

BERGHAUS NEWS

Traffic Technology • Mobile Crash Barriers



Contents at a glance

02

- Register now: traffic light training 2017
- 160 years in the service of traffic safety
- New Berghaus logo

03

- cont. from page 1: overhead signs with Berghaus TOP LED
- Mobile roadworks traffic light control with barrier system for service buses

04

- Mobile traffic light controller EPB 24 in operation
- DeuSAT: we'll be there!
- Pilot project in NRW: alternating traffic at A1 roadworks during the rush hour

Colleague Norbert Eikel takes retirement



The colleagues and CEOs Dieter Berghaus, Axel Keller and Andreas Schwingeler came together to wish Norbert Eikel all the very best for his well-deserved retirement.

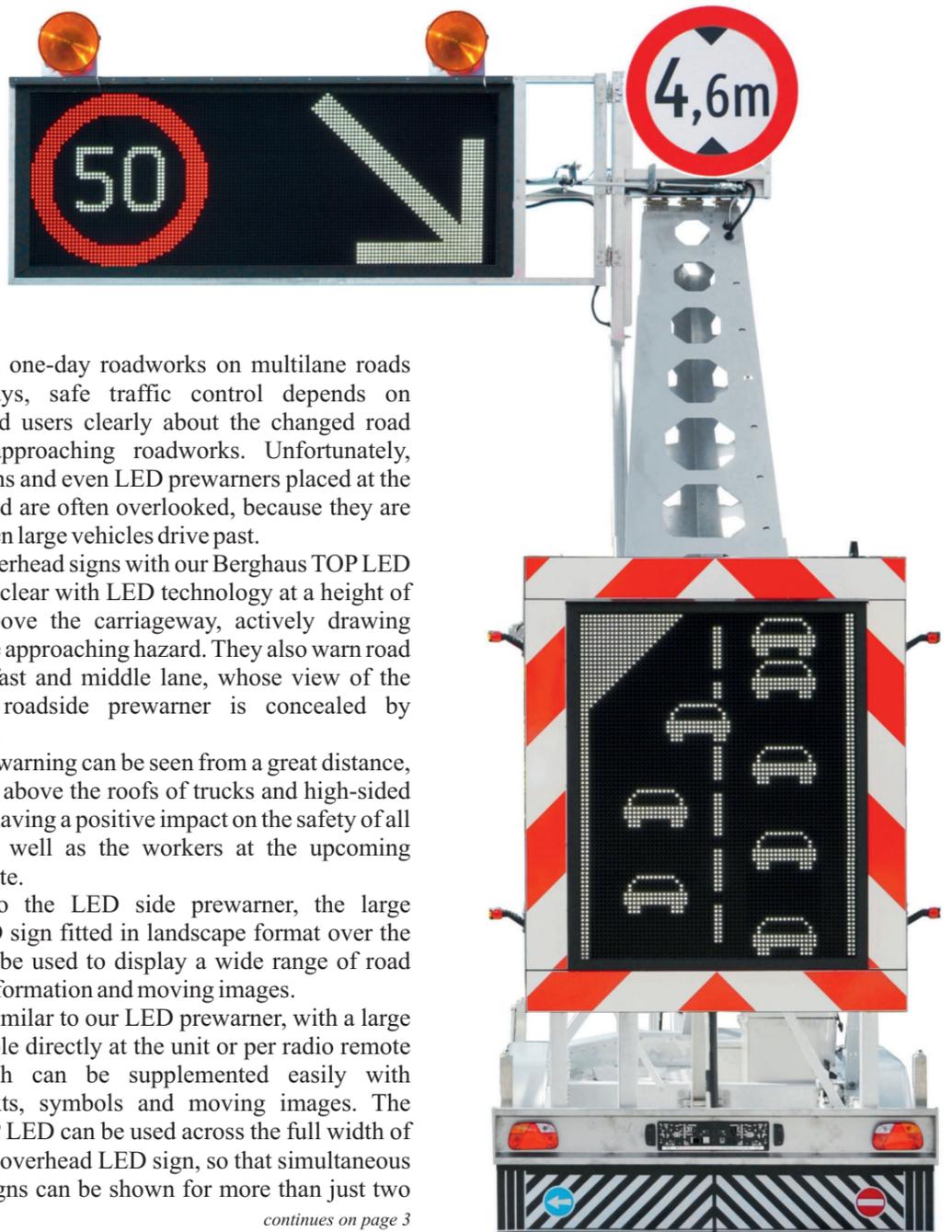
At the end of August, the workforce at AVS Overath GmbH said goodbye to their long-standing colleague Norbert Eikel as he went into his well-deserved retirement.

Dipl.-Ing. Norbert Eikel worked for AVS for many years, initially as site supervisor. Subsequently he was responsible for calculating the company's professional traffic-safety services. He was very popular with his colleagues for his calm manner and his comprehensive know-how. He always gave special priority to ensuring that AVS installation fitters and site supervisors receive outstanding initial and advanced training for their highly responsible tasks.

On his last day at work, Norbert Eikel said goodbye to his colleagues over a cup of coffee and a piece of cake. They have become friends over the years and he left them with a twinkle in his eye as he quoted Heinrich Zille: "How marvellous it is to do nothing, and then relax from doing nothing."

With these words, the whole AVS team in turn wishes him all the very best for this new chapter in his life, and lots of fun for "doing nothing"!

New: overhead signs with Berghaus TOP LED



Particularly at one-day roadworks on multilane roads and motorways, safe traffic control depends on informing road users clearly about the changed road layout and approaching roadworks. Unfortunately, temporary signs and even LED prewarners placed at the side of the road are often overlooked, because they are concealed when large vehicles drive past.

The mobile overhead signs with our Berghaus TOP LED are bright and clear with LED technology at a height of six metres above the carriageway, actively drawing attention to the approaching hazard. They also warn road users on the fast and middle lane, whose view of the conventional roadside prewarner is concealed by passing traffic.

The overhead warning can be seen from a great distance, clearly visible above the roofs of trucks and high-sided vehicles, this having a positive impact on the safety of all road users as well as the workers at the upcoming construction site.

In addition to the LED side prewarner, the large overhead LED sign fitted in landscape format over the road can also be used to display a wide range of road signs, texts, information and moving images.

Operation is similar to our LED prewarner, with a large library available directly at the unit or per radio remote control, which can be supplemented easily with individual texts, symbols and moving images. The Berghaus TOP LED can be used across the full width of its continuous overhead LED sign, so that simultaneous or different signs can be shown for more than just two lanes.

continues on page 3

Mobile width measuring system for heavy loads



Photo showing installation of the mobile width measuring system on the A2. Wide-load vehicles driving into the roadworks are reliably registered by the overhead detectors. Automatic LED traffic lights then temporarily block the feeder roads for the Langenhagen and Bothfeld junctions.

The tender specifications issued by the Lower Saxony State Authority for Road Construction and Transport for the work involved in resurfacing the A2 motorway around Hanover included among others the installation of a width measuring system.

In cooperation with our partner company MIS GmbH Mobile Information Systems, we installed two temporary arm masts with overhead detectors and corresponding control in the approach to the Langenhagen and Bothfeld junctions on the Berlin-bound carriageway. LED information signs with mobile concrete foundations were also set up at both motorway junctions for temporary on-request traffic control.

The detectors register a wide-load vehicle as it drives through the measurement cross-section. The LED information signs at the above-mentioned motorway junctions are then automatically activated for a defined period of time and block the two feeder roads leading onto the motorway. As a result, the wide-load vehicle can pass safely through the narrow roadworks without being influenced by other merging traffic driving onto the motorway.

Contents of our traffic light courses

Course 1 lasts two days (Monday and Tuesday) and covers:

- Brief explanation of the ZTV-SA, TL-LSA and RiLSA 2015
- Calculation of signal phase plans for alternating one-way traffic systems
- Implementing the phase plans in traffic lights MPB 3200, 3400 and MPB 4400
- Fault-finding and troubleshooting
- Laptop calculation of signal phase plans for T-junction and crossroads signal systems
- Implementing the phase plans in traffic light systems MPB 4400
- Introduction to the traffic light system MPB 44 M/S
- SMS remote monitoring system

Course II lasts two days (Wednesday and Thursday) and covers:

- Explanation of TL-LSA and RiLSA 2015
- Writing signal timetables on laptops using the AmpelTools software (update)
- Implementing the signal timetable in controllers EPB 12, EPB 24, pedestrian FG 2 and the mobile traffic light system MPB 44 M/S
- SMS remote monitoring system
- Practical applications for controllers EPB 12, EPB 24, pedestrian FG 2 and the mobile traffic light system MPB 44 M/S
- Analytical fault-finding and fast troubleshooting
- Video detector with presence detection
- CCTV camera system
- Simulation module with CPU
- Remote control/remote maintenance

The courses are – as always – in German only.

Register now: Berghaus traffic light training 2017



Whether beginner or advanced user, we bring you completely up-to-date with the latest mobile traffic light technology here in our training room in Kürten. Our experienced technicians gladly share their practical know-how accumulated over many years and will answer any questions.

Picture below: In Kürten, practical instructions for the various traffic light systems are given in the large showroom, illustrated here with the mobile pedestrian traffic light FG2

More than 1,700 employees from authorities, road maintenance depots, construction companies and traffic safety service providers have taken up our offer in recent years to receive training in mobile traffic light technology straight from the manufacturer.

At each of the two-day seminars, we provide participants with necessary basic know-how about mobile traffic light systems, making reference to current statutory regulations such as the TL-LSA; the ZTV-SA and the RiLSA 2015.

Our experienced technicians use practical examples for writing signal timetables and for participants to practice how to implement them in the various traffic light controllers.

Course I is ideal for beginners in mobile traffic light systems or for users intending to deploy these systems primarily for alternating one-way or T-junction operation or at the most for controlling crossroads traffic situations. We also make you familiar with the extended functions of the new software for the MPB 3200 and MPB 3400 traffic lights.

For those with more advanced knowledge, course II works on the basis of the know-how from course I and consists of a user seminar for the mobile crossroads system controllers EPB 12 and EPB 24 together with the pedestrian controller FG 2, and makes you familiar

with the new update of our AmpelTools software.

You are invited to attend the courses in **Kürten** (North Rhine-Westphalia) in **week 4** or in **Mellingen**, Thuringia in week 11. The yellow box on the left shows the planned programme.

Don't delay and register today for a place on our coveted courses!

The registration flyer for the courses is now available on our website. It is unfortunately not possible for us to accept registrations by phone.

berghaus-verkehrstechnik.de



160 years in the service of traffic safety



Berghaus and AVS Overath have celebrated seven employees with long years of service. Group photo with CEOs from left to right: Philip Henze (10 years), Axel Keller (25 years, CEO AVS Overath GmbH), Dieter Berghaus (CEO AVS Verkehrssicherung GmbH), Andreas Schwingeler (CEO AVS Overath GmbH), Alexander Schmitz (10 years), Alfred Wurth (40 years), Norbert Schnippering (25 years), Ralf Gressler (CEO Peter Berghaus GmbH). Two long-standing employees Walter Krupp (40 years) and Thomas Heeg (10 years) were unfortunately not able to be there.

In September we came together with the colleagues at AVS Overath to honour seven long-standing employees for altogether 160 years of loyal service.

Master electrician and authorised signatory Alfred Wurth looks back with pride on 40 successful years at Berghaus Verkehrstechnik. Walter Krupp has also accumulated 40 years, most recently as programmer for traffic light systems and large traffic signs at service provider AVS Overath. Both had begun their careers together in 1976 as apprentice electricians with Berghaus.

Master electrician Norbert Schnippering celebrates 25 years tenure this year. He is currently responsible for the production and servicing of complex traffic light controllers in the Control Engineering unit at Berghaus. Axel Keller, CEO at AVS Overath GmbH, also looks back on 25 successful years in our group.

AVS site supervisor Alexander Schmitz and his colleague Thomas Heeg, meanwhile deployed as hall manager and safety officer, have both been working successfully in the AVS Overath team for ten years.

Philip Henze started his vocational training as an electronics technician with Berghaus ten years ago. Today he assists operations manager Alfred Wurth and is also deployed in servicing mobile signal lights and service control.

The long-standing employees received the thanks and words of appreciation from the management and were warmly congratulated by the whole workforce. After a short speech with the presentation of certificates and presents, the real celebrations began with a sumptuous hot buffet and a few glasses of draught beer in true Rhineland tradition.

Everyone enjoyed the informal gathering of colleagues to share both business and less serious matters.

New Berghaus logo

Although our previous Berghaus logo was very well known, it had become a bit outdated over the years. And so we decided to refine the company logo and give it a modern, fresher look.

You're sure to have noticed the great result on the front page of this Berghaus News:



Our new logo now has a clearer layout while still closely resembling the familiar version: we deliberately kept the symbolised road and traffic light using the previous colours red and black.

The new logo will gradually be introduced to all our products and publications. You will probably find both versions in use during the transition: for environmental and cost reasons, we don't want to simply discard everything that has already been prepared, produced, finished or printed with the previous logo.

Relaunching the familiar company logo is a brave step to take, particularly for a market leader, but this has been a deliberate move on our part. And so we are very pleased to present you our new logo for Berghaus-Verkehrstechnik.

cont. from
page 1

New: overhead signs with Berghaus TOP LED



The mobile overhead prewarner TOP LED is mounted on a galvanised undercarriage with inertia brake and parking brake. The standard tandem trailer comes with a height-adjustable drawbar with replaceable DIN eye and a ball-type towing device, so that both cars and trucks can be used to transport TOP LED. The trailer has automatic voltage detection (12/24V) and is supplied with corresponding connection adapters.

The overhead LED sign is lifted and lowered by a hydraulic lifting and lowering device. An emergency control also makes it possible to lower and retract the tower and arm by hand. Hydraulic supporting legs ensure swift, safe installation on site. Unit stability has been tested and verified at wind speeds of up to 85 km/h. The rear and overhead LED signs are multicoloured and the lighting systems have been tested to EN 12966. RGB light-emitting diodes in the signs are also available on request. The three basic colours (red, green and blue) can be mixed for a wider colour range to give the user an even larger choice of road signs, texts and symbols.

Luminous intensity is automatically adapted to the ambient brightness for good visibility at all times. Furthermore, BAST-tested double LED warning lights are also fitted above the upper LED sign on the right and left, and are clearly visible from afar.

The Berghaus TOP LED is easy to operate intuitively, either directly at the unit's own controller for the LED prewarner or also with optional radio remote control with a backlit graphic LCD display and active feedback. All road signs, pictograms, symbols and texts, also as running continuous text, are saved in bitmap format and can be produced individually by the user working at the PC.

The standard scope of supply provided by Berghaus includes the necessary easily understood editing software (in German) and the USB 2.0 interface cable for programming the unit.

A selection of the main road signs, texts and animated graphics are already preprogrammed ex works so that TOP LED can be used straight away.

The spacious battery compartment in the undercarriage of the trailer offers enough space for four batteries and the fully automatic battery charger. The optional radio remote control can also be accommodated here overnight and recharged at the same time to keep it ready for use. The battery compartment and hydraulic box are made of stainless steel.

The mobile overhead TOP LED prewarner by Berghaus gives road users early warning that is clearly visible from afar and even over the roofs of long lines of trucks, to give advance warning of one-day roadworks, incident and hazard spots following road accidents and temporary changes to the road layout.

TOP LED with its bright LED signs positioned high above the carriageway makes an active contribution to the safety of road users and workers at upcoming construction sites and hazard spots.

Mobile roadworks traffic light control with barrier system for buses

We recently provided active support for our customer *step GmbH*, Cologne, in programming and implementing a rather unusual one-way traffic control system.

During construction work at successive railway underpasses, a mobile traffic light system was required to close the road for individual vehicles while still guiding buses, cyclists and pedestrians safely through the only remaining traffic lane.

To solve this complex task, *step* set up a mobile signal system type D and added an automatic barrier that can only be opened by authorised local public transport vehicles.

Pedestrians can push a button to be given a green light. However, a considerable distance has to be covered through altogether four underpasses so that the pedestrian phase had to be programmed with an unusual three-figure interim time.

We were pleased to support our customer *step* with this challenging traffic light situation in Cologne, programming the mobile traffic light controller EPB 20 ST

in conjunction with the LISA+ programming software often used in stationary systems.

It is thus possible for existing signal phase plans produced with LISA+ to be adopted in our mobile controller at roadworks where for example a stationary traffic light system has to be replaced temporarily with a mobile solution.

Programming was followed by comprehensive simulation of all complex sequences in the factory, firstly in time-lapse mode on the computer and then in real time with a connected mobile traffic light controller. The signal sequence works as follows:

As specified by KVB (Cologne local public transport), buses request passage through the roadworks with a special key switch. If there are currently no requests from pedestrians, the bus is released by BOStrab signals and the entrance barrier is lifted. The bus drives through the roadworks. A light barrier triggers the lowering of the barrier after the bus to stop individual traffic again. The exit barrier opens after a time delay and the bus can leave the roadworks.

If there is a pedestrian request, the bus cannot enter the roadworks until the interim time has expired to let the pedestrian walk safely through the four underpasses.

In the basic setting, i.e. without pedestrian or bus request, all signal heads show red or stop and the barriers remain down, with signs prohibiting access for individual traffic.

The new mobile crash barrier ProTec 50 City was also used here to reliably separate the traffic lane from the construction site. A clear road layout was vital as buses, cyclists and pedestrians had to share just one single lane. In contrast to chains of beacons, ProTec 50 City with its closed system prevents cyclists and pedestrians from straying into the actual construction site with all the potential hazards this entails.

The mobile crash barrier is quickly and easily installed, if necessary even by hand without tools. This is possible thanks to the practical element length of 2 m and the low weight of just 23 kg/m and makes it ideal for urban use.

While construction work is in progress, pedestrians, cyclists and buses have to share just one lane through the four railway underpasses. A barrier with traffic light control closes the road for individual traffic.

Buses request free passage in alternating one-way traffic through the roadworks on request. Pedestrians can also request a green light to walk through on their own. During this time, buses are stopped by BOStrab signals and the barriers remain closed.

The mobile crash barrier ProTec 50 City separates the construction site from the single traffic lane. In contrast to chains of beacons, cyclists and pedestrians perceive the crash barrier as a closed system so that they don't try to go unauthorised through the actual site.



Mobile traffic light controller EPB 24 in operation



Traffic light control for roadworks at Herten junction on motorway A2, consisting of one master and three slave controllers suspended on high as remote mast distributors. LED signal heads, buttons and camera detectors are accommodated in the nearest controller without needing huge lengths of cable. Only the databus cable connects the remote controllers over the crossroads as an open loop line.

The utility company Gelsenwasser AG is gradually replacing a water supply pipeline between Herten and Gelsenkirchen through to the end of 2017. In the course of the construction work, our customer *BAWA Verkehrssicherung GmbH* was responsible for fitting the new EPB 24 mobile traffic light controllers at three major crossroads.

This traffic light system with masters and slaves is ideal for local control of up to 24 groups with 96 fully monitored LED signal heads. Compared to conventional mobile traffic lights, the EPB 24 system clearly reduces the necessary wiring. Cables for signal heads, buttons, radar detectors and camera detectors only have to be connected to the slave units at the respective corners of the crossroads, instead of having lots of cables hanging over the road to reach a central point, as was previously the case. Just one single database cable is needed (as open loop line) between the control units and possibly a power supply cable. As well as saving on installation time and cable lengths, it is even possible to use less heavy overhead cable systems.

Altogether *BAWA Verkehrssicherung* installed three EPB 24 masters and three slave control units at the Herten junction for the A2 motorway and at the Ewaldstraße/Wiedehopfstraße crossroads in Gelsenkirchen. Other equipment included GPS radio clocks for

coordinated progressive signalling and CCTV detectors. BAWA used the AmpelTools software to produce four day-time programs and two special programs for events in the Veltins Arena, such as home matches for Schalke 04 football club. The corresponding event details are all saved in the EPB 24 with date, time and duration together with the requested phase sequences and are activated automatically for the events.

„Working with EPB 24 brings lots of advantages for us as traffic safety provider“, says Alexander Kallmeyer, site supervisor for signal systems at *BAWA*.

„These include for example the reduced cabling involved when we use the small slave units as mast distributors. We noticed this particularly at this junction with four groups including pedestrians in each direction. The possibility of shunting the signal groups in AmpelTool is also very practical, and the power cards can be addressed freely by hand directly at the unit. And so we can decide on the spot where to install the units. Changes to the program can be made simply during ongoing operation without switching the traffic lights off. Another very practical feature is the possibility of producing lists for automatic changeover between various programs that then run precisely with the GPS radio clock, particularly in view of all the events that are held in the Veltins Arena.“

DeuSAT: we'll be there!

Our last edition of Berghaus News already drew your attention to the 8th German Highway Equipment Conference which will be held in Congress-Centrum Ost at Koelnmesse in Cologne.

For the first time, this renowned event will be accompanied by a trade show in a large exhibition hall. This gives those attending the conference an opportunity to enter into direct dialogue with manufacturers and service providers and to find out about current innovations in traffic technology.

We will be joining forces with our colleagues from AVS-Verkehrssicherung in exhibition hall 11.1 to present interesting products from our own development and production activities, with an overview of our diverse services covering all aspects of traffic safety. Come to our exhibition stand with its hands-on mobile signal systems and portable road restraint systems and see for yourself all the many possibilities offered by our mobile overhead prewarner Berghaus TOPLED.

Visit our exhibition stand in Cologne this March. We look forward to meeting you and to many interesting conversations!

The programme for the 8th German Highway Equipment Conference will soon be presented on the website

www.deusat.de



Pilot project in NRW: alternating traffic at A1 roadworks during the rush hour

For the first time, StraßenNRW issued a tender for alternating traffic control at motorway roadworks in North Rhine-Westphalia (NRW).

The traffic safety solution implemented at this pilot project on the A1 by the team at the Euskirchen branch of AVS Overath was monitored very closely by the corresponding authorities, and was also featured in a Bachelor dissertation being written for RWTH Aachen University. This entailed scientific studies on site while the work was in progress for subsequent analysis of the economic efficiency of an alternating traffic control system compared to avoidable traffic congestion costs.

The tender stipulated the traffic safety measures as a specific lot award in the project to upgrade the hard shoulder and resurface the Cologne-bound carriageway of the A1/A61 motorway between Erfttal interchange and Gleuel junction, during the school summer holidays. The alternating traffic layout was changed over twice a day. During the rush hour, the corresponding 3+0 road layout provided two lanes in one alternating direction, heading for Cologne in the mornings and Koblenz in the afternoons.

The traffic safety solution implemented by the AVS team

consisted of the following main components:

- traffic safety through the 8 km roadworks as alternating traffic system including daily changeover
- installing and demarking 20 km lane marking foil
- installing and removing 15 km portable crash barriers
- alternating road signs in both directions
- congestion warning signs on the A1 and A61
- interim closure and diversion for a motorway junction and a motorway services

The AVS team started work right at the start of the school summer holidays, working 24/7 in shifts to install the equipment within just a few days. Similarly, everything was dismantled again just as quickly at the end of the holiday period. More than 40 AVS professionals were working all at the same time at various points of this one project to install and dismantle the traffic safety equipment. AVS site supervisor Claus Jürgen Schmitt coordinated the work of the ACS teams throughout the entire construction period; as project manager, he also ensured all the work was completed punctually.

The client stipulated an extremely tight time window for all installation work without interrupting the flow of



traffic in view of the high traffic volumes and was a real challenge in some situations. But the professional efficiency of the AVS Group ensured that this pilot project was completed reliably and on a high standard of quality – thanks among others to the perfect work preparation and outstanding cooperation between consistently trained AVS experts from several branches.



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