

Good day... Page 3

How are you doing and how's your garden railway? Are you, like H-J. Mueller in his op-ed piece, posing the G-question? Does G mean "Gross" (Large), "Good" or simply "Gummi" (Rubber) because anything goes? The question is, where to?

Admittedly, the intent is to provoke a few "letter to the editors", after all many a Large Scaler has questions regarding the happy mix of scales and philosophies which merrily calls itself "G". That what doesn't fit, doesn't really belong finds resonance with more and more Large Scalers. For that reason many decide to scratchbuild, others have a closer look at the American scene where 1:20.3 narrow gauge items are exactly to scale and even that oddity "1:29" has at least a common denominator, despite the gauge being incorrect.

While USA-Trains annoys their customers - at least that's the impression one gets from various sources, Aristo-Craft is busy presenting one new item after the other. Even LGB seems to have grudgingly accepted the "de facto scale" of 1:29 and positions their newest products very close to that scale.

Totally "G" is on the other hand

Photo contest

And the winners are... Page 10

It wasn't easy judging the entries of the first photo contest. There were 42 contestants, we promised 10 prizes. The winners of places 1, 2 and 3 had been announce in GBp 5/03. We decided to add 3 more prizes — small kits and figures from Pola, Piko and Preiser. All the winners have in the meantime received a notice. The missing placing of the pictures has good reason, it was simply difficult to decide between 5 and 7 or for that

the Saxonian IVK which EPL managed to transform from a 750mm track engine to a Meter gauge engine. How things stack up can be read in this issue. The editors haven't decided yet if building an oversized engine was a good idea or not, but one thing is for certain the engine belongs by rights on 32mm track. The "compromise" is absolutely plain when the engine is pulling some of the coaches, but that isn't a big surprise the engine is 1:19.5 scale and the coaches are 1:22.5.

Norbert Paech doesn't compromise the models he builds of wood and metal to exact scale. Carts and carriages have the exact same functioning elements as the prototypes, which is to be expected from models which deserve the term *jewels!* The article is towards the back. Even farther back you'll find the "Tail Light" with a sample of Chis Walas' work. He provides his talents to several of the film production studios in California and aims to show how he tackles Large Scale with his highly-original approach.

Knut Martin's weathering of a steam engine and the first glimpses of Peter Wanke's RhB layout are proof that Europeans have at least as much talent. Wanke's layout started as a

matter between well composed scenes or well detailed layouts. Just enjoy the pictures — they are an indication of the wide spectrum of the hobby as practiced outdoors. We had many entries — without a prize — which showed nice layouts that are worth publishing in GARTENBAHN*profi*. We need to emphasize that the object was interesting scenes in the garden, rather than whole layouts. Markus Heimbach delivered proof (with his first place

Translations: Hans-Joerg Mueller

smallish affair, but has been expanded to what today is one of the best garden railways anywhere.

How their own layouts measure up can be seen from the pictures the readers entered in the photo contest. Further proof is Jens Heinke's layout which, a perfect fit for the theme of this issue, is modelled after the Saxonian Railways.

For those who, with the progressively shorter day light, decided to work on the building/detailing jobs there is the SD-45 as a sample on how to weather or the Hartford flat car to test one's patience.

Ralph Reppingen's new live-steam creation is certain worth a look. It is such a beauty that it is possible that some of the "sparky" fraternity will turn green with envy. On the other hand they can check out the new Garratt from a Austrian producer and perhaps, provided they spring for the cash and are the lucky "High Bidder" on eBay, be the proud owner of something extra ordinary. Not bad, eh??

Enjoy the issue.....

The Publishers

entry) that very little of a layout needs to be show in order to get a vivid scene. The same effect had the completely shrouded live-steamer entered by Werner Pieczewski.

A big thank you to everyone who participated.

LARGE engines... Page 15

What you see exists, so far, only on the computer. Three dimensional pictures generated from CAD data of the construction drawings. It took the computer all night to convert the data to pictures — which by the way are a GARTENBAHN*profi* exclusive.

“Garrattmaker” is the moniker an Austrian fan, who builds Garratts, adopted. He would like to remain anonymous, which we respect.

The name of the game is: program. He plans to build not just the one sample, but rather has his sights set on all 12 of the Beyer-Peacock engines which were built for the Kenya -

Uganda Railways during 1939/40. The plan is to produce them in 1:22.5 scale to run on 45mm track. The extremely detailed drawings and pictures of parts which can be viewed at

www.garrattmaker.com auger well for the intended quality. Planned are 450 parts as investment castings and another 1600 either as laser-cut or EDMed parts! The material is sheet brass of 0.5 and 1mm thickness, as well as sheetmetal of 2 to 4mm thickness which will be laser cut. In addition there will be between 2000 and 3000 copper rivets.

The first of these large 4-8-4 + 4-

8-4 (named “Mengo”) should be ready by end of November 2003. “Teso” is planned for June 2004 delivery, to be followed by “Uasin Gishu” at the end of 2004.

Even Garrattfans who see no possibility to bid on these engines can enjoy the engines. “Garrattmaker” provides fully rotatable 3D renderings on the Internet and offers a free cut-out drawing of the engines for downloading. Apart from that you’ll find a full history of the engines in question.

Live-Steam engine from Ralph Reppingen

Harz - Mallet... Page 16

Dampfmodellbau Reppingen has just finished their model of the Harzbahn-Mallet in 1:22.5 scale. The pre-production sample indicates an excellent and extremely well-detailed live-steamer that is available in either a gas version or in the coal-fired execution. The engine weighs in at 6.5kg, is made of brass and stainless steel, the wheelsets are stainless steel and illumination is available

(additional cost) to be actuated by the four channel radio control which together with the 3 servos (installed in the cab) take care of the throttle, auxilliary blower and whistle. The receiver and battery are installed in one of the side tanks. The other tank serves its usual function of supplying the frame mounted feedwater pump. The boiler holds a total of 500ml and should deliver 45 to 60 minutes of

steam in the gas-fired version. The coal fired version should allow running times up to four hours.

Tests showed that the engine pulls 22 cars on a 2% grade. These engines are available in the black livery with nummers 99 5901 - 5903. The gas fired units are €4572 whilst the coal fired version starts at €4900. Delivery to start in January 2004, in the same order as orders are received.

Three-way turnout from Heyn

Most certainly not mainline...Page 20

Typically this turnout is intended for field railways and/or logging railways. It is a Stub turnout which would look very out of place within the confines of a modern narrow gauge railway. This despite being built for 45mm track gauge. The rail profile that is used is a perfect match to the LGB trackage.

The turnout is very sturdily constructed. The ties are milled from one solid piece of “Kömatex”, the connecting pieces between the ties line up perfectly with the rails and will not be visible once ballast is applied. Both the guard rails as well as the frogs

are fastened with screws to the ties. The remaining rails are held in place with clamps screwed to the ties. The only weak point is the transfer from the three tracks to the switch rail. In order to accommodate the chairs on which the switch rails glide the tie had to be milled to a minimal 2mm thickness, which isnt really a problem as long as the user realizes that the turnout has to be mounted on a perfectly flat sub-bed. Otherwise there could be additional drag of the switch rails on the chairs, which, by the way, shouldn't be lubricated because a) lube will attract and retain more dirt and b) the switch

rails need a certain amount of drag to stay put when they are in the diverging position with the extra lateral pressure. The chairs have a slight indent in the center position to assure proper alignment of the straight route.

To throw the switch requires two hands, but a bit of practice will allow you to use three fingers. While you move the one switch lever with two fingers you keep the second switch lever in its position with the third finger.

The insulated frogs are made of Plexiglas and align perfectly because the other rail pieces fit into recesses in

the frog. The short pieces of rail between the frogs are connected so that even short wheelbased field engines have a steady current supply.

We noticed that the Plexiglas is

somewhat brittle, which meant during one of our tests a small piece broke off when the equipment wasn't gently placed. Obviously our mistake. That didn't take away from the generally

positive impression this product leaves. One wouldn't mind being brakeman on this railway.

Saxonian IV K from LGB

The grown-up...Page 22

The Harz has its Mallets and Saxony has the smaller Meyer engines. The IV K engine with opposing cylinders and wheelsets in trucks is at the top of many a garden railroaders wish list. But does the sound-equipped 99 1568-7 from LGB fulfill those wishes?

The first version of the LGB model appeared two years ago in the green livery of the Saxony Railways and certainly pleased the steam nostalgics. It is a technically interesting model with two power trucks and two motors — something that promises pulling power and agility when negotiating curves.

The version in the black DR livery allows for even more universal usage. Who doesn't aim to have a IV K sitting beside a 99 6001?

But that's where Large Scalars who value scale will face the first dilemma. Thanks to LGB's universal "G" scale there is only a minor clash between the IV K, which belongs on 750mm track and the Harz 99 6001 which is a Meter gauge engine. In short: the Saxonian test model, which came as a Preßnitztal-Museumsrailway version 99 1569-7, is as far as optics go, a nicely executed LGB creation. Which is, while visually pleasing, too wide and, in order to keep some proportions, even 6cm too long. Undoubtedly a "fully grown" IV K. This won't bother many of the LGB fraternity, but it is good to know. Because paired with the "to scale" cars of many a higher class manufacturer, the little "Miss Mayer" will certainly leave the impression of being a very hefty Amazon.

The 96 units of Class IV K were the largest series of like engines on the German narrow gauge net. The flexible

design of the trucks (according to the Günther-Meyer design) allowed them to negotiate curves of 40m radius. The engines are of the four-cylinder, compound variety without superheating which in German nomenclature means a B'B' n4v. The high pressure cylinders were mounted on the front end of the rear truck and the low pressure on the back end of the front truck. 91 of the engines built by Hartmann, Chemnitz between 1882 and 1921 were renumbered in 1925 according to the DR scheme.

57 engines survived WW II to see further service.

A model of the rebuilt version

The LGB model represents one of the DR engines that were rebuilt starting in 1962. At that time it was decided to replace the boiler on 25 of the units and some also received new frames. The new steam dome had a very distinct flat look, gone was the sand box at the rear of the engine and the feed water valves - without a separate dome - got mounted right on the boiler.

The detailing of the LGB IV K coincides closely with the preserved engine of the Preßnitztalbahn — including the pulleys for the unique Heberlein brake system. But for some reason LGB selected the lettering of the earlier era 4, which lists the L6 overhaul as dating from 16.10.73. Engine 99 1568-7 did have the central mounted Scharfenberg couplers back then, like most of the Saxonian narrow gauge equipment which got changed to that system in the 1930s. LGB would have found the more appropriate prototype in the Oschatz - Mügeln line. Not only did the

Heberlein brakes survive there 'til 1987, that line also had engines 99 1564 and 99 1584 which still retained the original funnel couplers. As well as engine 99 1561 which ran into the 90s with that equipment. Just a suggestion for additional versions which pre-date the museum era.

The lettering on the LGB engine is crisp and wear resistant. The plastic coal load received a light coat of anthracite and silver, the cab with its collection of brass coloured hand-wheels is certainly an eye catcher, but also an acquired taste. The fireman's tools on the right hand water tank are nice details — but what's missing is the second man in the cab.

As much as the IV K is representative of the bygone era of secondary, narrow gauge railways: The number of rivets on and below the smoke box door are most certainly unusual on a rebuilt engine on which most everything was welded.

Too broad a truck

The critical eye of the collector is probably misplaced. This is a robust engine for duty in the garden which has but one major flaw: the rear truck with its high-pressure cylinders which have too much overhang and the side rods/valve gear which have a lot of play. Following the prototype LGB designed the rear truck with an outside frame. However since the prototype runs on 750 mm track and the model on the equivalent of 1000mm the width of the truck became too large. As a result the cylinders and side rods/valve gear protrude even farther into the profile. What results is an engine built to 1:19.5 scale (as determined by the length over the funnel couplers) which

sports a rear truck that scales out to approx. 1:17. This doesn't just upset the optics, it also means that the IV K will have problems with higher platform edges. If you plan on using that type of platform it is recommended to use the IV K to check clearances. All is well if the rear truck clears. As is evident scale is not only a matter of optics...

Once the clearances are established there is no holding back. Each of the trucks has a Bühler motor which develops plenty of power. Twelve electrical pick-up points (including the four wipers) ensure a steady current supply, which is just as well being as the IV K draws almost 2A under full load. The engine has very nice running characteristics in analogue mode, this despite the top speed which rivals the one we know from the LCE. There is a large enough regulation range to allow the narrow gauger to operate in a prototypical manner.

Set the IV K on the track and it comes alive, thanks to the incorporated sound (it can be turned off). The standing engine will emit "shoveling coal" sounds (where is the fireman?). Both whistle and exhaust are out of synch on start up i.e. the engine accelerates more rapidly than the sound would indicate. More annoying is the fact that the sound misses approx 2 seconds whenever the direction of

travel is reversed. You can bet that switching will be no joy for the ears. And then there are the auxiliary sounds (especially the ones triggered in digital mode) which are too loud compared with the muffled exhaust. The IV K was never a loud engine, but LGB's mix of the sounds earns no extra points. No more than the F4 triggered announcement of "All aboard" which has the ring of Leipzig's central station instead of the quaint sound of whistle stop Malter.

Digital mode opens a variety of possibilities to use the standard decoder for extra sounds. He who knows when to actuate the injector pump or the generator and masters the synchronization of the squealing brakes as the speed slows will be a happy man. It bears mention that there are better sound boards on the market — one need only contemplate the possibilities of the SUSI interface.

The decoder is capable of more than the MTS unit, with its 14 speed steps, is able to utilize, but this isn't documented in the manual. Acceleration in 14 step mode has the feel of a mechanical gearbox with distinct steps. This despite the factory preset to 28 step, of which LGB-MTS only interprets every second one. Users of other DCC systems (Lenz, Uhlenbrock, ZIMO etc.) can repro-

gram the decoder to 28 (or 128) speed steps by adjusting CV29 (details to be found in the manuals of the DCC system manufacturers). To reprogram one needs to set the mode switch in the cab to "2" (at least in the case of Lenz controls). 28 speed steps suffice for smooth operation, only the start up speed failed to improve — a slight jerk, just like in analogue mode, is noticeable at the 5V threshold.

All in all:

The not-inexpensive IV K is, despite the massive deviation from the 1:22.5 scale, a reasonably proportioned, robust and adequately detailed model. The oversize of the rear truck could pose problems on layouts with already established clearances for station platforms.

The running quality in analogue is very good. Less convincing is the sound (packed with auxiliary sounds in digital mode) which has good sound quality for the auxiliary functions but missed the required volume balance.

LGB's MTS system doesn't utilize the decoder's capacity. Owners of other DCC systems will be able to get better performance by reprogramming the decoder. However they need to bear in mind that without resetting to the LGB factory default, operation will be erratic on MTS powered layouts.

Kit or R-T-R from Hilbert

A genuine Saxon... Page 27

The narrow selection of Saxon models offered by the Large Scale industry is being expanded. Albrecht Hilbert, in Neukirch near Chemnitz produces car bodies to fit on LGB passenger car chassis, together with a selection of detailing parts. As a stand-in for the growing selection of freight cars i.e. gondolas, tank cars and covered gondola types we selected a R-T-R gondola for inspection. This car is available both as a 775 or a 776 series and is assembled from kit 77311B which Hilbert offers at €82.

The finished model, properly

assembled and nicely painted, retails for €143.

It is, with the exception of the incorrect Meter gauge wheelsets, an accurate model that features the typical Heberlein brake system in almost all details. Only the underbody misses the connection between the Heberlein mechanism on the end wall and the brake rigging. Another shortcoming are the brake shoes which, apparently due to a change in wheel diameters, are quite some distance from the wheel treads.

The car is equipped with 25mm

wheelsets which have properly rounded flanges and slightly tapered treads. The axles with the perfectly concentric wheels run in wear resistant plastic bushings. A plus are the coil springs — hidden behind the leaf spring imitations — which allow the axle bearings approx. 1mm of vertical movement. This assures good performance in lieu of the usual three point bearing arrangement. The car is made of styrene — with the exception of the funnel couplers (metal) — which works fine for floors, sidewalls and the U-channel reinforcements.

The Heberlein brakes — reaching some distance above the sidewalls to which they're fastened with minute screws — could, in the rough and tumble of garden operations, fall victim because of their scale size nature.

Absolutely robust are the funnel couplers, which require a steady hand during the coupling operation. Large Scalers who favour R1 operation won't be happy and probably wish to substitute the LGB couplers instead.

Those who plan to assemble the kit should encounter no difficulties as the

“Traglastenwagen of the DR from LGB

Can you manage that...? Page 28

To get it out of the way: “Traglastenwagen” are coaches reserved for those who carry plenty of hand luggage and always designated as Second Class.

What would go well with a IV K of the DR? LGB offers a fouraxle coach in their eXtra-Shop line modelled after the steel-clad “Traglastwagen”, which is the companion to the well known woodbodied coaches found on the State railways prior to amalgamation into the DR.

The passenger equipment of the Saxon narrow gauge lines underwent many a transformation during their time. The “Traglastwagen” 970-576, which was (according to LGB lettering) assigned to Wolkenstein, poses many a puzzle. This much seems certain: It must have been a car of the 729 series, which were built in Bautzen starting in 1919. The prototype for the LGB car is likely the version with 7 narrow windows from the series produced in 1926 and that type was refurbished with sheet-metal cladding in 1978.

The plastic car from LGB represents the clad version. But let's start with the interior of the car, more of necessity than choice. Our test sample had a loose bench (reminiscent of the occurrence on the Bernina railcar) crashing around the car body. While we suspected rough handling during transport on the Bernina item

instructions are step by step. The required drawings are included, but three dimensional illustrations would have been of some help.

A less than ideal solution is the lettering with the heavy and shiny carrier sheet. Those reluctant to apply Dullcote in order to tone down the lettering can get a refund of €5.50 and purchase a set of transfer lettering for approx. €25

The gondola's width of 91.5mm (exact 1:22.5 scale) appears narrow behind the heft of the VI K.

Hilbert produces an exact replica

which could easily be fixed, we soon learned that in this instance there was a design flaw.

As the car lacks a manual one has to resort to the trial and error method to remove the roof to gain access to the passenger compartment. This is how it works: Take a broad screw driver to carefully pry open the gap which guides the doors in the roof and with thumb pressure applied the roof will pop. You need to observe the correct position of the doors on re-assembly and a light tap with your fist should overcome the latching force. How much more simple the screws below the roof used to be....

As soon as we carried the car out to the layout we discovered the same bench had come loose again, just as we anticipated. It is only the window glazing that secures the bench, no latching indents in the floor.

Interestingly the second sample — of the State Railway variety with the wooden body — didn't have this problem. It appears that small differences in the moulding process are sufficient to cause the problem. But this could be solved with a customer friendly solution which would require less work.

The feature of the partially opened windows (they can't be closed and every second one is open) reveals another problem. The coarse wood-grain detail on the window frames

of the original which would certainly benefit by having the chassis required for 32mm track gauge.

Those who acquire the kit will, if they wish, be able to accomplish the re-gauging with relative ease. Adding a spacer behind the longitudinal beams and adjusting the wheelsets on the shortened axles should be all that's required.

Those who favour Meter gauge will find the Hilbert product a nice addition to the roster. Because models that are built to scale always look “right” and authentic.

makes them appear even larger. A light wood colour would have been enough.

The colour of the interior leaves much to be desired. The light wood colour of the walls found on the prototype is missing and the reddish-brown LGB benches have no relation to the prototype's light coloured wood benches or the green DR seat covers. Also missing is the second stove, this despite the stack being present on the roof. Nicely done are the railings on the platforms, notwithstanding the fact that they swivel in a different direction from those on the prototype.

The easily removable, incorrect centerbuffer gives one hope that LGB will one day offer a replacement in form of the correct Scharfenberg coupler that have been standard issue on many of these cars since the 30s.

Attaching the Heberlein brake system would be a wasted effort on this car but would certainly fit the look of the State Railways coach.

A major disappointment are the grossly oversized plastic wheels.

Checking the car dimensions resulted in accurate 1:22.5 scale for the length (within 1mm), but the width of the car exceeds the proper scale by 5mm, which considering the oversize of the IV K is still a plausible compromise.

Overall:

Adapting a prototype that runs on

750mm gauge to run on the equivalent of Meter gauge trackage required relatively few compromises. The interior and the window frames lack the proper look. The center buffer, together with the oversized wheels,

Recreating vignettes of Saxony

Along the Devil's territory... Page 33

Jens Heinke started out running "Whatever I liked.." But since LGB's IV K has become available he started concentrating his efforts on the homegrown Saxon narrow gauge. His passion started while on holidays in the Bavarian Allgäu...

My interest in model railroads started when I was thirteen. A TT layout would find use — mostly around Christmas time — and would see many expansions and modifications. Family holidays in 1991 brought us into first contact with a theme park garden railway in the Allgäu. We liked the size enough that our son soon after found a starter set under the Christmas tree. Little time elapsed before we started adding to the set. Come Spring we would loosely set the tracks out on the lawn and soon after we had plans for a permanent layout.

The start happened the following year with 22m of track and 3 turnouts. A particular theme was still missing and accordingly we acquired plenty of rolling stock for both the DR as well as the Zillertal Bahn.

The following years saw steady growth to today's size of 14m by 5m with 74m of track and 13 turnouts.

The focal point of the layout is Mühlbach Station, which never changed its location but saw several expansions.

An industrial siding to the sawmill was added, an engine service facility is now part of the track plan along with an additional through track.

As time went by we built a cable car up to Devil's Mountain and added a whistle stop at the Lower cable car station.

During all those years there was still no unifying theme, until 1999 when LGB announced the production of the

leaves a non-prototypical impression of an otherwise well executed coach which, apart from the mentioned items, has a nice finish.

This car complements the IV K much better than the two-axle

IV K.

Being as I had watched the prototype on many occasions, it was an easy decision: I "needed" one of those engines. Soon after delivery of the IV K my perception of the railway started to change: Forget about "anything goes" and let's concentrate on Saxon narrow gauge. But as I'm not a card carrying rivet counter I still run the Spreewald as a "visiting engine".

The announcement of the IV K gave me plenty of impetus to start some rolling stock projects, the selection prior to 2002 was limited to two-axle coaches. Up to that point I had concentrated on scratch building structures and accessories, including all structures on the layout.

Let's go for a tour of the layout. Starting point is Mühlbach Station (Mill Creek). Heading West we pass a farm to reach a junction where the track leads either to the whistle stop at "Teufelsberg" (Devil's Mountain) or to "Teufelsgrund" (Devil's Flat). Heading to "Teufelsberg" means tackling the incline prior to rounding the mountain with the cable car. From the whistle stop the line heads downhill back to Mühlbach. If the train is headed for "Teufelsgrund" it will encounter a tunnel shortly after the junction. "Teufelsgrund" has a siding to allow for meets and passes. After leaving "Teufelsgrund" the line circles the fortress of "Teufelsgrund" and heads back to "Mühlbach", passing an old mill along the way and crossing the mill creek on a bridge.

Passenger and freight trains modelled after Saxon prototype are the

"Fantasyland" items. If you consider buying one check for that loose bench beside the stove when you unpack the car. A gentle shaking will let you know what's what.

typical consists we run today, along with some of the mixed trains which were quite common. They're powered by the IV K or a converted Stainz with a tender. On occasion you will see a museum train lead by the Spreewald or another Stainz.

The technical stuff

The track consists solely of LGB material, in the fixed section, flextrack and turnouts. The road bed consists of home made concrete elements. The track is fastened to the road bed with screws. The ballast is secured with a water-resistant adhesive mixture. Power is still analogue and I use a PWM controller. The control panel with a track schematic is incorporated in a suitcase (normally intended for tools) and contains all the necessary toggle switches for turnouts and track sections. The 230V power supply is installed in the house — out of harm's way. The control panel has quick connects to the different cables. There is also an automatic sequence which uses two of the station tracks and allows alternating the circulation of two trains. This allows operation without supervision and manual intervention.

The cable cars work also on an automatic circuit and the appropriate load/unload intervals at the station.

Scratchbuilding and kit bashing

All structures have been scratch built from all kinds of different materials like the cast stone from Jig-Stones, different plastic materials, concrete and brass. In some instances I cut individual roof tiles from plastic sheet. Mühlbach Station is covered by

1300 of these tiles.

Most of the engines are kit-bashed and/or detailed, one of the first was a revamping of a IV K from green livery to the black of a 99 1584-4. A Stainz underwent the same conversion from green to black, had a sound equipped tender added and got renumbered to a proper DR designation.

Both IV K were retro-fitted with sound modules from Dietz and a sound module was added to the Spreewald. I also detailed some of the engines, amongst other things by weathering the running gear.

Many of the cars were scratch built over a number of years. Amongst them four-axle passenger and freight cars to complement the IV K of the types that are still running in Saxony i.e.

1 coach of type 720
2 coaches of type 729
1 baggage of type 751
and
2 box cars of type G Gw

What do you mean “G” scale..!??

“G” wie Gummi...Page 37

From time to time — most often after new product announcements — the discussion on scale will be re-activated. Positions will be taken, pleaded and defended.

But it is really very simple: Scale is the ratio (both for reduction as well as enlargement) between the original and the model. And when do we term the replica of an original a model? In my opinion when the model has a correct scale!

Most garden railroaders use 45 mm track gauge. This provides for some logical conclusions in regards to scale. We know that standard gauge track measures 1435mm between the rails. It therefore follows that the result of 1435:45 will be the scale in this case 1:31.88 or nicely rounded 1:32. The same applies to Meter gauge 1000:45 = 22.222 or rounded 1:22.5.

One is allowed to assume that the designers at the Large Scale manufacturers are using the same

The cars were built using both plastics as well as brass and detail parts, trucks etc. were purchased from different suppliers. If you're interested you can check out my website at www.heinkes-kleinbahn.de.vu to get more details on the methods.

Other cars were repainted and lights added.

The landscaping of the layout consists of slow growing conifers which get pruned every year. In addition we use different varieties of plants that are typically found in rock gardens.

Operation rests for most of the winter, due to frozen turnouts. The turnouts get covered in the Fall but still freeze on account of the high humidity.

Since a model railway is never complete (or shouldn't be!) there are plans for expansions and modifications. Planned is the change from analogue

method. But that's where we go wrong. There are “models” which incorporate three different scales: one for the length, a second one for the width and yet another for the height. The deviations can be anywhere between a scale of 1:19 and 1:27. Serious model railroaders ask: What gives?

One could surmise that Large Scale manufacturing is still in its infancy. The technical aspects have progressed but the proportions are still missing. Many of us spent umpteen years in the model railroading hobby and remember the same ailments from the smaller scales, where it took many years til HO and N had a clearly defined scale. But the HO and N scale manufacturers improved tremendously not least because of the increasing competition.

And how are we doing with Large Scale? (I almost wrote “G”, but that's for later). Much to our delight the same tendency can be noticed, albeit

to a radio controlled system which will incorporate the receivers in the engines with the commands coming from the mobile controller. What I have in mind is the new system from Train-Control which should soon be on the market.

In the rolling stock department there is a piggy-back car in planning which will be loaded with a standard gauge freight car.

The present layout is not just my handy work, but truly a family effort that includes my in-laws. Without the help of everyone only a fraction could have been realized.

The layout attracts many interested folks during the year, not least because it is located adjacent to the garden fence and can be readily seen by passers-by. But we have no fixed operating times! After all this is a hobby.

twenty years late. Some of the manufacturers make an effort to have a uniform scale. While it is true that the scale is still off i.e. the 1:29 to represent North American standard gauge, at least the scale is more or less uniform.

One also selects “better” prototypes, namely a model that had a number of different paint schemes and saw use on many different railroads. In short there is some movement. Yes, it was high time!

The technology in the injection moulding field allowed for at least the past twenty odd years to produce scale models. Even the variety that could be squeezed through the R1 curves. Producing moulds for “to scale” models is no more expensive than producing moulds for caricatures, provided one picks the appropriate prototype.

And scale models are just as easy

to sell to the “non-modelrailroader”; children have no aversion to scale and enjoy playing just as much. Besides there is little likelihood of damage just because of the scale factor, which is not to be confused with Super-Detailing.

The Large Scalars will be delighted with models that are to scale and have the right proportions, the super-detailing can be left to those who want it, even those who feel it makes sense in the garden.

One thing is for sure: A properly proportioned model in a clearly defined scale will find more buyers than a product that is pure fantasy, apart from having the same colour scheme and the same lettering as some prototype. However if the route from prototype to design desk is detoured through the marketing department it is quite possible that scale gets lost along the way. Granted one can sell many a

thing that isn't to scale. But to repeat: One can sell a lot more if it is actually to scale. Creative distortion is certainly not the yardstick of the model railroader.

What will help to cure the problem? In the first instance: selective buying, secondly scratch building and thirdly support of those manufacturers who pay serious attention to Large Scale modelrailroaders. Letters to the editor, comments in the various mailboxes that the manufacturers provide, participation in the fora on the Internet and the dialogue with the manufacturers at shows etc. will help to promote the “to scale” idea. We know that even the manufacturers who have no forum are busily reading elsewhere to keep their finger on the pulse.

Those of you who spend more than just a moment on the Internet will have

noticed that instead of the proper scale designations one reverts to “G” more and more often. Which isn't all that surprising considering that a global term like “G” certainly is a catch all for the mix of different scales.

I decided quite some time ago that “G” would best stand for “Gummi” (the German term for rubber). The material is the perfect fit for “G scale” where anything is possible. To call some of the “G” items models is certainly a stretch, being as they lack any semblance of uniform scale. What N, HO and O scale have taken for granted for many years — proper scale — can easily be expected in Large Scale items, both rolling stock and accessories.

We waited long enough!

Customizing a Bachmann engine

American Oldie... Page 39

Watch men turn fifty and there are the tell tale signs of what they experienced.

But what happens when a steamer turns fifty?

Knut Martin didn't hesitate and treated his Bachmann American to some weathering to give it personality. It sure aged the engine.

I just had to have it! I ordered the Bachmann American as soon as I had seen the first B&W ad. She was the personification of a typical Western engine, a long faded dream from my Karl-May days. Both Mr. May and the “Wild West” I left behind long ago.

Bachmann's Shay converted me to a modelrailroader and had set the theme: Logging, a typical American logging railroad set in the 20s and 30s. As I unpacked the American I noticed the gaudy colours, just like the engines used to be back in the 1800s when railway companies could still afford people to polish engines. But things have changed and I planned similarly with my shiny 1:20.3 model.

The Shay got weathered using a brush and thin washes. Any disassembled screws would be an invitation for disaster. Just to open the trucks and the tender to install R/C control and sound was plenty of excitement.

The 4-4-0 was going to be my test piece to experiment with all the methods I had read about. She would become an engine which had survived into the 30s and was now relegated to light duty for passengers and freight on a logging railway.

This meant that the engine had to be dismantled almost to the last bolt. The conversion wouldn't have a specific prototype but everything would be plausible and there would be some example.

The engine, an individual..

During its life time the Baldwin got repaired, overhauled and updated. Some companies preferred short smoke boxes, others long ones. The

positions of headlights and smokebox struts would be more or less given. Being as the smokebox was simple to detach it was easy to have an extension fabricated from PVC tubing and attached with brass nails to simulate rivets.

1911 marked the point where all mainline engines needed to be equipped with cut-levers for the couplers, steps for the brakeman, running boards and proper hand rails. I didn't follow all these rules as the elegance of certain parts would have been compromised — and because my soldering talents are stubbornly stuck at a mediocre level.

Bachmann's American has the classically long pilot, with a long coupler extension which swivels upwards. There was no room for a Kadee coupler with a trip pin. The pilot is very sturdy and one of the solid handgrabs on the engine. To fashion a shorter pilot was out of the question. A further argument was the fact that engine rests

on the driving wheels, the pilot wheels have no weight bearing function. The engine has so much overhang in curves that a front coupler would be non-sense.

But I found a picture with a compromise solution: A classic pilot with a reinforced link and pin coupler. This is what I built using styrene, brass and the coupler from a LGB log-disconnect. I also textured the struts and scored the parting lines to emphasize the different parts. In addition a few of the brass nails (rivets). The originally plain piece of plastic had now some texture and appears as if assembled. Steps and brake hoses were added. Instead of the flag holders I installed a handrail. I glued everything possible to the smoke box and the boiler. The castings are from Ozark Miniatures, clean outs, valves, a more detailed compressor, air tank in the frame, a generator and instead of the humongously large kerosene light I installed the lights from the Shay (which in turn got new Ozark lights), marker lights and a handrail for the length of the engine. The narrow gauge 4-4-0 was missing the brakes on the drivers, I decided to install the ones from a Mogul. Bachmann's price for the parts was so scary that I decided to build my own one day. The boiler contains the RCS radio control and the Phoenix soundboard, I skipped the fussy smoke generator. Two buttons to adjust the sound volume are hidden behind the smokebox door.

A new home for the crew

A wooden cab wouldn't last forever and sooner or later needed replacement. Americans are taller than they used to be. I noticed in a video of the only remaining narrow gauge 4-4-0 the Eureka that my frame of 1.90m would have trouble fitting in the cab.

I assembled a new cab in board by board fashion using teak, the windows and doors were retained. I covered the roof with the lightest fabric I could find.

The roofs used to be covered with fabric and only later on with sheet metal. The airvent is a 1:24 brass part from a ship model. The cab got painted black and then distressed with a fiberglass eraser.

The frame of the engine, the fire box and the suspension are castings, painted a shiny black. I corrected the lack of depth with a paintbrush.

The omnipresent Bachmann fireman got placed on the connector plate. This camouflages the distance between the engine and the tender. They always include the same type of fireman with every engine, the third one is too much and number four gets carefully taken from the packaging — and treated like a trademark symbol.

A load for the tender

The connection to the tender are the two feedwater lines. They consist of brass tubing, shoe laces and heat shrink tubing. Each of the lines contains two cables, which aren't visible. But it took a full evening to get the second cable through on each of the lines.

All my engines are wood fired, because I find a stack of wood more interesting than a pile of coal or a tank of oil. The first thing to add to the tender was a railing made of 2mm brass tubing which gets flattened. The brackets for the back-up and the marker lights. The plastic toolbox got replaced by wooden ones complete with cast hinges and the covers were mounted where they belonged; on the inside. The boxes contain various switches, the plug-in for the battery charger as well as a plug in for the spare battery that rides in a water tank car. The minute tender had just enough room to squeeze twelve miniature batteries around the speaker. The fire wood is mounted on balsa and carved out from below. It can be removed in two sections.

Aged by 50 years

Sometime around the previous turn of the century someone started to paint steam engines black because that

saved on upkeep. If you prime an engine then apply rubber cement to be followed with the finish coat, you only need to remove the rubber cement blotches and voila you have very flaky paint. I tried it on the inside of the tender. American rubber cement must have a different consistency from the German variety. Mine adhered too much. But doesn't plastic solvent attack plastic? After removing the original paint I used my finger to apply plastic solvent to all the surfaces. This was followed by carefully removing about 50% of the defect with 400 grit paper. This simulated the peeling paint which had been repainted time and again without being cleaned. Then I applied a coat of dull laquer and followed up with washes of brown rust. Next followed the red rust treatment. Apply softened water (a drop of detergent will do it) with a small brush and immediately add a dab of water soluble paint. The paint will disperse in the water and normally migrates to the corners.

You need to pay attention where rust develops, how it spreads and where it will run down the side of surfaces. You will get better at it with each rust spot.

It disturbs me when I see rust that has been applied with an air-brush — if I see it. The tender features patched rusted through portions which have been repainted. Those portions are already rusting again.

The lettering is still a challenge. For the numbers on the tender I used a template and applied the paint by dabbing with a brush, the ones on the sand dome were done freehand. To the glazing of the lights I applied transfer lettering — most likely the last batch that was for sale.

The finishing touch was the application of mud and dust from below and soot and dust from above, both applied with the air brush. The biggest challenge! On the one hand because my creation was to be buried in dirt and on the other hand my lack of skill with the airbrush. However, now the Bachmann 4-4-0 is **my** 4-4-0. People stop thinking: "Ah, a Bachmann!" instead they ask: "Tell me, is that a Bachmann?"

What a puzzle... Page51

Don't expect quick results assembling the craftsman kit from Hartford. To build this kit of accurately cut but skimpily documented part will take plenty of time and patience.

"If everything else fails, read the instructions!" Bob Hartford put this quote at the beginning of three pages of instructions for the 6000 series flat car of the D&RGW. He could have saved the irony, being as the instructions are far from detailed and leave plenty of questions to puzzle. In the fashion used by German HO limited series producers back in the 70s — typewritten text and minimal drawings — Hartford delivers a short description, four 1:1 drawings and a few small pictures indicating the position of the lettering.

Especially annoying: parts that are visually different i.e. two pairs of cross members have the same number in the drawing. Only very close study of the drawing will give a hint, far from certainty, which part is which according to hole patterns and cut-outs.

Not before the end of construction, which stretched over 3 full weekends, was it apparent were some of the small wood parts, that one couldn't make out in the drawing, would fit.

Nicely detailed, but warped trucks

There is no drawing for the trucks, which come with two types of brake rigging. Being as even the few pictures in the relevant reference books are of little help, one needs to use feel and intuition. Having left-over parts doesn't inspire a lot of confidence in the producer's attention to quality

control. Just like you're on your own when assembling the Accucraft couplers. These have almost no clearance in the tight coupler pockets which causes the car to bind in 1000mm (3ft4") curves. And the couplers sit several millimeters too high if compared to the couplers on the Accucraft/AMS cars.

A surprise on the finished car is the apparent intention to use it strictly for display, how else would one explain the 1500mm (5ft) minimum radius required. Anything less will cause the wheelsets to rub against the brake rigging and the longitudinal beams. I had to modify the finished brake rigging (distort is the better term) by bending and clipping and the beams needed to be notched.

What also annoys is the quality of the cars truck sideframes. They slant due to the asymmetrically arranged coil springs and the axle journal openings misalign in all directions. Were the modeller to drill these, he at least would have a choice. As it is, one needs to carefully open the holes in order to make room for the axles of the excellent Sierra Valley wheelsets which have 1.8mm flanges.

Of course this won't faze an experienced modeller, he will find solutions and luckily the wood parts fit perfectly. For a less experienced modeller, with limited English, the kit will be a tall mountain to climb. To recommend the purchase of a \$25 assembly jig — which is not required — in addition to the \$100 kit, is just part of the many annoyances. As is the insufficient quantity of wire, which after all needs to be bent according to the 1:1 drawing. The finished 30ft flat

car looks convincing because he reflects the prototype and the worn floorboards lend authenticity. I started by distressing the boards, both top and bottom, with a wire brush and the end were also slightly distressed. This was followed with a wash of gray stain mixed of paint and methyl alcohol, dust and grime was added by using different chinks. The finishedboards were glued to the frame. Drag marks were made with a screw driver, drops of oil provide spreading and bearly visible stains, paint splatter rounds out the appearance of a car that carries different loads. Two boards are almost new, an additional one is old and rotten. A fine felt pen was used to simulate the brown indents of the nail holes.

The original prototype didn't last long. Many of the 100 30ft flatcars which were delivered to the D&RGW in 1887 were rebuilt around the turn of the century (early 1900s), the last ones were sold to the US Navy (1942). Only four survived as MoW cars on the Toltec & Cumbres Scenic Railway in Colorado.

To sum up..

There are few flaws on the finished car, apart from the slanted trucks and the high couplers. But it must be said: The instructions are an imposition. This craftsman kit is only recommended for the experienced modeller.

However there is an alternative: Accucraft/AMS produces the same type as a R-T-R item.

His first garden railway had no relation to the Rhaetian Railway. All Peter Wanke wanted when he laid the first 30m of track 25 years ago was a garden layout. But passing time meant higher standards and a larger layout. Until the day when uninvited visitors appeared.....

Back in 1962 Wanke's acquired a 3000m² garden plot in Southern Germany. For the first few years it remained in agricultural production, but by and by they added trees, shrubs and a gazebo. Peter Wanke belonged already to the modelrailroad fraternity, but because of limited space he modelled in N scale.

"Bit by bit I realized the big advantages of the larger scales and the opportunities which a garden railway would offer" recalled Peter in an article he wrote in 1992 for "Die Modell-Eisenbahn". This stirred the wish for a garden railway — planned was a "small" large one. After a scant three months, April to June 1978, there were 30m of track laid, a station with three tracks installed and a passing siding in place. The conifer planted plot gave glimpses of the train in two minute intervals if one was resting on the patio, otherwise it was mostly hidden from view. The power was provided by a car battery since the garden plot, off the beaten path, had no services.

Following holidays in the Zillertal Wankes decided to forget about the "small" large one. There was plenty of space and the Haberschlacht - Heumaden Railway Company started to grow.

Shortly before that, on the occasion of the inaugural, flower decorated train between Haberschlacht and Brackenstein (June 14, 1979) Peter shot a picture on the back of which is noted "...not quite finished" (see picture on page 59). That is an understatement, being as the garden

saw the joint efforts of the Wanke family for the next 25 years und in the process the transformation from a South-German branchline operation to a Swiss Mountain Railway. The RhB layout developed, with detours, during three construction phases which stretched over many years and today has trains circulate at close to prototypical speeds. The stretch from Surava to Tirano takes 16 minutes. A journey through the Grisons in 1:22.5 which includes the famous circular viaduct at Brusio.

Back to the "Stainz Zeit"

Let's step back in time when Stainz engines pulled two-axle coaches through Wanke's garden. This was the time of the Haberschlacht - Heumaden Railway Company which existed from the inception in 1978 until the RhB takeover in 1986. Up to that time it was purely a LGB layout which had grown from the original 30m of track on 30m² to 265m of mainline on 265m² of space. The turnouts were all LGB products used in the spring-loaded mode. Peter's planning had method; for each square meter of space, one meter of track. Only 1980 and 1984 saw a lull in construction — all the other summers were extremely busy and the winter months saw the construction of structures.

Everything is too small...

The anticipation of the next season was dampened by a feeling — to which long-time modelrailroaders can relate — the feeling that winter has shrunk the railway. "There was no alternative, but to expand the layout". The garden railway had grown to a point where there were two large loops. 1983 saw the inauguration of an additional line with return loops on each end. To operate the new type of LGB turnouts Peter installed an additional battery in his car. There was still no electrical service

to the property. The growing collection of rolling stock together with structures that were not weather-proof got stored in an underground location. However the hide-away was not secure enough and in 1986 thieves carried away whatever wasn't securely attached and badly damaged the rest. This signalled the end of the Haberschlacht - Heumaden Railway Company — almost over night.

A chance to start over

Peter recognized in the bad situation his chance to start over. Since 1983 — the occasion of riding the Davoser circle route on the RhB — he had been intrigued by the Swiss prototype. The plan was to have the 1:22.5 RhB models in the garden. Between 1986 and 1989 there was a drastic reduction of track and catenary was being installed. The first to go where the sections with tight radii, along with the old turnouts. Flextrack was used as replacement and a minimum radius of 1m was adopted. Only the large stone viaduct, which dates back to the early 80s, remains of what used to be.

Success with "Mohrenköpfe"

While rebuilding progressed Peter decided, together with a friend, to build a series of Uce cement hoppers, the well-known "Mohrenköpfe" (named after a European sweet which's shape in resembles). "Ten for him, ten for me and ten to be sold" remembers Peter. One of the units he traded — with LGB-Boss Richter who offered him a Ge 2/4 (2045). This was the new beginning with the rolling stock. Success and enjoyment with the Uce convinced Peter to limit himself to building only scale models of RhB prototypes. By 1990 he had 30 cars and 4 engines from his own production ready to run. There was considerable progress in the

garden. The scale size rolling stock meant larger curves were a must. Major changes happened between the Fall of 1995 and the summer of 1996. All station trackage was moved, from the inner location to the periphery. "Being as a major operating point like Surava — placed at ground level — and equipped with catenary is not conducive for switching moves, I always wished for a station at table level: to easily place both cars and engines on the track" says Wanke.

All rolling stock is being brought from home and taken back at the end

Jewels from NPTM

Simply exquisite...Page 62

NPTM — these four letters could come to simply mean "highest technical precision". The man behind the letters is Norbert Paech (Eichenberg, Thüringen), someone who thrives on intricate work. The wooden models of this technical artist do more than resemble the prototypes — they function in precisely the same way.

Looking at his hands you start to wonder. His are ordinary men's hands, but the use he puts them to for the minute models is extra-ordinary. "Nothing special and very sturdy" replies Norbert and presents the visitor with a handcart in 1:87 scale which he assembled from etchings. Sturdy is the little cart — about 8mm across — that balances on one's finger tip without doubt. But nothing special??

HO and O scale models are no longer the main stay for Paech, the demand for larger models is increasing, especially 1:32. What can be done in the larger scale is illustrated on a wooden delivery buggy which has everything: the axles are sprung with proper leafsprings, the brake shoes are made of wood which act on the nickelsilver bands of the spoked wooden wheels just as soon as you turn the crank by the driver's seat, to transfer the motion through several

of the day, since the horrific experience of the break-in. The rolling stock travels in special containers. After time-consuming surveying it was decided to move the station to the South end of the layout: "Luckily I left enough room during the previous rebuilding phases not to cramp my style." The West end of the station features the plug-in for an additional controller, to make switching in two-man operation a joy.

A few years prior, starting in 1990, phases "B" and "C" were under way. "B" included Tirano station and the

levers.

Just like the original which is exhibited at the Hamburg Museum of History. A client wanted exactly that carriage. Paech built it using basswood boards which he nailed and glued. The leafsprings are not "simple castings" but rather individual pieces etched from nickelsilver, the banding is all of 0.2 to 0.5mm in thickness.

"The spindel thread of the brake" mentions the artisan "is 1.2mm in diameter" Half of that in 1:43. He could build the same wooden model in 1:87, but the price would be astronomical. Those who would like the larger scale model for their layout or display case, need patience and money. €475 for the model that consists of approximately 250 parts. That is reasonable considering the hours required. Availability is on completion, batches of the same item are extremely rare.

It takes the 48 year old Paech a week to design all the parts on the computer based on old drawings and pictures. Paech learned his trade a VEB Carl Zeiss, in Jena (former GDR). As a modelbuilder of fully functioning prototypes he learned not

circular viaduct at Brusio and the phase lasted about two years. (picture on page 58) Phase "C" was started in summer of 1994 and it was anticipated that construction would take five years. The final step of that phase was the connection of phase "B" via the Val Pila bridge and the avalanche gallery to Cavaglia station.

The most recent project was a cog railway which started operations in summer of 2001 — precisely 23 years after the inaugural run on the "small" big layout.

only how to design things, but also the art of improvising and the application of all types of different materials.

A sample piece awakens the demand from Large Scalers

After the tumultuous times of German reunification Paech and his friend Günter Weimann, a proponent of the HO-pure movement, went to work for a limited production manufacturer assembling brass HO engines. After "Hp1", the magazine which promotes "strictly scale", presented one of Paech's 1:22.5 creations in 2001, there was new clientel. Most of them were interested in the finished models, which had grown to about two dozen items, much of it in 1:32. The selection goes from a "Schwungramme" (a sort of pile driver) for €10 through carts and conveyor belts for coaling stations to delivery wagons for several hundred Euro. Ladders for picking apples in the scale garden and pushcarts are also in the program, of course all of it produced from wood and metal. The 1:22.5 fraternity is slowly discovering the NPTM products, even if those items are too good for the garden. This despite being as sturdy as the originals as can be tested by

applying finger pressure on a sprung carriage model. 12 carts and ladders are available as finished models. Scratch builders will love the doorhinges and a minute hinge which measures 4 by 4mm. A hay rake, two carts and a 25mm diameter cartwheel made of wood and nickel silver are available as kits. And the 1:32 items are available in 1:22.5 on special order. Those willing to try the kits need steady hands and experience as model builders.

Models need to function like the originals

Norbert Paech has all the skills of a very experienced model builder. Most of the parts he produces "in house" in his tiny workshop which is a lean-to on his house in Dienstädt. The location is south of Jena in the rolling hills of the Thuringa forest. A CNC milling machine, a small lathe, an old milling machine and an ancient lathe

comprise the machinery. "The lathe still has the base of the belt transmission and must be a hundred years old" declares Paech with pride. The lathe and the older milling machine he acquired at a "going out of business" sale in Jena. The nickelsilver edgings he gets done by a jobbing shop, but he takes care of all the assembly and finishing. Sales happen at shows and through the On-Line shop.

But what gives Norbert Paech the drive? There's the fascination to preserve the technical knowhow of earlier times in a model.

"Modelbuilding means doing the prototype justice and avoiding the compromise" is the slogan on his website. While he pays absolute attention to detail, he is not obsessed! He is an artist who can replicate in miniature what intrigues him on the original: miniatures that function just like the originals.

"What fascinates me are old vehicles as a decorative part on a restaurant, a cart in the front garden or old pictures and drawings" explains Paech. He can't completely ignore the pressures of today's economy, but the techniques and the usage of the same materials found in the originals seem to be his demarcation lines. What he produces is basically invaluable and only for people who appreciate the skills required to produce such supreme models.

But the modelbuilder is not just fascinated by the small and intricate. His next project is the replica of a Franconian engine shed complete with the attached crew quarters — for the Large Scalers. That the model will be weather resistant and have all the perfect detail is a given. Norbert Paech is already doing research regarding the most suitable materials — at an outdoors museum.