

# Berghaus-News

## Traffic Technology · Mobile Crash Barriers

Issue 33

December 2009 / January 2010



Fachbetrieb und Mitglied im  
Verein für Verkehrstechnik  
und Verkehrssicherung e.V.



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### New crash barrier



Read our report on page 4!

### Still free of charge:



#### Practical aid to go in your pocket

Our free offer of the Sign Scout has met with such a positive echo from our readers that we have decided to keep this service available.

We provide an overview of Germany's most important hazard warnings, regulatory signs, advisory and additional information signs of the Road Sign Catalogue in the Road Traffic Code with around 400 coloured illustrations. (Unfortunately, in German only.)

#### Imprint

**Published by:**  
Peter Berghaus GmbH  
Herrenhöhe 6  
D-51515 Kürten-Herweg

**Editor:**  
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D-51515 Kürten-Herweg  
Text und Layout:  
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**Circulation:**  
55,000 copies in German  
1,000 copies in English

**Printers:** Druckerei Brocker  
D-51515 Kürten-Dürscheid

### New LED technology for warning and flashing lights



**Super bright, extremely robust and ultra flat: that's the new LED light for all applications. Here for example as traffic cone flashing light**

Warning and flashing lights actively draw the attention of road users from afar to road traffic hazards, road works, accidents or changed traffic situations. Whether used as advance warning light in the lane switch zone of motorways or as illuminated arrow on a road maintenance depot safety vehicle, it goes without saying that light-emitting diodes (LEDs) continue to make advances into all mobile traffic safety applications.

For many years now, we have been making LED lights for a wide range of applications. The advantages of LED

technology in terms of extremely low power consumption and the long service life of LEDs as illuminants are meanwhile well known. But lights with Berghaus LED technology also offer a further characteristic of considerable importance in traffic technology: they do not have a reflector. And so they simply do not have the "phantom effect" produced by lamps lights with a reflector. Particularly in the spring and autumn, the phantom effect can cause irritating reflections of the low-lying sunlight so that road users are no longer capable of seeing the intended lighting effect properly.

We have now developed a new LED electronic unit with strong light technology in an ultra-flat light housing. With a height of less than 50 mm, the new LED advance warning light with its 200 mm lens can be used for many different applications. For example, as compact, energy-saving LED flashlight on TL traffic cones, as LED advance warning light in roadwork zones, as LED illuminated arrow mounted on vehicles or as a small flashing arrow on a handy aluminium frame.



**top: New small flashing arrow L8 with flat LED lights on lightweight aluminium frame with plug-in device**

**bottom: LED illuminated arrow L15 with electrical lifting and lowering device**



### Traffic light training 2010: register now!

In recent years, around 1,300 "traffic light experts" from road maintenance depots, authorities, construction companies and those responsible for traffic safety attending our courses have found out how worthwhile good training is.

And so of course we will be offering our popular traffic light training courses again in February and March 2010, providing participants with necessary basic know-how about traffic light systems, making reference to the statutory regulations, e.g. in the RiLSA, the ZTV-SA and the TL-LSA 97. The course looks at practical examples for drawing up signal timetables and how to implement these phase plans in the traffic light controllers.

Course I (always Monday / Tuesday) is ideal for beginners or users of mobile traffic light systems for alternating one-way, T-junction or crossroads traffic situations. For those with more advanced knowledge, course II (always Wednesday / Thursday) works on the basis of the know-how from course I and consists of a user seminar for crossroads system controllers. Learn the simple graphic procedure for drawing up signal timetables with our "Ampel-Plan" software and how to implement the resulting phase plans in your controllers with "Ampel-Win". A new

program version of the "Ampel-Plan" and "Ampel-Win" programs with extended functions is now available for



**From the simple alternating one-way traffic system through to complicated crossroads: we offer training in the practical use of traffic lights for road works**

convenient laptop programming of our MPB 4400 and EPB 12/48.

You are invited to attend the courses in Kürten, North Rhine-Westphalia in week 5, 2010, or in Mellinger, Thuringia in week 9, 2010. Take this chance to have your service staff trained, as good qualifications are always worthwhile!

The registration flyer for the courses is now available on our website:

**www.berghaus-verkehrstechnik.de**  
(Unfortunately, all training courses will be held in German only.)

**Course 1** lasts two days and deals with the following topics:

#### Day 1:

- Brief explanation of ZTV-SA, TL-LSA and RiLSA
- Calculation of signal phase plans for alternating one-way traffic systems
- Implementing the phase plans in signal systems MPB 3200 and MPB 4400
- Fault-finding and troubleshooting

#### Day 2:

- Calculation of signal phase plans for T-junction and crossroads signal systems using the new "Ampel-Plan" program
- Implementing the phase plans in signal system MPB 4400
- Instructions on using the SMS remote monitoring system

**Course II** lasts two days and deals with the following topics:

#### Day 1:

- Explanation of RiLSA, TL-LSA
- Writing signal timetables with the "Ampel-Plan" program
- Implementing the signal timetable in controllers EPB 6000 S, EPB 2400 and EPB 12 together with EPB 48
- Instructions on using the SMS remote monitoring system

#### Day 2:

- Programming with the new "Ampel-Win" program, version 3.25
- Practical applications for controllers EPB 6000 S, EPB 2400 and EPB 12 together with EPB 48
- Analytical fault-finding and troubleshooting
- Video detector with presence detection

# AVS Overath GmbH celebrates new premises and its 25<sup>th</sup> anniversary

In early September, a good 300 invited guests, customers, representatives from the authorities, business partners, suppliers, colleagues from other AVS branches and friends joined AVS Overath GmbH to celebrate the company's move to its new premises. These consist of new production units, an office building and lots of storage space on an area covering 20,000 m<sup>2</sup> directly at the Overath junction on the A4 motorway.

Relocating to Overath had become necessary because in time, the old premises in Kürten-Eichhof had simply become too small for the quantity of mobile crash barriers and traffic safety equipment. More space was also needed for the production line for the mobile crash barrier system ProTec 120. In addition, it took a good 30 minutes by car on country roads to get from the old site to the nearest motorway junction.

There was also another reason to celebrate: 25 years since the traffic safety division was founded as a spin-off from the Berghaus-AVS Group! It was in 1984 that the service company M+V GmbH was founded as a spin-off from Peter Berghaus GmbH, responsible in those days for hiring out portable traffic lights and traffic safety equipment. From those early beginnings with just 4 employees, since January 2009 business now continues successfully as AVS Overath GmbH with a workforce of 40 at the new site in Overath. "Of course there's a risk involved in changing an established name that has become broadly associated with top quality in traffic safety", admitted Managing Director

Axel Keller in an interview. "But now we also want to show the outside world that we belong to the successful service collective of AVS Traffic Safety. So actually in the end, we didn't find it at all difficult to change our name." Under the umbrella of AVS Holding GmbH, Peter Berghaus GmbH as manufacturer of innovative traffic technology and mobile crash barriers is affiliated with ten branches of AVS Traffic Safety throughout Germany in a strong, efficient network (please also refer to the report on the last page). This means we are capable of offering traffic technology and traffic safety from a single source, to the benefit of our customers.

The team at AVS Overath had hatched out truly inspiring plans for the 25th anniversary celebrations. They rolled out the red carpet, decorated the buildings and tables, they had an ox turning on a spit and even provided an "events area" with fun and games for the guests. The official opening was followed by an address on "mobile crash barriers" by Jens-Rolf Oppermann for those interested in the topic.

Hot and cold local specialities were presented at lunch time, followed seamlessly by coffee and cakes. Many guests used the opportunity for a tour of the new company premises, taking a look at how the mobile crash barrier ProTec 120 is made, and finding out about the comprehensive range of services available from AVS Overath. There were plenty of opportunities for friendly talks to expand business relationships and consolidate longstanding friendships. The evening then heralded the arrival of



This impressive panorama of the new company premises was presented to AVS Overath GmbH as a gift.  
Picture: Daniel Alker | Visuelle Kommunikation www.metol.de

our AVS colleagues from Mellingen, Lehrte and Hamburg who had set off from their sites at lunchtime to make their way to Overath. Now it was time to open the opulent evening buffet and to carve up the ox. Two live bands soon conjured up the right atmosphere, and before long everyone was chatting away in the local dialect, also thanks to the local beer!

There was praise and admiration from all sides for the AVS Overath team and for the enjoyable celebrations. They in turn would like to take this opportunity to thank all guests and friends: it was lovely to have you here!



More impressions of the AVS premises: making mobile crash barriers, large mast systems, road signs in storage and traffic light systems for hire.



Many guests were welcomed, old and new friendships cultivated. As well as indulging in all sorts of culinary delights, there was also time for fun, games and entertainment.



The audience just loved the surprise performance by the "Overath Blues Brothers" Axel Keller (2nd from the left) and Dieter Berghaus (3rd from the left) who were made welcome on the stage by "Die Flöckchen".

The second live band "Original Bergischen Gaudibuam" also helped to get the atmosphere going and kept the place rocking all evening.



## Three anniversaries at Peter Berghaus GmbH + AVS Overath GmbH

In 2009, two employees at Peter Berghaus GmbH, Kürten are celebrating ten years with the company, together with one colleague at AVS Overath GmbH. Hanna Punte keeps our books in order. She makes sure all suppliers are paid on time. Invoices and payment reminders also pass through her capable hands. In this way, she keeps things in the right balance for our customers.

Peter Heider is the head of the metalworking department. His tasks include coordinating his team in the development and production of many traffic technology products, such as aluminium TL erection devices.

Together with Erthan Gürses, a colleague at AVS Overath GmbH in the traffic safety team for mobile crash barriers,

Hanna Punte and Peter Heider enjoyed an evening celebrating their anniversaries with employees from both companies. After a copious warm buffet in the nearby country inn, Ralf Gressler and Axel Keller, Managing Directors at Peter Berghaus GmbH and AVS Overath GmbH respectively, made presentations of flowers and gifts, handed over with words of gratitude and recognition of the hard work and loyalty shown by Hanna Punte, Peter Heider and Erthan Gürses over the years.



Hanna Punte, bookkeeper at Peter Berghaus GmbH



Peter Heider, head of the metalworking department at Peter Berghaus GmbH



Erthan Gürses from the AVS Overath service team, standing in front of his truck. As a "Traffic Safety Professional", he works together with his colleagues to ensure that roadworks on our motorways are kept safe. For example, he is responsible among others for setting up the life-saving mobile crash barriers to separate off the on-coming traffic.

## Mobile traffic technology with solar power

On-going developments in light-emitting diode (LED) and also in solar energy technology are making constant further progress all the time. Already a few years ago, Peter Berghaus GmbH presented the prototype of a first portable traffic light system with solar panel.

Thanks to the increasing demand for solar modules and widespread use of solar energy systems also in private households, today's market already offers small high-powered panels at a comparatively low price.

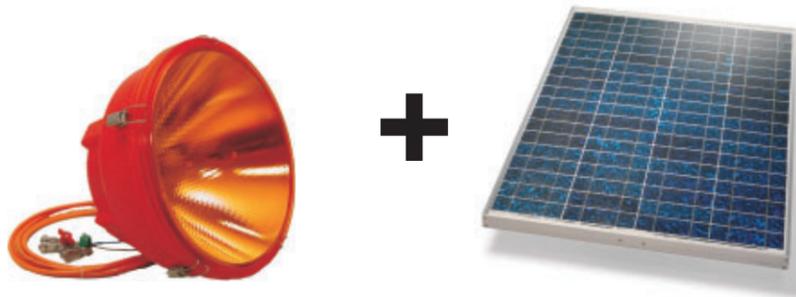
The new energy-conscious circuits and the constant improvements in LED technology, with great luminous intensity from minimum power consumption, are reason enough to take a further look at the additional advantages offered by an essentially self-sufficient solar power supply concept not just for long-term roadworks.

The top-quality solar module that has been developed specially for off-grid applications in signal and navigation systems reliably provides portable traffic technology products with maximum power of about 95 W and charges handy 12 V batteries. This warrants trouble-free operation even at night or during bad

weather. The solar module laminate is enclosed in a robust aluminium frame. The cells are embedded between a hardened glass cover and EVA casting compound, and sealed with PET foil on the back to protect it from even the worst climatic conditions.

A high-grade solar charge controller with clearly structured multi-colour LED display is responsible for reliable charging technology, naturally also with overcharge and total discharge protection. This means that long, almost maintenance-free operating periods are now possible even with handy 12V batteries.

The new nearly maintenance-free and reliable solar technology is a real alternative to conventional systems with their weekly battery changes, and can be used for off-grid portable traffic light systems with LED technology miles away from any source of grid power, or for LED advance warning lights on the motorway, particularly when these are positioned in the frequently inaccessible central reservation



Advance warning lights can also be equipped with battery and solar panel as a reliable power supply. This eliminates the need for the batteries weighing up to 50 kg to be changed under what are frequently dangerous conditions as they then have to be carried right across motorway carriageways in the face of heavy traffic. The clear reduction in servicing costs alone means that solar panels soon start to save hard cash.

## Date for your diary: INTERTRAFFIC 2010

23.24.25.26 MAR  
**2010 Intertraffic**  
CONNECTING INNOVATION TO INFRASTRUCTURE  
AMSTERDAM  
**Booth No. 01.404**

INTERTRAFFIC is the world's Number 1 trade fair for the transport and traffic industry. The INTERTRAFFIC Amsterdam has become a meeting point for experts from all over the world. About 24,000 branch experts from 102 different countries spread out right across the world came to the last INTERTRAFFIC 2008. It has become absolutely vital to attend this event every two years to find out all the very latest about fast developments in infrastructure, traffic safety, traffic management and parking. The market leaders in these branches take this opportunity every two years to

present their latest products and technologies during the four-day event in Amsterdam RAI Exhibition and Convention Centre. It goes without saying that once again **Peter Berghaus GmbH** and **AVS Traffic Safety** will be part of the event with an exhibition booth from 23 to 26 March 2010. Unfortunately, minor changes to the facilities means that our long-established position is no longer available: in 2010 you will find us in **hall 1, booth 01.404**.

Come and see us in Amsterdam. Attend a demonstration of the latest products in portable traffic technology at our booth, and find out all there is to know about the immense capabilities of the AVS service teams – the "Traffic Safety Professionals". Make a note of the dates today! We look forward to meeting you.

## A1: first section approaching completion

Last year, the Hamburg and Bremen branches of AVS Lehrte GmbH were commissioned with traffic safety at the roadworks involved in widening the A1 motorway. The construction work covers a length of altogether 72.5 kilometres between Hamburg and Bremen and will probably be completed by the end of 2012.

The first seven phases of the initial construction section are now approaching punctual completion and it is time to rearrange the traffic safety measures. For the traffic safety team at AVS, this means moving a good 45 km of mobile crash barriers, about 55 km of marking foil and approx. 7.2 km cold spray plastic on the corresponding carriageways. In spite of various drying appliances and items of top quality equipment, this is naturally a real challenge for the competent road marking department, but a challenge that they gladly live up to at AVS Lehrte GmbH with its branches in Hamburg and Bremen.



AVS marking team at work on the motorway A1

picture top: AVS Lehrte GmbH  
right: Lower Saxony State Authority for Road Construction and Transport



The "Traffic Safety Professionals" will now be rearranging altogether seven 4+0 road layout sections with crash barriers, road markings, signs, TL beacons and warning lights.

## BASSt: TL Portable Road Restraint Systems

Did you know that it is now possible to view and also download the release list of TL portable road restraint systems on the website of the **BASSt (Federal Highway Research Institute)** which is located in our district town of Bergisch Gladbach? [unfortunately, the list is only available in German.] Go to [www.bast.de](http://www.bast.de) and use the following navigation: "Qualitätsbewertung > Listen > Straßenausstattung > Listen nach TL-Transportable Schutzeinrichtungen". According to the BASSt, this list contains all portable road restraint systems that fulfil the requirements of the TL Portable Road Restraint Systems 97 and the ARS 5/99, for which permissible application areas are defined pursuant to ZTV-SA 97 and ARS 18/99. The list

consists of altogether nine tables and gives an overview of the efficiency ratings of all systems and their application areas.

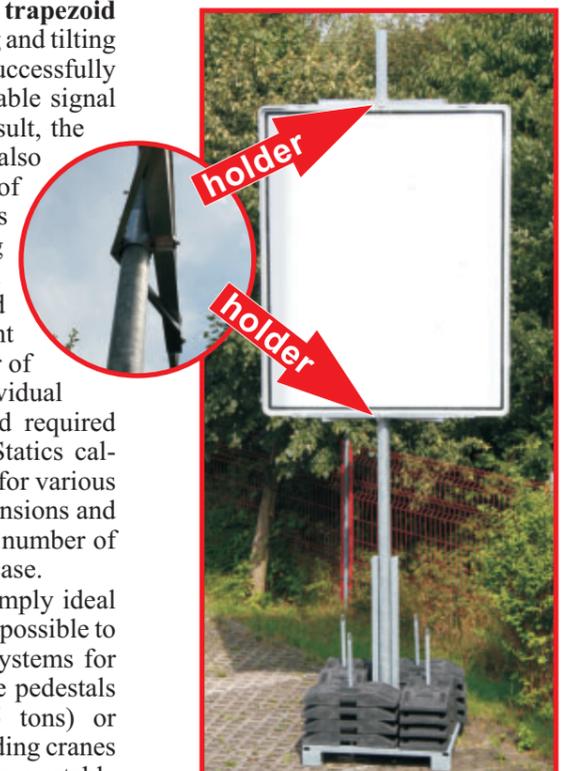
All current mobile crash barriers produced by Peter Berghaus GmbH respectively AVS Mellinging GmbH and deployed on a daily basis, for example by the service companies belonging to AVS Traffic Safety, are naturally featured in this BASSt TL approval list: ProTec 120, Quadro T3/W3, STGW Duo-4 or STGW 4200, and more besides.

Why don't you download the release list for TL portable road restraint systems from the website of the Federal Highway Research Institute to see for yourself how efficient our mobile crash barriers are!

## Portable erection devices for large signs

We have now developed a **new trapezoid holder** for our portable turning and tilting mast which has been used successfully with and without arm in portable signal technology for years. As a result, the proven mast system can now also be used for stable erection of large signs. Here attention has focused in particular on using commercially available K1 base plates made of recycled material to increase the weight of the stand mast. The number of base plates needed in each individual case depends on the size and required erection height of the sign. Static calculations have been drawn up for various sign sizes and headroom dimensions and give a direct indication of the number of K1 base plates needed in each case.

And so this mast system is simply ideal for applications where it is not possible to transport our other erection systems for large signs with their concrete pedestals (each weighing approx. 1.5 tons) or where no forklift trucks or loading cranes are available. After all, our portable turning and tilting mast can be erected by just two people in next-to-no time without any effort – and without needing any tools.



Erection of large signs with commercially available K1 base plates (made of recycling material)

## Tenth branch opened: AVS Traffic Safety now also in Bühl

Countless pallets with brand-new TL safety beacons, TL base plates, TL lights and many miles of mobile crash carriers are waiting for use. The tenth branch of AVS Traffic Safety has now been opened in Bühl, a town located in the rural district of Rastatt, about 10 km to the southwest of Baden-Baden.

Under the auspices of AVS Mellingen GmbH, a service branch has been set up in the Bühl district of Oberbruch with responsibility primarily for traffic safety over a period of several years on the motorway A5 in the section between Malsch, Baden-Baden and Offenburg.

Our last issue of Berghaus News already included a report on the work in progress on this particular stretch of motorway covering a distance of 60 km to upgrade the 40-year old four-lane highway and make it fit to cope with today's traffic volumes. The result will be a modern, efficient six-lane arterial motorway. In the 41.4 km partial section between the motorway junction south of Baden-Baden to just south of Offenburg junction, AVS Bühl is responsible for traffic safety for the duration of the upgrading and widening work to produce the required six lanes. The project is scheduled for completion by autumn 2014. During the construction period, the

corresponding section of motorway has to be kept open and safe for continuous traffic use: this is the responsibility of the new Bühl team belonging to AVS Mellingen GmbH. One major advantage for customers

### AVS Mellingen GmbH

Traffic safety • Traffic light systems • Mobile crash barriers



#### Bühl branch

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AVS-Verkehrssicherung.de

*The Traffic Safety Professionals!*

and also for AVS itself is of course the company's nationwide network. More than 250 well-trained skilled workers and technicians are available as "Traffic Safety Professionals" at altogether 10 sites, as indicated by the map shown here. This makes it possible for the company to take on even such major traffic safety assignments as involved in the PPP projects on motorways A5 and A1 with a highly professional approach in each case, in the interests of everyone involved.



The service network of the AVS Traffic Safety Group with all sites at a glance. background picture: Mobile crash barrier ProTec 120 in use on motorway roadworks work on the "Köln Ost" (Cologne East) A3/A4 intersection.

### AVS Lehrte GmbH exhibitor at NordBau



Interested visitors at the AVS booth

In mid September, the 54th NordBau trade fair was held in Neumünster. 73,300 visitors came to North Europe's largest construction trade fair on the six days of the event. Altogether 957 exhibitors from 15 countries provided an abundance of information about the current trends on the building sector.

AVS Lehrte was naturally also present with a booth to demonstrate its services as an efficient traffic safety company – after all, AVS has a total of three branches in North Germany, with Hamburg, Bremen and Lehrte near Hannover.

Trade visitors showed great interest in the widely varied traffic safety products and the full range of services offered by AVS. They were most impressed to see that AVS is capable for example of warranting traffic safety throughout the full 73 km of roadworks currently in progress as part of the PPP project on the motorway A1 between Hamburg and Bremen – without any additional support, i.e. without sub-

contractors – providing full service throughout the entire period of about four and a half years. Amazement was also generated by the detailed road sign plans presented by the AVS engineers. Many of the visitors were not aware that it was at all possible to produce drawings that show pending construction projects in such great detail.

The versatility of the LED pre-warnings available for hire from AVS also attracted great attention, and Managing Director Jens Selling enjoyed alternately demonstrating his loyalty to HSV football team and AVS Traffic Safety in illuminatory fashion. Following the event, the AVS Lehrte team drew a very positive conclusion from the six days. The opportunity for personal contacts presented by such a trade fair helped to consolidate existing business relations with authorities and building contractors and also gave rise to many new contacts which in some cases extend way beyond Germany's borders.

### All ZTV-SA application areas with new ProTec

With the new ProTec 160 and the proven ProTec 120, we are now in a position to ideally cover all ZTV-SA97 application areas with just one product family.

Munich, mid September 2009

An unmanned 10,000 kg truck races towards the mobile crash barrier. High-speed cameras take thousands of pictures, video cameras film what happens from various angles. Then the truck hits the mobile crash barrier with a speed of 70 km/h at an angle of 15°. As expected, the heavy vehicle is intercepted and then deflected parallel to the crash barrier. The crash barrier itself has only been slightly displaced by the impact and remains undamaged. Spectators at the scene, who had been watching with great attention and in silent suspense, responded with a round of applause. They are all visibly relieved that the impact test for the new mobile crash barrier ProTec 160 on the testing grounds of TÜV Süd in Munich was such a success.

The 900 kg car impact test was also successful under similar conditions, but here the impact speed was 100 km/h at an angle of 20°. The result of the test was then quite clear: the new mobile crash barrier ProTec 160 successfully separates off the on-going traffic, without vehicle impact causing any dangerous recoil effect. The system was certified with containment level H1, effective range W4 and impact force level B.

With a visible width of 16 cm, the new



**NEW!**  
H1 / W4

ProTec product family now extended: testing the new mobile crash barrier ProTec 160

mobile crash barrier ProTec 160 is so-to-speak the "big brother" of the proven ProTec 120 system which has been responsible for traffic safety for years now at Europe's (motorway) roadworks. Whether used as protection between the actual roadworks site and on-coming or parallel traffic flows, between opposite traffic flows or even in the transition zone, ProTec is always the first choice for safety at all kinds of construction sites on our roads!



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