

# Berghaus News

Traffic Technology • Light Innovation

Issue 24

November/December 2006



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



## At a glance

### Contents

#### Page 2

- Well-deserved presents for long-serving staff
- Traffic light training 2007: register now!
- New traffic signal system MPB 4400

#### Page 3

- Universal aluminium erection system
- Even more aluminium TL erection devices
- Traffic signals for Norway

#### Page 4

Information about portable safety devices:

- What does "positively engaged connection" mean?
- Harry's column: this time it's just about me ...

## Professional vehicle protection

Particularly in these times of ever growing traffic volumes, it is increasingly important to ensure that everyone working out there on the roads is provided with the greatest possible protection.

This applies equally to employees working for the authorities and organisations entrusted with public safety tasks, such as the fire brigade, Federal Agency



Triple flashlights on fire engine LF 8/6

for Technical Relief, police, customs, ambulance services, and naturally also employees working for local councils, road and highway maintenance companies, power utilities, transport companies, airports and road safety companies – in other words, everyone working on or at the roadways.

This is why we have produced a new special brochure all about vehicle protection which presents our corresponding product range. Our double warning light systems, triple flashlights and illuminated arrows are ideal not only where new purchases are concerned but also in particular when retrofitting and upgrading existing vehicles. The universal 12V/24V technology, simple installation and extremely low price mean that there are now no plausible reasons for managing without this additional safety equipment (as per Guidelines for the Work Involved in Safeguarding Roadworks RSA Part A, 7.1(7)).

Simply ask for our new free special brochure Vehicle



Illuminated arrow with lifting and lowering device – ideal for roadwork protection vehicles.

Protection. Our experts will also gladly provide you with individual advice and draw up a quotation for optimum protection of your vehicles.

## Congratulations!



Befitting reception committee outside the registrar's office

On behalf of the whole workforce, we congratulate the newly weds Ulla and Axel Keller (Production Manager at our subsidiary M+V GmbH) and wish them all the best for their new life together!

## Imprint

### Publisher:

Peter Berghaus GmbH  
Herrenhöhe 6  
51515 Kürten-Herweg

### Editor: Dieter Berghaus

51515 Kürten-Herweg  
Text and layout: M. Kronenberg

### Circulation:

45,000 copies in German  
1,000 copies in English

Printers: Druckerei Brocker  
51515 Kürten-Dürscheid

## Mobile warning trailer AM 3 with new technology



New mobile warning trailer AM 3

The new mobile warning trailer type AM 3 by Peter Berghaus GmbH is produced in accordance with STVZO, STVO, ZTV-SA, TL warning trailers 97.

Erected on a certified trailer, AM 3 has a gross vehicle rating of 750 kg. DIN eyelets and ball-type towing device are included in the scope of supply so that the trailer can be towed behind both cars and trucks. The front of the loading area is taken up by the battery compartment which can take two power supply batteries and a battery charger.

The warning trailer with 24 halogen and 2 flashing directional lights can be operated conveniently and safely either

with cable remote control or, as an option, with radio remote control (including feedback).

A first-rate micropismatic reflective adhesive foil type II with optimised day and night visibility clearly makes an additional safety contribution to the lighting system. Intelligent reverse polarity protection, under- and overvoltage protection protect the controller from damage and the batteries from total discharge.

The software of the newly developed electronic module by Berghaus individually activates every directional light so that all possible signal patterns can be created to customer requirements.

It is thus possible to produce signal patterns which were previously not featured in Germany: that makes AM 3 even more interesting for foreign customers as well.

Another new aspect is that at the customer's request, the warning trailer can be equipped with an electronic erecting device so that the upper section can be raised and lowered electrically.

A special lifting spindle motor with planetary gear with intelligent overload limitation and positively engaged interlocking now makes it even safer to put mobile warning trailers in position.

The integrated emergency lowering function warrants manual operation in the event of a power failure.

The blue arrow is also adjusted by a motor. The required clear view possibilities are present on the right and left in

## Wanted: sales partner

In expanding our network of dealers and service partners abroad, we are looking for suitable partners for the sale of our traffic technology products. Similarly, we would also like to expand the sales of our DIN EN 1317-tested portable safety devices even further in Europe, because our service companies in Europe in particular put us in a position to offer our road restraint systems not only for sale but also for hire including erection and dismantling.

If interested, please get in touch. You can also gladly send us an e-mail:

[mail@berghaus-verkehrstechnik.de](mailto:mail@berghaus-verkehrstechnik.de)



Simple, clearly organised controls

the blue arrow for observing oncoming traffic.

Convincing technology – our new mobile warning trailer AM 3 makes it simply safer to work on the motorways.

## Well-deserved presents for long-serving staff



The management express their thanks to two members of staff who have each served the company for 30 years (from left to right: R. Gressler, A. Wurth, W. Krupp, D. Berghaus)

It was at the age of 15 on 1 September 1976 that Alfred Wurth and Walter Krupp joined Peter Berghaus GmbH in Kürten as apprentice electricians.

Who would have thought in those days that the chosen trade would become the future career for them both?

Alfred Wurth's phone never stops ringing: as competent contact partner and technical manager, the master electrician and authorised signatory for the company is responsible for Berghaus's production activities. Many of our traffic products and signal systems are the result of his ideas and suggestions.

Walter Krupp also learned all about traffic signal systems right from the start. With his 30 years of service for the company, for many years now he has been employed by our service subsidiary

M+V GmbH where he is the expert for programming traffic signal systems. There probably isn't any single traffic situation that Walter Krupp cannot "control", according to Dieter Berghaus, Managing Director of M+V GmbH in his congratulatory speech at the special ceremony held in Kürten-Herweg in mid September.

Ralf Gressler as Managing Director of Peter Berghaus GmbH also expressed his thanks to the two long-serving members of staff, acknowledging all the work they have put in and the loyalty they have shown to the company before presenting them with presents from the firm.

The subsequent barbecue was enjoyed by all and sundry, with colleagues telling plenty of anecdotes to keep the old days alive.

## New portable traffic signal system: MPB 4400

The new construction site traffic signal system MPB 4400 merges decades of experience both in the production and in the daily practical use of portable traffic signals, with the addition of innovative ideas.

Among others, the new MPB 4400 uses an optimised digital radio system. This offers enhanced transmission quality than in the past, together with improved security of the radio connection.

Export systems can now be equipped with up to eight signal heads for radio control. As an option, the traffic signal is available with a multi-frequency radio path for finding a free or low frequented radio channel quickly even in conurbation areas.

The three-coloured LED field strength display informs the user about the strength of the incoming radio signal at any time, simply by pressing a button. The signal can thus be finally maximised if necessary by slight adjustments to the traffic signal.

MPB 4400 is adjusted conveniently with a hand box and is very easy to use, thanks to the dialogue procedure which asks for the necessary inputs step by step. Even users who

do not have to operate a traffic signal on a regular basis will not have any problems, thanks to the logical control. By the way, while the traffic signal is operating, data can also be imported into the hand box, changed if necessary



Simple programming with the hand box in the dialogue procedure

and exported back to the traffic signal still while in operation (without having to switch the signal off). That means that changes can be made without any complications.

When using a laptop to program the

## Traffic light training 2007: register now!

Meanwhile a tradition in our company: in more than 10 years, around 1100 skilled professionals have received training in how to use portable construction site traffic signals and how to draw up signal timetables here in 51515 Kürten and in our subsidiary in 99441 Mellingen. The courses being offered in 2007 once again pay special attention to practical troubleshooting. As in previous years, the course leader is master electrician Alfred Wurth.

Here are the dates for training courses in Kürten for 2007:

**Course I:** 5/6 February 2007  
**Course II:** 7/8 February 2007

and in Mellingen:  
**Course I:** 5/6 March 2007  
**Course II:** 7/8 March 2007



Bring your staff completely up to date with the very latest traffic signal technology.

Use this chance to acquire additional qualifications and register with us now today in writing or by fax, to make sure of one of the coveted course places before the seminars are fully booked.

✂...please cut out, fill in the details and send to us...✂

### Registration form

**Training course I** (€ 290 per person)

Course date: \_\_\_\_\_

Course venue: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

First name/Surname: \_\_\_\_\_

First name/Surname: \_\_\_\_\_

**Training course II** (€ 290 per person)

Course date: \_\_\_\_\_

Course venue: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

First name/Surname: \_\_\_\_\_

First name/Surname: \_\_\_\_\_

Date \_\_\_\_\_ Signature \_\_\_\_\_

**Training course I** lasts 2 days and deals with the following topics:

- Day 1:**
- Brief explanation of TL-LSA ZTV-SA and RiLSA
  - Calculating signal time-tables for one way alternating traffic systems
  - Implementing time-tables in signal systems MPB 3200 and MPB 4400
  - Analytical troubleshooting and fault rectification

- Day 2:**
- Calculating signal time-tables for signal systems at junctions and cross-roads with the traffic light time-table program
  - Implementing the time-tables in signal system MPB 4400
  - Familiarisation with the SMS remote monitoring system

**Training course II** lasts 2 days and deals with the following topics:

- Day 1:**
- Explanation of RiLSA, TL-LSA
  - Drawing up signal time-tables with the traffic light time-table program
  - Implementing the signal time-table in the control units EPB 6000 S, EPB 2400 and in the new control unit EPB 48 multi-processor
  - Familiarisation with the SMS remote monitoring system

- Day 2:**
- Programming with the new traffic light Win program, version 3.0
  - Practical uses for the control units EPB 6000 S, EPB 2400 and EPB 48 multi-processor
  - Analytical troubleshooting and fault rectification
  - Video detector with presence detection

*Unfortunately, all training courses will be held in German only.*

system, configurations are possible with up to 12 groups and maximum 24 monitored and 24 parallel signal heads.

Our MPB 4400 is equipped with commercially available halogen lamps as a standard feature. On request, the signal system is equipped with new LED technology, either ex works or for retrofitting by the user. New actuation

electronics and the use of innovative LED technology has reduced the already low power consumption rate of our LED modules even further, while still maintaining the same brightness even when there is a decrease in the battery voltage!

MPB 4400 – the innovative traffic signal system for daily practice at construction sites.

## Universal aluminium erection system

The new generation of concrete pedestals and aluminium structures presented in the last issue of Berghaus News is now ready for use.

The new concrete pedestal type "BS 3" measures 1200 x 1200 x 500 mm and weighs approx. 1,550 kg.



Concrete pedestal with practical transport openings can take lattice and round mast structures



Aluminium lattice structure with overhead traffic signals

"BS 3" is protected at the edges with a galvanised frame structure which is filled completely with concrete.

On the basis of this new concrete pedestal, we have now developed a new aluminium structure for signal systems with arm lengths of up to 8 m.

This new structure means that you can now safely position up to three signal heads at the crossroads over the middle of the carriageway.

With a relatively small footprint of 1.2 x 1.2 m, you can now erect a highly effective arm mast for various different applications.

Another use for the new structure is safe erection of building site information signs and large-scale signs. Several modules of the standard system can be simply combined, depending on the size of the sign.

An extensive range of fastenings results in use as sign gantry, as arm mast for traffic signals or for blocking carriage-ways with illuminated cross



## Traffic signals for Norway

This autumn we have produced the MPB3200 traffic signal system in the version illustrated below for a customer in Norway.

The radio-controlled vehicle-actuated signal system was produced with hinged aluminium lower structure powder-coated in bright yellow/orange in accordance with Norway's national regulations.

The particularly interesting feature for our export customer is that the MPB 3200 can changeover automatically from radio/cable operation to quartz operation in the event of transmission problems. This option copes easily with short-term transmission problems so that traffic can continue to flow without any interruptions. In the background, MPB 3200 restores normal transmission and then changes back to the regular operating mode. This version is increasingly in demand from customers particularly in countries with only one certified radio frequency.

The fact that our site here in Kürten has been responsible for both development and production of traffic signal systems for more than 40 years now means of course that we can be very flexible and react promptly to our customers' requests, so that we produce traffic signals to meet many different customer requests and national regulations.

You can find traffic signal systems made by Peter Berghaus in many countries all around the world, with deliveries going not only to Germany and other European countries, including Austria, Belgium, the Netherlands, Luxembourg, France, Finland, Denmark, Switzerland, Italy, Sweden, Ireland, Spain, Portugal, Hungary, Poland, Slovak Republic, Croatia and Czech Republic.

Our traffic signal systems can also be found in Canada, the USA, Iceland, Australia, New Zealand, Singapore and Malaysia. Before very long, systems made by Peter Berghaus will soon be controlling construction site traffic in countries whose names alone conjure up dreams of paradise, such as Barbados, the Bermudas, New Caledonia and the Faroe Islands. So next time you are on holiday, perhaps you can keep your eyes open for our signal systems and send us a digital photo of you standing next to one of our traffic signals!



## Even more aluminium TL erection devices

Demand for our aluminium erection devices is growing constantly. Already one year after launching the first TL-tested aluminium products in spring 2005 and presentation of the TL-tested aluminium erection devices in our price list this April, a large number of road maintenance depots, municipal building yards and works depots as well as traffic

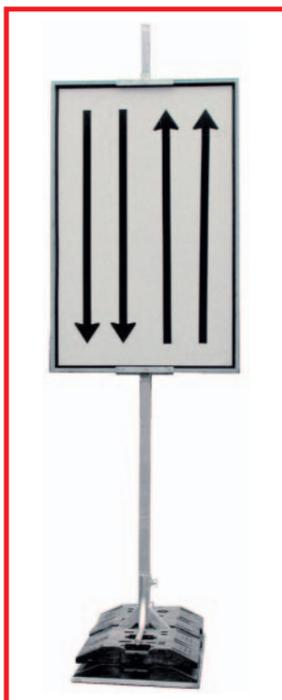
safety firms are now convinced of the advantages of our aluminium range of products.

The arguments in favour of aluminium are simply unbeatable: considerable weight savings, easier handling, lighter transport.

Changeover to aluminium right now: your staff will be grateful!



Ideal for inner-city use where space is confined. Tested as per TL erection devices up to K4. Weight: approx. 4.5 kg



Sign stand for poles 60x60 mm with peripheral angled frame for taking up to 12 base plates K1. Ideal for overhead road cabling units and for erecting traffic control boards. Tested as per TL erection devices up to 2 x K8. Weight: approx. 22.5 kg



Sign stand for poles 60x60 mm with peripheral angled frame for taking up to 10 base plates K1. Ideal for overhead road cabling units and for erecting traffic control boards. Tested as per TL erection devices up to K8. Weight: approx. 18 kg



Sign stand made of aluminium for poles 40x40 mm with peripheral angled frame and safety bar. Tested as per TL erection devices up to K8. Weight: approx. 17 kg

T-sign stand for poles 40x40 mm. The stand is placed in the 60x60 mm supports of the base plates. Tested as per TL erection devices up to K4. Weight: 4.1 kg



MPB 3200 version "Norway"

# Information about portable safety devices

## What does "positively engaged connection" mean?

A chain is always as strong as its weakest link, so the saying goes.

This also applies to the connections between various road restraint systems. It is possible and even necessary for different containment levels to be erected in a road restraint chain. A classical example is zone "D" and "E" for a 4+0 road layout. "E" is the transition zone where ZTV-SA demands a T3 or H1 containment level, and a T1 containment level in zone "D". These two systems should and must have a positively engaged connection.

What does "positively engaged connection" mean? And who checks this kind of connection?

A positively engaged connection is a very important element in the above mentioned chain. It must certainly not be the weakest link. It is expected to be able to transmit the forces of at least the lower containment level of two different systems.



M10 screws and plugs – this solution lets the imagination run riot



Positively engaged connection just with three screws?

In other words, here the manufacturer has to design and produce a connection to the best of his engineering skills and know-how to meet the requirements of the construction site. It is first and foremost the manufacturer of the corresponding system who has the necessary know-how. He knows at which points in his system the transition sections can be connected in order to absorb and transmit the necessary forces. And he also knows that the transition section must be at least as stable as the smallest containment level.

Unfortunately, this is still not established in practice, i.e. on our road construction sites.

An "interesting" argument has been proffered for an "apparently" inadequate transition section: *"But the transition is not so important, because both road restraint systems have been tested and certified without anchoring so that they can be also used as stand-alone solutions"*.

But this cannot be simply accepted unconditionally. In theory the systems could be erected as stand-alone solutions without any transition section, but then

## HARRY'S COLUMN

### This time it's just about me ...

Dear readers,

I have been writing this column for many years and hope to continue doing so in future as well, although there have been certain changes in my relationship to the Peter Berghaus Gruppe.



articles in the Berghaus News.

Please excuse the fact that I have not provided any interesting technical information this time, but I felt it was very impor-

tant to inform you of the changes in my circumstances.

Many thanks to the Berghaus News editors for giving me the possibility of presenting my situation at this point; dear readers, please be assured that you will find a particularly interesting column on this page in the next issue.

Your



Harry Lippert

As of September 2005, I am no longer an employer of this group. I was then retained by a consultant contract to work for the company for another twelve months. This contract has now also expired as of 31 August 2006.

I have been working as a self-employed neutral expert for road construction site safety already since 1 September 2005, focusing on portable road restraint systems, and also run a consultancy firm for construction site safety, where I offer the following services: drawing up and review of tenders, courses and seminars for MVAS training or portable road restraint systems and erection devices, acceptance procedures for services provided for road restraint systems, tests as per TL for erection devices and road barriers.

I also hope to continue to give interested readers the opportunity to share my experiences in the form of a column and technical

Any more questions?

How to contact me:

e-mail: h.lippert@tb-l.de  
or phone: +49(0)700 454 77 378  
or fax: +49(0)2681 98 31 37



Positively engaged connection between two tested road restraint systems



Positively engaged connection between systems from different manufacturers

Here the question arises as to the corresponding test; this is a very frequently asked question!

The corresponding regulation for all mobile road restraint systems is DIN EN 1317.

Tests for impact force and containment level are carried out according to this standard (part 2 of DIN EN 1317). Part 4 contains a test for transition sections, but this does not include temporary protection systems, so that this means that there are no official testing criteria.

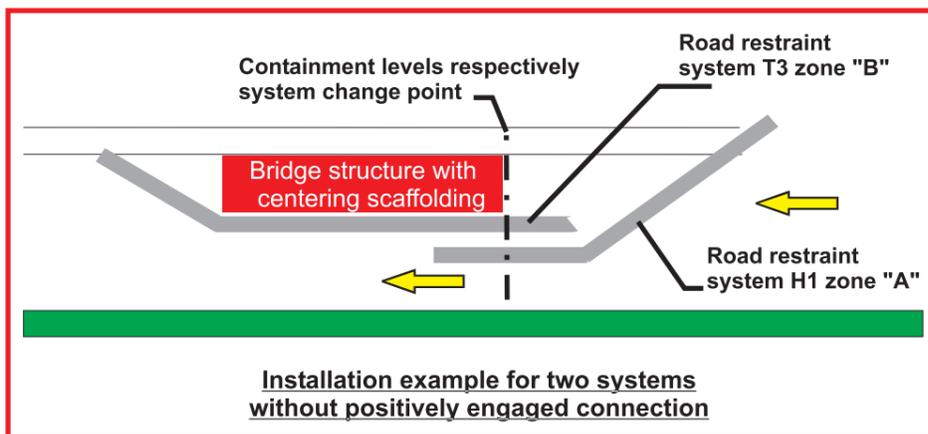
they would have to fulfil at least the criteria for a stand-alone road restraint system. This entails compliance with the minimum length and, most important,

special attention must be paid to the impact point during the crash test. This impact point is located in the first third of the minimum length and is the point where the wall has its effective containment level, i.e. the level stated in the test report!

In practice this means:

Section "A" has a H1 system and section "B" a T3 system. Both systems must overlap, at least by the implied third of the system length, with two thirds of the minimum erection length having to be erected beyond the crash point, as in the test. Theoretically there would also have to be enough space between the two systems for deflection of the corresponding impacted area.

This is the only way to erect two systems without a positively engaged connection.



# Peter Berghaus GmbH

## Traffic Technology · Light Innovation

Herrenhoehe 6 • D-51515 Kuerten • phone +49 22 07 96 77 0 • fax +49 22 07 96 77 80  
www.berghaus-verkehrstechnik.de • mail@berghaus-verkehrstechnik.de