

Berghaus-News

Traffic Technology · Mobile Crash Barriers

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At a glance

Contents

Page 2

- Congratulation: 15 years Wöffler Verkehrstechnik
- CPU simulator for traffic light controllers EPB 12 / 48
- Berghaus products at international trade fairs

Page 3

- New radio tester for mobile traffic light systems
- Remote control/remote maintenance for traffic lights
- New LED feedback display for mobile warning trailers

Page 4

- New mobile crash barrier ProTec 50 in use
- ProTec: force-fit transitions
- ProTec 160: premiere in Switzerland

New brochure for TL mounting devices



Our new brochure "Mounting devices" shows you at a glance which TL stands are the best choice for robust, safe mounting of road signs. We have organised our sign stands according to colour as specified by the ZTV-SA with regard to mounting signs in built-up areas or on country roads and also depending on the size of the road sign, mounting height etc. Our system now makes it easy to select the correct TL mounting device.

Simply download the brochure from our website or ask us to send you a printed version (unfortunately only available in German).

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Camera systems at mobile traffic lights

Urban tender specifications increasingly stipulate that mobile traffic light systems for temporary traffic control must be equipped with CCTV traffic flow monitoring and with a remote monitoring system. If necessary, it should then be possible to adapt the traffic lights to the traffic flow by remote control.

Here we offer a mobile camera system for use e.g. in roadwork situations.

The swivel/tilt camera with infra-red technology permits an almost all-round view of the roadworks by day and night. Using the internet, it offers a convenient overview of the traffic situation on site without having to leave the office or service point. On request, we can also provide the customer with a browser-based application. In this case, secure access to the camera control can also be set up for the police, authorities, traffic control centres and other authorised users.

The Berghaus camera is very easy to install as it needs only 12V operating voltage and a mobile phone card with internet link. The integrated module set with UMTS router in a lockable weatherproof housing makes our camera fully self-sufficient and it can even be operated without traffic lights. The swivel/tilt camera offers many possibilities.

Depending on the internet link, pictures of the roadworks can be transmitted in real-time in a HD 720p resolution up to 1280 x 720.

Camera movement and configuration is also conveniently operated and con-



Berghaus camera systems: left: our rotating infra-red camera for monitoring the traffic situation as a self-sufficient system regardless of the traffic lights. Remote maintenance permits intervention in the traffic light control if necessary.

Video detectors (right) act as virtual contact strip with eight freely defined monitoring zones each for convenient control of the request mode at mobile Berghaus traffic light systems.

trolled via the network. The heated weatherproof housing, the zoom and integrated IR LEDs permit reliable day/night operation of our Berghaus camera system, so that traffic flow monitoring as described in the tender text is warranted.

Furthermore, the remote control/remote maintenance described on page 3 gives

the authorised user access to the traffic light control at any time.

Another possible use for cameras consists in CCTV detection in mobile traffic light technology.

For some time now we have been offering the PB-Cam system for automatic traffic light control, e.g. in request mode. Instead of installing contact strips or fitting a large number of radar detectors, up to eight monitoring zones per camera can be set up simply using the mouse when configuring the PB-Cam on the screen.

The user is free to define in which direction the traffic is registered and how it is evaluated, e.g.: detection of vehicle presence as long as they are within the detection range, congestion detection, request for local public transport, request for traffic turning left, or generally for green phase extension.

The detection zones can be changed or deleted at any time. The PB-Cam can be adapted to changing traffic situations time again quickly and easily on site, using a laptop.

The camera systems described here offer many more possibilities for professional monitoring or automation of mobile traffic light systems - we will be glad to advise you!

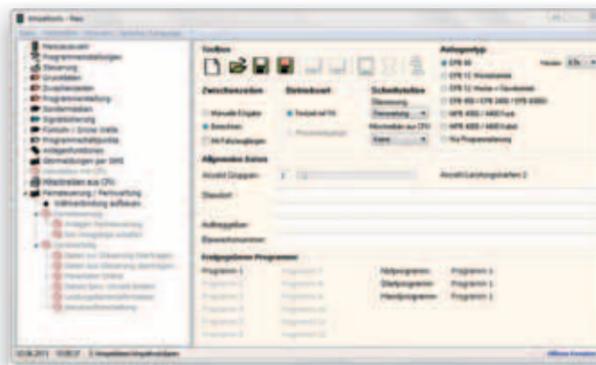
Free software update: AmpelTools

With immediate effect, we offer our customers a software update for the popular AmpelTools programming software, now with new functions. To update your AmpelTools version, please call our Steuerungsbaue ("controllers") department from Monday to Friday on +49 2207/96 77-28.

In addition to general program adjustments, the free software update comes with a whole package of new functions, e.g. remote control/remote maintenance, emergency system control by PC or laptop on site, CPU program simulation and automatic reporting of possible faults per SMS, e-mail or fax. (Certain functions may require special hardware).

AmpelTools lets you create very clear

signal timetables in just a few steps, together with other documents as per German RiLSA. For example, it only takes a few steps to put together e.g.



View of the user interface in the new program version.

interim time calculations and graphic signal timetables with control of interim

time infringement and conflict monitoring, e.g. green/green interlocking. These can then be optimised and the times adjusted or even the whole phase plan rolled with just a few mouse clicks (e.g. to shift progressive signalling by 10 seconds).

Passage times can be entered separately for every step of the calculation (e.g. vehicles going straight on, vehicles turning off, tram or bus clearance).

Needless to say, signal timetables produced with AmpelTools can be used immediately for programming our signal systems in the EPB series and in our MPB 4400 system.

This saves time, as AmpelTools combines signal timetable planning and programming simply and effectively in just one step.

**Congratulations: 15 years
Wöffler Verkehrstechnik**

Our customer Wöffler Verkehrstechnik is the expert partner for all aspects of professional traffic technology in the greater Trier region. In May, the company celebrated its 15th anniversary with an in-house exhibition. Needless to say, Berghaus was also among the well-wishers and professional exhibitors. Wöffler's range of services goes way beyond simple traffic control. Wöffler is also the right contact e.g. when it comes to car park management, traffic control, hired hoarding, road marking work, event technology, containers and training.

Wöffler
Verkehrstechnik



Anniversary with in-house exhibition: directing cones with GPS-synchronised LED flashing lights, BASt-tested LED advance warning lights, TL sign stands, aluminium battery casings, plug-in system for temporary signage, crossing out devices, mobile traffic light systems, mobile warning trailers, ProTec mobile crash barrier system etc. - just a small excerpt from the Berghaus product range at the Wöffler Verkehrstechnik in-house exhibition.

CPU simulator for traffic light controllers EPB 12 / 48

Our popular AmpelTools programming software makes it easy to create signalling timetables and program sequences for mobile traffic light systems - even in complicated crossroad situations.

According to German RiLSA 2010, programs created on the computer for mobile controllers also have to go through practical testing before being used on the road. Theoretically, this could entail setting up the corresponding EPB 12 or EPB 48 traffic light controller in the workshop with all necessary periphery (signal heads, buttons, radar detectors, etc.) ready for operation. But our new simulator makes it much easier: this is a special combination of software and original traffic light controller CPU as hardware in a handy enclosure.



CPU simulator for traffic light controllers

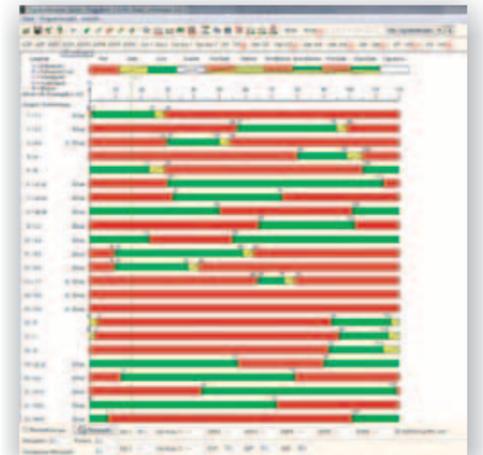
The new simulator can be used for detailed testing of the signal timetables produced with AmpelTools, regardless of the particular configuration - fixed phase mode or vehicle-actuated, local transport preemption or synchronised progressive signalling, etc. The programmed data are simply entered into the CPU simulator with the PC/laptop.

The signal timing program can now be tested thoroughly in peace and quiet in the office, while the actual traffic light controller is already en route to the roadworks or even already installed on site with the mobile traffic light system. With the CPU, it is now possible to simulate the complete workflow of all monitoring functions (as per German RiLSA, DIN VDE 0832 and TL-LSA) as in real state. This permits practical control of the created program in live sequence. All situations that can occur on site can be tested thoroughly with the CPU simulator, including e.g. green phase extension, local transport preemption, progressive signalling, vehicle and pedestrian request, program changes, triggering functions for all signal fuses, red light monitoring, green/green interlocking, illicit signal statuses (status monitoring), interim time control, starting and shutting down the traffic light system (ON/OFF programs), and much more besides.

While the test is running, it is also possible to proceed with a visual check of the created signal timetable with the program sequence.

The new CPU simulation makes it much easier to proceed with the stipulated control of the created programs as this can be carried out quickly at any computer workstation or using the laptop, far away from the actual controller. And while the signal timetable is being created and tested, the service technicians can already install the EPB 12 or EPB 48 controller and corresponding equipment with masts, wiring and traffic light buttons on site at the roadworks.

Other advantages in using the new CPU simulator result e.g. from the possibility of optimising the created programs under realistic conditions and proceeding with staff training without needing the actual controller, together with hazard-free testing of special customer requests in the program sequence.



The CPU simulator tests the created signal timetable (top) thoroughly in the program sequence in every second of the cycle with all monitoring functions, just like at the real EPB traffic light controller.

Berghaus products at international trade fairs



At the end of May and in June, our partners presented traffic technology products, naturally also including Berghaus products, to the interested trade public at three international trade fairs. From 22 to 24 May, Stockholm was home to the MaskinExpo, Scandinavia's prime trade-fair for the building trade and construction machinery. Our Swedish



partner ATA Byggoch Markprodukter AB also presented the mobile crash barrier system ProTec 100 and the mobile traffic light MPB 3400. More than 400 exhibitors and about 20,000 visitors attended the MaskinExpo this year. For four days at the end of June, more than 600 exhibitors presented their products and services at the Suisse Public



Bern, 18.-21.6.2013

in Bern. Our Swiss partner Dähler Verkehrstechnik AG showed professional visitors among others the ProTec 120 and 160 mobile crash barriers, together with our warning lights. With around 20,000 visitors, the Suisse Public is the key procurement address in Switzerland for representatives from local councils, the cantons and the federal authorities.

The ProTec 120 mobile crash barrier system was also on show at the Intertraffic Istanbul at the end of May. Our partner Saferoad RRS in Istanbul represents the ProTec 120 product sector in Turkey. Intertraffic Istanbul attracted more than 5,000 professional visitors, with more than 200 exhibitors presenting their traffic technology products.



Our partner ATA from Sweden presents the mobile crash barrier system ProTec 100 (left) and the mobile traffic light system MPB 3400 (right) at its exhibition stand in Stockholm.



Mobile crash barrier system ProTec 120 and ProTec 160 at the exhibition stand of Dähler Verkehrstechnik AG in Bern/Switzerland.

New radio tester for mobile traffic light systems

For some time now, we have been offering our own professional test units for quick and easy testing of mobile traffic light systems on the construction site.

A tester can be used for example to check the polarity of the data connection (cable bus outlet) of the mobile traffic light systems MPB 3200, MPB 3400, MPB 4000 and MPB 4400 on site. Our test units can also quickly check whether the incoming intensity level of the data bus signal via the traffic light connection lead is strong enough at the individual signal heads. Similarly, it is possible to check that the connection for the radar detector or pedestrian button works perfectly at the individual traffic light signal heads. The continuity of (installed) MPB traffic light connection leads can also be tested at a glance for both 12V and 42V systems. It is thus soon possible to make a statement about reliable communication of the individual traffic lights over the section of cable.

In addition to the above mentioned test possibilities, we have now developed a further new handy service unit: the high-frequency power tester for ruling out defects in radio modules - a vital component in every service case.

This new instrument can now be used for on-site testing of the functions of the digital radio modules in the traffic light system. In a matter of seconds, the HF power tester reliably ascertains whether the maximum permitted transmission power is generated in the radio module and whether the emitted high frequency (HF) is within the nominal parameters.

The HF tester is very easy to use: it is simply plugged into the antenna output of the radio module with the enclosed BNC cable. The traffic light

signal head being tested is now switched or programmed as transmitter in radio mode. The HF tester is switched on by pressing the button; the yellow LED then shows whether the 9V voltage of the integrated battery is available for the test. If the transmission output stage of the digital radio module is working perfectly with sufficient transmission power,



the green LED now lights up in the rhythm of the transmission frequency: the radio module is working correctly.

However, if the green LED remains off during the test, this indicates a defect in this radio module which now has to be replaced.

The HF power tester is the ideal accessory for effective on-site service at radio traffic light systems, making it a vital component in every service case.

Special versions of the HF power tester are also available for our international customers in accordance with the prevailing national regulations in the individual countries – please just ask us for an offer.



HF power tester

Remote control/remote maintenance for traffic lights



Like being directly on site: our remote control (top right) shows the complete front panel of the traffic light control, at your workstation in the depot. The controller can then be operated conveniently at a distance using the computer mouse and keyboard.

Remote maintenance makes it possible to read out, change and re-install programs from the running control, using AmpelTools etc. It is also possible for the service fitter on site to receive active support - also from us as manufacturer.

When using mobile traffic light systems for temporary traffic control at roadwork situations, particularly at major crossroads, it may be necessary to optimise program workflows individually during operation.

Tender specifications frequently include the request for remote control of the mobile traffic light system so it can be adjusted to the traffic flow if necessary. Our remote control/remote maintenance is a combined hardware/software solution that gives convenient access to the traffic light controllers type EPB 12 / EPB 48, conveniently from the service workstation or from the office.

To this end, the desk-top unit (12/230V) is simply connected with the PC or laptop and our AmpelTools software is started. Data transfer takes place by calling a phone card of any provider using the GSM network.

Neither the desk-top unit nor the controller need configuration of the phone card or an internet connection. This warrants a secure data link to the traffic light even in areas where UMTS/EDGE are not available. On request, the traffic light controller can automatically send status information by SMS, even to several subscribers.



Remote control desk-top unit

whether the adjusted parameters and configuration comply with the called controller. Only then is access enabled to the traffic light. It is now possible to follow the current workflow of the traffic light control on the screen and to read off operating modes, cycle counter statuses, signal statuses and information messages in plain text from the traffic light display.

On request, the traffic light can be remote controlled and the program changed easily e.g. with the mouse. All the functions that are possible directly on site can now be adjusted with the remote control. Signal groups can even be switched by hand or the whole traffic light system can be decommissioned if necessary.

Needless to say that individual parameters in the traffic light system can be changed during on-going operation, such as extension and green phases.

Using the GSM data link, AmpelTools makes it quick and easy to read off, edit or change programs from the run-ning traffic light control, taking notes and producing graphic printouts in the office on request. Completely new signal timetable programs can naturally also be down-loaded onto the traffic light control.

Our remote control gives you access anywhere to your traffic light controllers, saving you time, travelling distances and costs.

You can intervene in the traffic light control within seconds at any time, as if you were directly on site, and also provide active support for your technicians at the roadworks.

New LED feedback display for mobile warning trailers

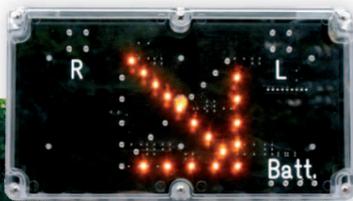
All AM-type mobile warning trailers can now be equipped with a new LED feedback display on request. The AM series is used preferably on roads without oncoming traffic, for example on expressways and motorways. The clearly visible LED display on the back

of the mobile warning trailer shows the current function of the two long-range flashing lights, together with the direction of the illuminated arrow. The bright light diodes are clearly visible even from a large distance.

The feedback display also informs the workers on site about the condition of the power batteries well in advance before they have to be replaced, and not just before the illuminated arrow goes off.

Together with the visual warning, an acoustic signal is also possible as an option, consisting for example of a loud horn. Our SMS module can also be connected to the system. In this case, the mobile warning trailer informs the service technician automatically by a text on his mobile phone when the battery needs to be changed.

Mobile warning trailers by Berghaus, with type SM 40 for roads with incoming traffic in front of the larger AM 3 TL for use on motorways.



Safety first by

Berghaus-Verkehrstechnik.de

Advertisement

• produced and tested as per TL mobile warning trailers

• BAST-tested LED technology

• Made in Germany

New mobile crash barrier ProTec 50 in use



With just 10 cm planning-relevant width, the new ProTec 50 is hitherto the narrowest and, with just 28.7 kg/m, also the lightest mobile road restraint system by Berghaus.

The picture shows our mobile crash barrier on the A5 motorway near Karlsruhe, Wolfartsweier exit. 2200 m of ProTec 50 are in use here to separate on-coming traffic at roadworks for resurfacing the carriageway.

The new ProTec 50 supplements the proven Berghaus portfolio with the addition of yet another mobile crash barrier model.

The outstanding echo at home and abroad to the proven mobile road restraint systems ProTec 100, 120 and 160 has prompted Berghaus development engineers to create a new narrow, much lighter mobile crash barrier which naturally offers all the known advantages of the ProTec systems.

The special design of the mobile crash barriers in our ProTec family provides optimum protection in the working zone and for road users. To sustain the directional effect of the crash barrier all the time, the BAST-tested reflectors are protected in a recess so that they do not come loose from the wall. This also means they will not get sheared off when touched by a vehicle. The rubber-based standing surfaces ensure optimum distribution of the deadweight of the crash barrier on the road surface.

The design with just one standing surface over a total length of six meters leaves a generous opening of five meters to let water and dirt flow through. This prevents the dangerous accumulation of puddles known at conventional crash barriers which can get splashed up onto the windscreen of the vehicle behind.

The mobile crash barrier ProTec 50 is ideal particularly for confined roadworks situations where nearly every centimetre of remaining carriage way width counts. ProTec 50 really takes up very little space with a planning-relevant width of only 10 cm.

The individual ProTec 50 element is only 6 metres long, offering sufficient flexibility for use also in urban roadworks with smaller curve radii. This length offers logistic advantages for many customers as the ProTec 50 elements can

now be transported with smaller (own) company vehicles.

What makes the ProTec 50 particularly interesting is its light weight of just 28.7kg/m. The resulting low element weight of well below 175 kg permits loading volumes of up to 800 running m per truck, thus once more clearly reducing the transport costs for ProTec 50.

ProTec crash barriers can be unloaded and mounted on site using simple loading tools in just one procedure - without even disrupting the flow of traffic. ProTec 50 is very quickly installed with just one screw being fitted every six metres.

The ProTec crash barrier with its low ASI value clearly absorbs the recoil energy that otherwise has a violent effect on the passengers in an accident vehicle.

With its good results in the impact test at TÜV Süd in Munich with containment level T1/effective range W2 and the ideal ASI value of the impact force level "A", ProTec 50 is an ideal addition to the proven portfolio of the ProTec family.

Mobile crash barriers in the ProTec family can be used to cover all possible uses from A to D pursuant to the ZTV SA (fig. 2, chapter 6.11) with professional installation, force-fit transition and absolute precision. Starting, end and transition structures on permanent crash barrier elements are naturally also available, together with mobile systems – preferably on the ProTec family – or length compensation elements (dilatation elements).

More information about our comprehensive product range of mobile road restraint systems can be found on the internet at

www.mobile-schutzwaende.de

ProTec: force-fit transitions



Strong transition: safe, force-fit connection of the mobile crash barrier types ProTec 120 and ProTec 160. Road users scarcely notice the transition to a different ProTec system, as the reflectors carry on consistently at the same height.

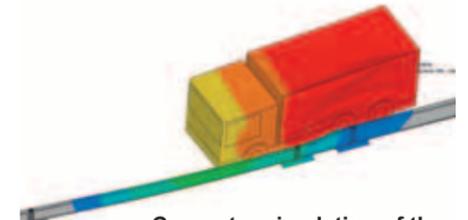
A chain is only as strong as its weakest link, or so the saying goes. This also applies to connections between mobile road restraint elements for different containment levels or even different systems.

Transitions ideally adapted to the crash barrier systems, such as the transition element ProTec 120 to ProTec 160 shown above, constitute a force-fit transition between the individual systems.

This has also been confirmed by professional numerical simulation calculations carried out by a renowned team of engineers for the ProTec connection element, based on the real practical truck impact tests using our ProTec crash barriers.

The reliable finite element method (FEM) that is also used for example in crash tests for the automotive industry calculated tensions and deformations in our ProTec connection element during an impact

situation with a truck for containment level T3 (8°, 10t, 70 kmh).



Computer simulation of the distribution of forces when the truck impacts on the transition element

The dynamic, nonlinear FE analysis provided verification that the tested force-fit transition element from ProTec 120 to ProTec 160 perfectly fulfils the functionality of at least a T3 test.

In this way, ProTec also warrants safe traffic control even in the transition zone between the individual crash barrier elements.

ProTec 160: premiere in Switzerland



With the colleagues from Dähler Verkehrstechnik, AVS Overath installs around 230 m mobile crash barrier type ProTec 160 at the A6 motorway near Thun in the Canton of Bern.

The A6 motorway in the Canton of Bern, Switzerland, is being gradually refurbished between Rubingen and Spiez.

Special priority is being given to the bridge taking the A6 over the Aare between Heimberg and Uetendorf. After 40 years in service, the bridge superstructure reveals considerable damage in a number of structures. Stability in the case of a strong earthquake is no longer guaranteed.

The Federal Department for Roads ASTRA has therefore brought forward the work to renew the bridge. Construction began at the end of May.

To provide road users with four lanes throughout the roadworks, our narrow

mobile H1 crash barrier ProTec 160 is being used for traffic control.

Following the positive experience gained by our Swiss partner Dähler Verkehrstechnik AG with the mobile crash barrier ProTec 120, the larger ProTec 160 is now being used in Switzerland for the first time. As a special feature in the roadworks, sight screens have been fitted on the crash barrier elements.

The roadworks should be completed before the winter begins, and then in the spring work continues in the opposite direction.

Here too ProTec will be in use through to the end of 2014 when refurbishment of the bridge comes to a conclusion.



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