue-gray (RAL 7031). We'll tell you all about realizing the color concept for the Insider model in the next issue. This much we can tell you in advance: the appearance of the streamlined Intercity train will blow the cobwebs away from the model railroad layout.

Text: L. Wiegand Photos: C. Asmus, D. Kötzle, H. Seehuber, Märklin, C. Rudolph



### The model the Insiders want

"The first thing that strikes you is the shape of the front of the unit – that's why the class 403 was promptly nicknamed "Donald Duck", says Märklin H0 product manager Karl-Heinz Grässle, visibly impressed by the Insider model 2012. "The four car standard formation of the model is just how the prototype ran". As a highlight for Club members, the train is correspondingly fitted out: "We have factory-fitted interior lighting, engineer's cab lighting, a correct change of head- and taillights as well as table lamps which



Fascinated by shape and color of the 2012 Insider Model: Märklin HO product manager Karl-Heinz Grässle.

can be turned on and off", enumerates product manager Grässle. The level of equipment of the model is really quite something. "Since in the last few years, we have had several steam and electric locomotives as Insider models, it was a conscious decision this time to select one of the most important rail cars of the 1970s". The German Federal Railroad train was in any event at the top of the Club members' "most wanted models" list according to the survey carried out. For the product manager the model's appearance carries conviction too. "The express railcar with its modern color scheme is a proper eye-catcher and thanks to its length of 118 cm (46-1/2") manageable" The finish of the model is naturally up to the high quality standards expected of Märklin: "The model is largely of metal, making it better to handle. Apart from that, details are easier to model", says Karl-Heinz Grässle. The painting and printing too are of the highest standard, and much of the sharp lettering can only be read with a magnifying glass.

Aerodynamic: the very flat sloping front of the end cars of the class 403 favors its running behavior on high-speed lines to a remarkable extent.

Class 001: Insider model 2012 in Z gauge

Timeless elegance, solid power

Hardly any other German steam locomotive class typified express passenger traffic in the mid-20th century as did the class 01. The standard locomotive designs she heralded in helped the 01 to her enormous popularity, and her success story continues with the Insider model in Z gauge.

The service life of this showpiece loco stretched from the mid-1920s to the early 1970s. The express locomotive with its clear lines and its high-pitched boiler demonstrated what progress had been made in the German railroad industry. The spacious engineer's cab and the large smoke deflectors in addition ushered in the era of a new look on German railroad tracks.

After World War II, 171 machines went into service on the German Federal Railroad (DB), while the German State Railroad of the former GDR took over 70 of them. Whether at the head of long passenger trains or in the Central Highlands, the 01 class did all its tasks well, from northern Germany down to Bavaria and right across the Federal Republic: "The loco is well known by all our members, and is a great favorite", states Andreas Schumann, one of the Märklin designers. That's why she is such an impressive prototype

for the 2012 Z-gauge Insider model. In its realization, even more exacting specifications were laid down for the details: the new tooling includes a representation of the Indusi train safety fitting and imitation brakes on the chassis among other things. And for the right headlights, there are several warm white LEDs.



nn1 161-9

Masterpiece in Z: the Insider model fascinates with its fine details and refined engineering.

## 88010 Express train steam locomotive and tender



**Prototype:** class 001 of the German Federal Railroad (DB). Standard locomotive with all-welded tender and Witte-type smoke deflectors.

**Model**: new tooling, finely detailed. Loco body of metal. Representation of the brakes, Indusi (train control contact) etc. on the locomotive chassis. Finely-detailed valve-gear and rods. Enlarged buffer heads. Close coupling between loco and tender. Locomotive with 5-pole motor. All 3 coupled axles driven. Headlights warm white LEDs. Tender with spoked wheels. Length over buffers 112 mm (4-7/16").

Deliveries are scheduled to start in the 4th quarter of 2012.





Insider Annual Cars 2012 in H0 and Z

Delicately-worked superstructure: the Degussa acid transport car in the Railway Museum, Bochum-Dahlhausen triggers anticipation of the H0 Insider Annual Car.

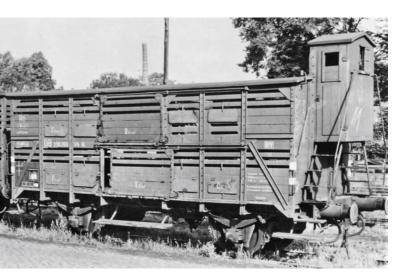
# Rolling stock for delicate goods

Insiders have two classics of freight transportation to look forward to this year: exclusively for them, Märklin is producing an era III Degussa acid transport car as H0 Annual Car. For Z fans, there is an outstanding new tooling waiting – the Vh 14 stock car of the German Federal Railroad.



Withstand even the strongest of acids: the pots are made of stoneware.

Nitric, hydrochloric or sulfuric acid: the railroads used to used carboy cars for transporting corrosive or caustic chemicals or liquids. Large carboys were placed on the chassis of the cars. "The jars couldn't fall over or slide out of place as they were secured by a stable skeleton-like framework" explains Thomas Landwehr, one of Märklin's documentation experts. The floors of the cars had a slight slope from the center leading to the edges of the car to lead away any of the contents which might have leaked. "The carboys", he continues, "are of stoneware, which resist even the most concentrated of acids". The upright jars mostly eight to twelve of them, each with a capacity of 800 to 1,200 liters – used to be emptied with compressed air. Stone jars are rather delicate and if they are damaged and the contents leak, they can cause very serious damage. That's why operationally, acid transport cars had to be treated quite specially. They weren't provided by any of the railroad companies, but only by such as chemicals factories or wagon leasing companies. "The H0 Annual Car is



Pig on board: the Vh 14 stock cars were used to transport small animals like pigs, poultry and sheep.

an acid transport car with a brakeman's cabin. It is owned by the Degussa company and registered with the DB as a privately-owned car", as documentarist Landwehr describes the model.

The Annual Car in Z gauge is a new tooling of a stock car. During industrialization, transport of animals by rail was an everyday sight. Towns and cities grew so fast that local supplies of food couldn't keep up with the demand. To keep towns supplied with meat, the animals were carried by train directly into the town slaughterhouses. In stock cars, there were mainly small animals carried such as pigs, sheep and poultry carried. So that proper use could use could be made of the load space, the height of the cars was divided by an intermediate floor. For ventilation, the sides and ends of the cars were provided, unlike a normal boxcar, with numerous air-slots and flaps. More than 2,000 of these stock cars of the standardized type were built between 1913 and 1927. The German Federal Railroad (DB) listed the cars falling to them after the war as type Vh 14, and this is the prototype of the new Z-gauge model, which is fitted with a high-level brakeman's cabin.

Text: Lorelei Wiegand
Photos: Albrecht Staudenmayer, Märklin collection

### The Insider Annual Cars 2012

Closing date for orders: March 31, 2012

### 48162 HO Insider Annual Car for 2012

N ··· III



**Prototype:** Acid transport car with a brakeman's platform. Privately owned car lettered for the firm Firma Degussa, Rheinfelden plant (Baden), used on the German Federal Railroad (DB). The car looks as it did at the end of the Fifties. **Model:** The car has detailed, finely constructed frameworks of braced timbers. The car is loaded with acid containers. Length over the buffers 11.3 cm / 4-7/16". DC wheel set  $2 \times 700580$ .

### 80322 Z Gauge Insider Annual Car for 2012

N === III



**Prototype:** German Federal Railroad (DB) type Vh 14 association design livestock car.

**Model:** This is new tooling for the type Vh 14 livestock car. The car body is made of plastic and is lettered prototypically. Length over the buffers approximately 40 mm / 1-9/16".

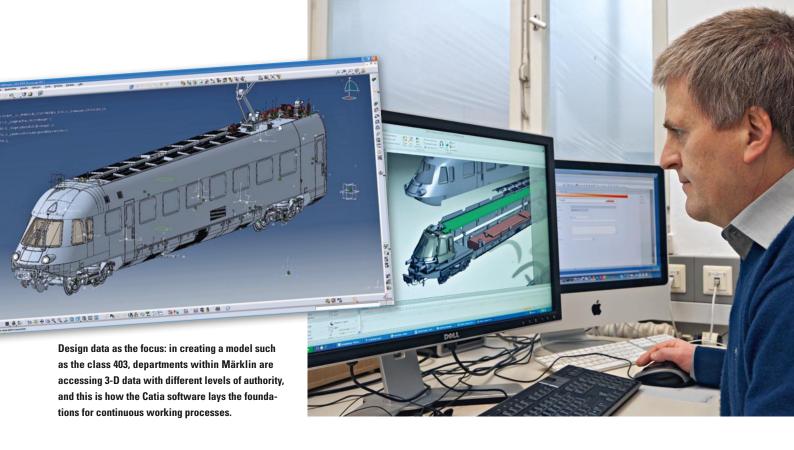
### **Notes on ordering**

You will find the order form for your 2012 Insider Annual Car enclosed with this issue of Insider Club news. Please note that the bonus model is ordered at the same time as the exclusive Club models which are offered for sale, and is therefore found on the same order form.

On the form is printed the gauge of your choice, H0 or Z, together with the corresponding item number. Should this be incorrect, or should it have been altered, please strike out the entry shown and enter the

other gauge, in which you will in future receive your Annual Car.

The exclusive nature of these cars does not permit more than one example or more than one gauge to be supplied, even at an appropriate extra cost. The order form can be handed in to your authorized dealer until March 31st, 2012. Deliveries are scheduled for the third quarter of 2012.



CAD software: Märklin marries up design with administration

# Polished flow of information

A uniform data world is improving the level of efficiency in development at Märklin: the Merito project (Märklin development time reduction through IT optimization) is completed – after only two years – and with demonstrable success.



Michael Zauner, CAD Project Manager Märklin: "We have succeeded in converting the design software at Märklin in half the time normally taken in industry for such a task".

Märklin-Insider: So conversion of the CAD software is complete apart from any necessary optimization. Have you achieved anything in the way of reduced development lead time for the three brands Märklin, Trix and LGB? Zauner: We have implemented the design software Catia and Enovia Smartteam as an administration solution for development data, and there are already signs of the forecast efficiency improvement. Resulting from the complicated transfer of old systems, a standard data world has now been created and the flow of information has been structured and smoothed out. In addition, some sub-routines have been automated to give us enhanced process reliability.

Märklin-Insider: What effect does that have in real terms on the work of a designer?

**Zauner:** To take the example of an amendment which today is completed in a matter of minutes, earlier he might have had to restart from scratch, meaning up to 20 hours' work could

easily be lost at once. The process is now continuous right through to the toolmaking – that simplifies the realization of details through design of the working stock. His know-how is still of great importance for the designer, knowing how far he can go into the detailing to enhance the quality while avoiding incurring excessive costs.

Märklin-Insider: How then does the design benefit from the better flow of information?

Zauner: There are simply less work interruptions caused by internal enquiries for specially-prepared data. Once the product design is complete, the designer creates a separate "approved" folder with drawings to which downstream departments have access. He no longer has to distribute – an obligation to provide becomes an obligation to collect. This virtual approval folder is also more or less a collecting point in which the DTP department puts its contribution for lettering. Then on day X, Parts department releases everything.



# Märklin-Insider: Which departments use the CAD data?

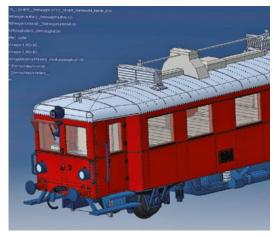
Zauner: We have two separate methods for data management. The development departments and some individually-authorized staff in Toolmaking and Sales have editorial authority to make alterations. All others can only read 3-D data specially cleared for them.

# Märklin-Insider: Has this second group a special visualization software for this?

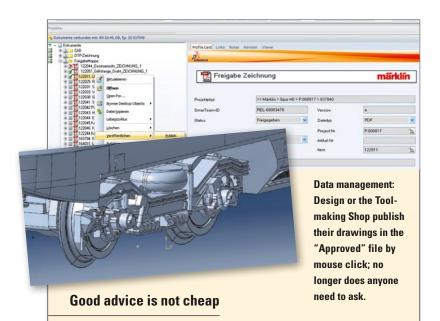
Zauner: With the viewing solution we have developed in house, the shell of a model can be seen in our Internet browser and the basic functions include rotation at will or the fading out of parts. These are used by departments such as Marketing or Public Affairs, and indeed the workshops, who can for example take measurements relevant only for them for finishing on the NC machines.

# Märklin-Insider: How much work is involved for the designer in producing corresponding data?

Zauner: Not excessive, as we have routines integrated. When earlier the DTP department needed the CAD data for the pre-printing stage for tampon printing, the designer first had to think about the correct settings – this is a requirement which only arises once in each project. Today, a model such as the class 403 railcar is designed and the data set is stored in the product documentation Smartteam – in the automated process it only takes a few mouse-clicks and the data for DTP drawings are produced in the required format.



VT 75.9 in read-only access: departments such as Marketing or the workshop can see details and components once they are approved.



With the CAD software by Dassault Systèmes, Märklin has not only introduced a design software capable of handling high-tech products of the very best quality: the developers now have a platform for global product development - based on their actual tasks, information can now be made available to all authorized staff. Does that make it all faster? "That's a side issue; the main point was to improve efficiency", explains CAD Project Manager Michael Zauner. Thus to start with, time recording doesn't relate to parts, because the time it takes to design a model is directly dependent on the quality of the prototype documentation. "And apart from that, every loco, every vehicles, remains an individual - we do prevent duplication of work and reduce stockholdings through an ever-growing catalog of parts, but that typically impacts more on the non-visible parts of the design such as motor components and parts of the chassis."

In a Bachelor thesis, Märklin investigated whether a software solution for an automatic classification of parts would be viable. "But the shell of the class 403 and boiler for the Franco-Crosti 50.40 loco are unique and the Bachelor thesis indicated that for us a software-supported search for components which could be re-used would not be worth while due to the extreme variety of parts". Instead, project manager Zauner explores with Dassault possible help such as a wheelset generator. "A wheel can be extremely complex after all - it's all about roundings and mold tapers, the wheel profile must fit, it all has to be perfectly designed for the molding process". In the CAD module prototype, the designer generates a model of the desired wheel by entering well over 20 different parameters such as diameter, number of spokes, balance weights or fixing of the connecting rods.



# Märklin-Insider: What do you have to look out for when exporting data?

Zauner: In the standard format DXF there are much larger amounts of data created than in PDF, for example, and this is more expensive. Or fonts are not converted into vector graphics – and then guite suddenly the tampon printer starts printing the wrong fonts. Similarly automated is the extremely complex data exchange with external engineering bureaus. Stored in Smartteam are details of which recipient gets what files in which format and with what settings exported from Catia. The designer triggers the process, and the rest is carried out by the software modules IDAUS and Exporteur of our project partner Schwindt CAD/CAM-Technologie GmbH. And a precise record is kept of each step.

### Märklin-Insider: With the end of the project, Design department will in IT terms be coupled to Administration – Smartteam will thus be talking to the commercial standard software SAP. Are interfaces like that not extremely complicated?

Zauner: We took a pragmatic route. Smart-team and SAP have both got a database and we just make them compare their fields. If the designer generates a part number, this will be specified to him by SAP – then if Manufacturing requires material for the part, it is automatically written in the field "Material" in the SAP database: here there are suppliers, prices or possibly packaging units stored. As a rule, data are only entered at one point, and the rest is managed in the background by the systems.

Text: Rochus Rademacher / Photos: Dietmar Kötzle, Peter Waldleitner; Screenshots: Michael Zauner



Insight for the inquisitive

Augmented Reality: CAD data reveal the quality of a model.

At the Märklin Days, many Club members in the VIP area asked Michael Zauner to explain to them all about data visualization. Seen on the screen were the 3-D model data - a camera picks up a marker in front of the screen with which the volumetric model can be rotated and turned. "They were all excited about the "Augmented Reality", as you can zoom much deeper into the CAD files than into a photograph, where you are limited by the pixels", as the CAD expert reports. The animation shows the finest details such as those in the engineer's cab, tells you whether the drive is by cardan shaft or spur gear and how what motor is installed. This doesn't mean designer expertise is lost. "The data won't show you how to design a loco, or the tolerances and fittings to which we have to work". The demonstration was an exclusive glimpse into the future for Club members: with the basic tool, the Composer, the creation of owner's instructions and exploded drawings from design data at the push of a button is an everyday occurrence.

Catia/Smartteam: Developers work with the CAD and the product management solutions; the DTP department also uses its own Apple graphics computers.





# Advertising models December 2011 & January 2012

H0



4415.544"Löwenbräu"

- Euro Tecnica GmbH, Prümer Str. 54, 53940 Hellenthal, GER, Tel. +49 (0) 65 57/92 06 40, euro.tecnica@t-online.de, www.arstecnica.de
- Spielzeugparadies, Nagelstr. 28, 54290 Trier, GER, Tel. +49 (0) 6 51/ 9 94 43 88; klein.trier@vedes.de



**94370** "Bitburger" Available from various dealers.



94380 "3652"



4441.091 "Schierker Feuerstein" Spiel + Freizeit Breustedt, Charley-Jacob-Straße 7, 38640 Goslar, GER, Tel. +49 (0) 53 21/ 4 18 22, www.vedes-goslar.de



4441.092 "Cocio" IM Hobby APS, Egevangen 10, DK-8900 Randers, Denmark, Tel. +45 20/27 43 11, www.imhobby.dk



4870.004 "Dansk Sojakagefabrik"



4890.129 "Trifolium"

Tog & Tekno, Boulevarden 42, 9000 Aalborg, Denmark, info@togogtekno.dk, www.togogtekno.dk

98110 "3652"



**94362** "Manner" Josef Manner & Comp AG, A-1170 Vienna, Austria, available via the online shop www.manner.com



94376 "Berg Bier"



94377 "Tress"

Schwäbische Alb-Bahn e.V., Bahnhof Münsingen, Bahnhofstraße 8, 72525 Münsingen/Württ, GER www.bahnhof-muensingen.de



98097 "10 Jahre Modelleisenbahn-Wunderland"

Miniatur Wunderland Hamburg GmbH, Kehrwieder 2–4, Block D, 20457 Hamburg, Germany, www.miniatur-wunderland.de, Tel. +49 (0) 40/30 06 80-0, info@miniatur-wunderland.de

### Please note:

Promotional models are only made for Märklin dealers or companies from the industry etc. (the latter are marked with an \*). Models marked with an \* are generally not available for purchase. This is why we do not list addresses for these models. The only models which are published on these pages are those which have already been delivered and only if we have the express permission of the ordering party.



**94381** "Das Weizen aus Krombach" Available from various dealers.

Z



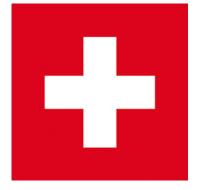
Nostalgia trip for Club members: full steam through Switzerland

# With the Crocodile to Grisons

Culture, variety and nature. Grisons is Switzerland's number one holiday destination. The resorts of Davos and St. Moritz have made this, the largest Swiss canton, famous all round the world. Club members can enjoy this beautiful landscape on an exclusive trip this summer.

All Club members can book this year for a unique railroad and landscape experience in the Swiss Alps. The Rhaetian Railway is not only renowned for its stock of wonderful historic rail vehicles, but also for the stupendous railroad sections it operates, including those through Grisons, a canton with some of the most beautiful landscape in Switzerland. There really is something to discover there; 615 lakes, more than 900 mountain peaks and 150 valleys. Grisons is the largest canton in area, but with just under

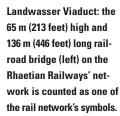
192,000 inhabitants, it is also the most sparsely-populated. Its capital Chur is at the same time the oldest town in Switzerland. Club members can therefore look forward to

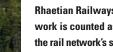


a five days' trip of thorough enjoyment including riding behind the legendary Rhaetian Railways' Crocodile. The famous loco will be in charge of a special train which will wind its way right through Prättigau and up to Davos. The next rail trip in a special car will take you past picturesque landscapes and steeply-graded railroad stretch to Arosa. Then with a full head of steam, the RhB steam loco will take over the train and haul it through the impressive backdrop of the "Swiss Grand Canyon", the Vorderrhein canyon. During

the steam trip, we hug the bank of the Rhine as we head for the white cliffs of the canyon, one of most exciting and superb railroad sections in Grisons. So that all participants







### **Price includes**

- Rail ticket from your local DB station to Maienfeld and return 2nd class.
- Seat reservation in long-distance trains
- 4 x demi-pension in your \*\*\* hotel in Maienfeld
- All transfer rail trips from and to Maienfeld
- Nostalgic special trip from Landquart to Davos and back
- Rail trip in special car Chur Arosa and back
- Nostalgic special trip through the Rhine Valley and back
- Guided tour of the RhB depot in Landquart
- Tour conducted by Bahnreisen Sutter, planned to be Gregor Sutter
- Information material

### Price per person

double/twin room 1,560 euro/single 1,680 euro First class rail travel out and home supplement

Club members will receive a discount of 5 % on the travel price by quoting their memberhsip number (please give the membership number on the booking form). The reduction only applies to the member personally.

Number of participants: at least 30, at most 40 people

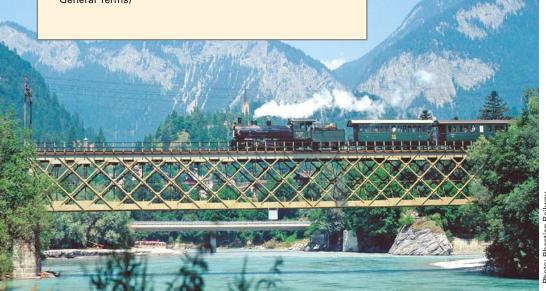
(If the minimum number is not reached by one month before departure date, the trip will be cancelled - see our General Terms)



Nature pure: the picturesque Palpuogna Lake lies not far from the famous Albula Pass in the Swiss canton Grisons.

are able to enjoy this marvelous scenery to the full during the journey, the comfortably-equipped special train only carries a maximum of 40 passengers. All Club members are guaranteed a window seat and can film and photograph to their heart's content. There will certainly be plenty of subjects: the return journey from Davos to Maienfeld takes us over the world-famous Landwasser Viaduct and through the narrow Schyn Gorge down to the Rhine Valley. Club members will also be able to enjoy a look behind the scenes in the Rhaetian Railways workshops after having savored the variety of Swiss landscapes.

During the journey, group leader Gregor Sutter will be happy to answer any questions. Members of the groups will be accommodated in the 3-star Hotel Maienfeld, to include demi-pension.



Absolutely worth seeing: all along the Rhine Valley there are glorious Alpine panoramas as well as wildly romantic valleys to be discovered.

### **Information on booking:**

Bahnreisen Sutter Sickingerstraße 24 79856 Hinterzarten, Germany

You can obtain a registration form under:

Telephone: +49 (0) 76 52/91 75 81 Fax: +49 (0) 76 52/91 75 82

E-mail: eisen@bahnen.info Internet: www.bahnen.info



# **Digital Info Days**

Märklin Dealer for the Event	Date	Time
Germany:		
14057 Berlin, Kaiserdamm 84, Breyer Modellbahnen	23.02.2012	10:00-18:00
30519 Hanover, Hildesheimer Strasse 381, Gleis 24	21.02.2012	10:00-18:00
32425 Minden, Stiftsallee 75, Modellbahn-Schiffer	21.02.2012	10:00-18:00
34134 Kassel, Leuschnerstrasse 13, Zwehrener Modellbau-Lädchen	15.02.2012	10:00-18:00
37081 Göttingen, Maschmühlenweg 40, Hobby-Center Göttingen	16.02.2012	10:00-18:00
38124 Braunschweig, Jenastieg 12, Modellbahnen Broders	22.02.2012	10:00-18:00
40822 Mettmann, Poststrasse 1, Spiel + Bahn	01.03.2012	10:00-18:00
44141 Dortmund, Märkische Strasse 227, Der Lokschuppen	28.02.2012	10:00-18:00
45145 Essen, Kölner Strasse 48–50, Modellbahn-Ecke	29.02.2012	10:00-18:00
46042 Oberhausen, Centroallee 9, Märklin Store	14.03.2012	10:00-18:00
49078 Osnabrück, Lotter Strasse 37, J.B. Modellbahnservice	23.02.2012	10:00-18:00
49525 Lengerich, Altstadt 18, Dirk's Eisenbahnbude	22.02.2012	10:00-18:00
<b>55430</b> Oberwesel, Liebfrauenstrasse 29b – 31, Schreibwaren Hermann	14.03.2012	10:00-18:00
56068 Koblenz, Löhrrondell 6, Modellbahn Rössler	13.03.2012	10:00-18:00
57076 Siegen, Poststrasse 1 + 3, Kessler's Ecke	15.03.2012	10:00-18:00
59065 Hamm, Oststrasse 56, Spielwaren Kremers	13.03.2012	10:00-18:00
60329 Frankfurt, Karlstrasse 12, Modellparadies am Hbf.	08.02.2012	10:00-18:00
60385 Frankfurt, Berger Strasse 198, Meder	15.03.2012	10:00-18:00
64293 Darmstadt, Europaplatz 1, Modellbahngalerie	14.02.2012	10:00-18:00
70794 Filderstadt, Bernhäuser Hauptstrasse 32, Eisenbahn-Modellbau Stoll	07.03.2012	10:00-18:00
71032 Böblingen, Poststrasse 44, Bruno Köngeter Eisenbahn	09.02.2012	10:00-18:00
71083 Herrenberg, Bahnhofstrasse 15, Jim Knopf Süd-West	06.03.2012	10:00-18:00
72250 Freudenstadt, Martin-Luther-Strasse 7, Spielwaren Wagner	02.03.2012	10:00-18:00
73630 Remshalden, Wilhelm-Enssle-Strasse 40, E und E	08.03.2012	10:00-18:00
76532 Baden Baden, Ooser Hauptstrasse 12, Märklin Shop Baden Baden	01.03.2012	10:00-18:00
77855 Achern, Sasbacher Strasse 1, Vosy's-Lok-Shop	29.02.2012	10:00-18:00
80333 Munich, Pacellistrasse 5, Märklin Store Munich	09.02.2012	10:00-18:00
83646 Bad Tölz, Bahnhofplatz 8, Tölzer-Modellbahnstüberl	15.02.2012	10:00-18:00
86199 Augsburg, Gögginger Strasse 110, Augsburger Lokschuppen	14.02.2012	10:00-18:00
Ask your Märklin dealer about the break for lunch		oout the break for lunch!

### Liechtenstein:

9490 Vaduz, Städtli 2, Mikado	06.03.2012	*

### Switzerland:

Ovricoriana.		
4133 Pratteln, Hauptstrasse 35, Hobby-House	08.03.2012	* Please ask the
4460 Gelterkinden, Ribistrasse 7, Hobby Shop	09.03.2012	dealer promoting
4500 Solothurn, Westbahnhofstrasse 11, CMS	07.03.2012	the event for times
8400 Winterthur, Unterer Graben 1, Barp Tech	10.03.2012	of opening!

### Italy:

1.411		
24121 Bergamo, Via Antonio Locatelli 45, Toy Trains di L. Micheli	24.03.2012	*

Info days cars 2012: all Märklin dealers who present info days can order info days cars (H0) for the day of the event. The offer remains open on the info day, as long as stocks last.





# Märklin-Seminar program

1st half year 2012

Märklin is offering interesting seminars this year as well. This time it's all about layout construction, decoder fitting and switching and controlling with the new Central Station. In our seminars, you will learn everything of interest on the subject you have chosen. Only a limited number of places are on offer for each course as each participant receives intensive personal tuition.

#### All seminars are held in German!

#### Registration for all seminars:

Gebr. Märklin & Cie. GmbH, Stuttgarter Strasse 55–57, 73033 Göppingen, Germany Tel.: +49 (0) 7161/6 08-2 57 or -2 22, fax: +49 (0) 7161/6 08-1 43 training@maerklin.de or instantly online under www.maerklin.de Our conditions of registration and participation are laid out below. No separate seminar brochure is available.

Note: when booking hotels please only use the telephone numbers given here.

# Venue for all seminars led by Rüdiger Haller:

Göppingen Märklin Erlebniswelt Reutlinger Strasse 2 73037 Göppingen, Germany

#### Accommodation may be reserved at:

Hotel Restaurant Hohenstaufen Freihofstrasse 64–66 73033 Göppingen, Germany Telephone: +49 (0) 7161/6 70-0

### HO: Layout planning and construction preparation (2 days)

### Seminar content Dates

- Track geometry for K- and C-track, track planning, e.g., arrangement of station tracks (also applicable for staging yards)
- Providing grades in model railroad layouts, theoretical construction of a track helix including relevant parameters (steepness, minimum radius)
- Use and purpose of an electrical ring circuit, accessories for the electrical wiring (a selection)
- The different properties of switching contacts (circuit track, reed contact, contact track), correct placement of switching contacts
- Testing solenoid articles (signals and turnout motors) in unlaid condition (some practical testing)
- A short soldering course with realistic practice (soldering on various tracks)
- Installation hints and function of the braking module 72441 for the controlled deceleration and stopping of digital high-efficiency drives
- Assessing the electric current requirement for a layout and determining the number of transformers/boosters required, for which sample calculations will be made
- Jointly working out the conditions in which a layout can best be fitted into a room. Jointly planning a layout of maximum dimensions for a previously-defined room plan

Date	No.	Seminar leader
Th./Fri., 09./10.02.2012	110 a	Rüdiger Haller
Th./Fri., 03./04.05.2012	110 b	Rüdiger Haller

### Aim of the seminar:

■ Theoretical principles governing the proper design with the necessary components (analog and digital) of a model railroad layout

### Miscellaneous:

■ Each participant will receive an exclusive seminar special car on the theme of layout planning and construction preparation

### Duration and cost of the training courses:

2 days: each day 8.45 am – approx. 4.30 pm, 259 euro for Insider members, others 289 euro



## H0: Loco assembly seminar (2 days)

## ■ Refresher course on soldering with little practice pieces

- Talk through the individual parts in logical sequence
- Systematic assembly of a class 10 steam loco of class 10 (item 37084) and an electric loco E 70 (item 37483) in H0

### Conditions:

■ Soldering ability is essential

### Aim of the seminar:

**Seminar content** 

Assembling the individual parts of the respective locomotive in the correct order and getting to know the corresponding functionality

### Duration and cost of the training courses:

2 days: 8.45 – approx. 4.30 p.m., 599 euro for Insiders, others 629 euro.

### Date

Date	No.	Seminar leader
Th./Fri., 16./17.02.2012	120 a	Rüdiger Haller



Seminar fees cover the cost of the locomotives, and they become the respective participant's property.



### **Control and switching with the Central Station (1- and 2-days)**

### **Seminar content**

- Principles of the Central Station: Connections and using the control panel
- Running and programming locomotives (mfx and Motorola)
- Setting up a shuttle train control using contact tracks
- Setting up and switching turnouts and signals
- Creating circuit diagrams of the layout
- Setting up pathways
- Incorporating the Central Station in existing layouts
- Connecting further units to the Central Station (e.g. Mobile Station)
- Mobile running and control possibilities using the iPhone and iPad App

### Aim of the seminar:

Acquiring knowledge of designing a layout with the Central Station or converting an already existing layout

#### Miscellaneous:

■ Each participant will receive an exclusive seminar special car in H0 on the theme of Märklin digital

### **Duration and cost of the training courses:**

2 days: each day 8.45 am – approx. 4.30 pm, 259 euro for Insider members, others 289 euro/1 day: each day 8.45 a.m. – approx. 4.30 p.m., 159 euro for Insiders, others 189 euro

### **Dates 2-day seminar**

Date	No.	Seminar leader
Th./Fri., 23./24.02.2012	130 a	Rüdiger Haller
Th./Fri., 01./02.03.2012	130 b	Rüdiger Haller
Th./Fri., 28./29.06.2012	130 с	Rüdiger Haller

### **Dates 1-day seminar**

Date	Venue	No.	Seminar leader	
Tuesday 17.04.2012	Senats Hotel Unter Goldschmied 9–17 <b>50667 Cologne, Germany</b> Tel.: +49 (0) 221/ 2 06 20	203 a	Dieter Lorenz	
Thursday 19.04.2012	Hotel Kastens Luisenhof Luisenstr. 1–3 <b>30032 Hanover, Germany</b> Tel.: +49 (0) 551/30 44-0	203 b	Dieter Lorenz	
Tuesday 15.05.2012	Märklin-Vertriebs AG Mönchmattweg 3, <b>CH-5035</b> <b>Unterentfelden, Switzerland</b> Tel.: +41 62/ 7 23 51 21	203 с	Dieter Lorenz	

### H0: Decoder-installation seminar (2 days)

### **Seminar content**

Training is suitable for participants who want to upgrade analog and digital H0 locomotives to the latest state-of-the-art system technology with mfx decoders.

- Refresher course on soldering with little practice pieces
- All you need know about the latest generation of decoders
- Two Märklin locomotives will be retrofitted

### **Conditions:**

- Soldering ability is essential
- The Märklin locomotives you bring with you must be in very good condition (other makes will not be entertained!).
- When registering for the seminar, it is essential to give the locomo-

### **Dates**

	Date	No.	Seminar leader
	Th./Fri., 08./09.03.2012	140 a	Rüdiger Haller
ĺ	Th./Fri., 15./16.03.2012	140 b	Rüdiger Haller

tives which are to be retrofitted (please give a selection of locos, and bring them all to the seminar)

### Aim of the seminar:

■ To learn how to modify the Märklin locomotives

### **Duration and cost of the training courses:**

2 days: each day 8.45 a.m. – approx. 4.30 p.m., 499 euro for Insiders, others 529 euro

## H0: Decoder-installation seminar (1 day)

### **Seminar content**

- Modifying an H0 locomotive you have brought with an mfx decoder with sound
- Acquiring practical knowledge of digitalizing locomotives Conditions:
- Soldering ability is essential
- When registering for the seminar, a choice of locomotives for modification must be given. The locomotives must all be in perfectly good mechanical condition. The seminar leader will decide which of the locomotives is to be modified. Only one locomotive can be modified (can be advised in advance on telephone enquiry).

### Aim of the seminar:

■ to learn how to modify the Märklin locomotives

### Duration and cost of the training courses:

1 day: each day 8.45 am – approx. 4.30 pm, 269 euro for Insider members, others 299 euro including the materials to be used (decoder, motor and small parts)

### **Dates**

Date	Venue	No.	Seminar leader
Wednes- day 04.04.2012	Hotel Kastens Luisenhof Luisenstr. 1–3 <b>30032 Hanover, Germany</b> Tel.: +49 (0) 551/30 44-0	201 a	Gunther Schneider
Thursday 12.04.2012	Hotel Dress und Consul Hohe Str. 107 <b>44193 Dortmund, Germany</b> Tel.: +49 (0) 231/ 1 29 90	201 b	Gunther Schneider
Tuesday 22.05.2012	Märklin-Vertriebs AG Mönchmattweg 3, <b>CH-5035</b> <b>Unterentfelden, Switzerland</b> Tel.: +41 62/ 7 23 51 21	201 с	Dieter Lorenz



### H0: Service and inspection (2 days)

### **Seminar content**

- Basics of soldering technique with soldering practice
- Function of the Märklin drum and disc collector motors
- Adjusting a mechanical reversing switch
- How to oil an H0 loco correctly
- Carrying out servicing and inspection work on a class 218
- Dismantling a class 218, explaining the assemblies and finally reassembling the loco
- Carrying out servicing and inspection work on a class 74
- Dismantling a class 74, explaining the assemblies and finally reassembling the loco
- Converting a Märklin locomotive to digital operation with highefficiency motors and the latest decoder generation (theoretical, will not be put into practice)
- Fault-finding made easy with doctored locomotives using the knowledge gained on this course

#### Aim of the seminar:

■ This seminar is ideal to enable you to look after and service your old locomotive better and to be able to undertake minor repairs

### **Dates**

Date	No.	Seminar leader
Th./Fri., 29./30.03.2012	150 a	Rüdiger Haller
Th./Fri., 26./27.04.2012	150 b	Rüdiger Haller

#### Miscellaneous:

■ Each participant will receive an exclusive seminar special car on the theme of service and inspection

#### **Duration and cost of the training courses:**

2 days: each day 8.45 am - approx. 4.30 pm, 259 euro for Insider members, others 289 euro



## **Z**: Service and inspection (2 days)

### **Seminar content**

- Basics of soldering technique with soldering practice
- Dismantling locomotives and talking through the components
- How to oil a Z-gauge locomotive correctly
- How to clean locomotives correctly
- Carrying out maintenance and inspection work on various locomotives
- Assembly of these locomotives and showing the corresponding maintenance points
- Fault-finding made easy with doctored locomotives using the knowledge gained on this course

### Aim of the seminar:

■ This seminar is ideal to enable you to look after and service your old locomotive better and to be able to undertake minor repairs yourself

### **Date**

Date	No.	Seminar leader
Th./Fri., 10./11.05.2012	160 a	Rüdiger Haller

### Miscellaneous:

■ Each participant will receive an exclusive seminar special car on the theme of maintenance and inspection in Z-gauge

### Duration and cost of the training courses:

2 days: each day 8.45 am - approx. 4.30 pm, 259 euro for Insider

members, others 289 euro



## Gauge 1: Loco assembly seminar (2 days)

#### **Seminar content** Date

- Refresher course on soldering with little practice pieces
- Talk through the individual parts in logical sequence
- Systematic assembly of a "Crocodile" series Ce 6/8 II (item 55563)

### Conditions:

■ Soldering ability is essential

### Aim of the seminar:

■ Assembling the individual parts of the respective locomotive in the correct order and getting to know the corresponding functionality



# Duration and cost of the training courses: 2 days: each day 8.45 a.m. - approx. 4.30 p.m., 1,599 euro for Insiders, others 1,629 euro. The seminar fees cover the cost of the loco which becomes the participant's property.

# Highlight 2012 in Z: Insider model class 001



locomotive in the German Sate Railroad standard design program, was a big hit with its powerful performance, pleasing shape and exceptional reliability. With an impressive top speed of 130 km/h (81 mph), the steam loco was suited to express passenger traffic all over Germany. Its distinctive design made the class 001 a

(item 88010). The newly-tooled 001 161-9 is finely detailed, the loco superstructure is of metal. In addition, the model is fitted with a five-pole motor and loco and tender are close-coupled. Absolute highlight: the Mini-Club loco has a complete set of valve gear and imitation brake fittings. Warm white LEDs are fitted for the class 001's headlights and marker lights.