



TRL DataBike



Background

There are around 1.52 million motorcycles in Great Britain. In 2003 alone a further 161,000 new motorcycles were registered. Motorcycles are a legitimate part of the traffic mix, providing the user with mobility and access to jobs, education and healthcare. However, motorcycles are also one of the most vulnerable modes of transport. In 2003, there were 28,411 motorcycle collision casualties. Of these, 693 people lost their lives.

Introduction

TRL is at the forefront of research looking at reducing motorcycle rider casualties. To assist with this task, TRL DataBike has been developed. The motorcycle collects information about the road environment and rider behaviour. These data sets are then studied to identify the occurrence of risk.

Technical details

TRL DataBike is a 600cc Fazer provided by Yamaha. It is fitted with a Provida 3000 camera and video system supplied by Petards.

The motorcycle has a camera on the front and a second that can either be attached to the rider's helmet or on the rear of the motorcycle.

A small video screen on the handle bars allows the rider to review what has just been filmed. This turns off automatically when the motorcycle is being ridden. There are also switches on the handle bars to start and stop the recording. The video recorder is inside the top box at the rear of the motorcycle and records using digital 8 video tapes.

The Provida 3000 system logs speed and the use of indicators and brakes. The motorcycle also has a geographical positioning system.

When the video is played back, the speed is shown in both mph and kph. A red button lights up whenever the brakes are being applied and a left or right green light flashes when the indicators are being used. The northings and eastings from the geographical positioning system are also shown. The recording shows a screen within a screen, each showing the output from either camera.



TRL DataBike on the road

Capabilities

Identification of risk TRL DataBike can be ridden along a route with a history of motorcycle collisions. The information collected can be downloaded and analysed by TRL. Graphs can be produced showing the speed along the route and where the rider is accelerating and braking. The geographical positioning system will allow this to be completed to the highest degree of accuracy.



The findings may show that riders are braking suddenly as they approach a bend. The bend may have 'deceived' the riders as it may have a tighter curve than the rider originally thought. TRL can visit the site and make recommendations on how the bend could be better 'read' by the rider. For example, edge of carriageway markings or posts could highlight the line of the bend.

Once remedial work has been completed on site, the route can be ridden again allowing the data from the 'before' and 'after' surveys to be compared.



Sport bike riders on the A537 'Cat and Fiddle'

Meetings with riders Meetings can be convened with local riders. The video can be viewed and the particular hazards highlighted can be discussed. Motorcyclists riding a route on a regular basis will be aware of the hazards and will be able to provide valuable comment from a rider's perspective.

Training & BikeSafe TRL DataBike can also be used as a training facility, riders can be followed by DataBike and filmed. The video can then be played back to them and advice offered on how their riding skills could be improved.

BikeSafe is an initiative run by police forces around the UK. Riders are followed by a skilled police rider on an "observed ride". By passing on their knowledge, skills and experience, police motorcyclists can help riders become safer and more competent.

Route Audits Routes can be ridden using DataBike and the recording can be used to make simple audits of signage, street furniture and the road surface.

Safety Videos The motorcycle can be used to make promotional or road safety videos. As the DataBike recording facility is already set-up, this can be very cost effective. Riders are more likely to relate to the road safety message if it is a local route that they recognise.

Collision investigation In the event of a motorcycle crash, TRL DataBike can visit the scene and gather information on the circumstances that led to the collision. TRL DataBike has advantages over using a car as the two sets of data would be comparable.

Exhibitions TRL DataBike is an eye-catching motorcycle and quickly draws attention. It can be displayed at exhibitions and conferences acting as the catalyst for discussion on motorcycle safety.



TRL DataBike monitor

Contact us

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