

# ANY QUESTION ANSWERED

If we don't know the answer, we'll find the person who does  
Send your questions to: [advice@motorcyclenews.com](mailto:advice@motorcyclenews.com) or 01733-468002

## Q How do I choose an ultrasonic cleaner?

I've picked up an early Yamaha FZS1000 Fazer that has sat outside for three years under a cover which I intend to convert from a sports tourer into a stripped down cafe racer. I'm considering saving some time and money by investing in an ultrasonic cleaning machine for the carbs, calipers, fixings and so on but there seems to be a baffling choice. Which would MCN recommend for an average garage spanner twirler? If it ends up being a good idea, I've plenty of biker mates who'd be tempted to use it for the price of a beer.

Mike Brierley, email

**A Answered by Alan Seeley, Technical Editor, Practical Sportsbikes magazine**  
You're right - there are a bewildering array of

ultrasonic cleaners on the market. Don't expect much change from £400 for the best type for your needs - I hope your friends are generous with the beer!

The first consideration is capacity. If you want to clean a bank of four carbs you'll need one of around a 20-litre capacity.

Remember, the individual carbs themselves will still have to be stripped to allow the cleaning fluid to penetrate and a cleaning power of around 400W would be desirable. You also want one that can heat the fluid to 60-70°C at least. Degassing is also a useful feature which takes the air out of the cleaning solution and gives better results on carbs and the like where there are lots of fine passages.



## KIT CHOOSER

### Q Should I invest in a bike lock and chain?

Is it actually worth getting a lock and chain? Surely if someone really wants to steal my bike it's not much of a deterrent? I don't live in a bad area and my bike is nothing special (a slightly tatty, four-year-old MT-07) that can't have much appeal.

Dave Saunders, Gillingham

**A Answered by Keith Roissetter, Infinity motorcycles**  
Imagine the hassle sorting police reports and insurance.

That alone makes it worth protecting. Plus you pay the excess, lose your no claims and may have difficulty getting insured in future. So yes, it IS worth getting a lock and chain. Ensure its Thatcham approved to qualify for an insurance discount. Oxford's Monster XL (from £149.99) is top value. The Almax Series V Extreme Chain plus Squire lock (£259.95) is among the best while a ground or wall anchor such as the Rota or Terraforce is recommended.



### Q How can I 'Czech' my tyres?

I'm planning a trip from Mallorca to the Czech Republic this time next year. The temperatures there can drop to -12°C and almost all the roads are gritted and salted so sometimes slushy. Will the Michelin Anakee 3s on my Triumph Tiger 800XC be up to the job? Of course, there are plenty of more off-road focused tyres available but I wondered if the tyre compound and its ability to work in such extreme temperatures might not be the more important factor. I have no intention of venturing off the black stuff. Do you have any advice on what I should be considering tyre-wise for extreme cold and poor but passable road conditions?

Tim Robinson, email

### A Answered by Paul Fairclough of SMD Tyres.

The factor that limits tyre choice for your bike is its 21in front wheel. Aside from the Anakee 3, you could also consider the Metzeler Tourance Next. To be honest, though, I don't think there's much to choose between the two for what you want to do. Both are excellent tyres.



What winter tyres suit the Tiger 800XC?

### Q Why does my GSX-R run rough low down?

My Suzuki GSX-R1000 K6 ticks over and revs perfectly while static yet when I set off it feels like it's miss-firing or its clutch is slipping up to 3500rpm. Above 3500rpm the bike runs perfectly but when the revs drop below 3500 the problem returns. Any ideas?

Ken Watkinson, email

### A Answered by Martin Crooks of Crooks Suzuki

Check whether the clutch pack is correctly fitted with the wave washer and seat. It was a mod for the previous K5 model. If someone swapped the clutch plates they may have omitted these two key parts. If not then check the spark plugs and the coil.



GSX-R1000K6 is 'missing' at low revs

## MCN LAW

Your legal questions

### Q Can I still claim if I didn't call the police at the scene of an accident?

Last summer I lost control of my bike on a bend due to some diesel on the road. I felt a bit shaken up but OK so I got up, dusted myself off and carried on with my journey. My wrists started hurting when I got home and I later found out that I had broken one of them. A few weeks later, I called a local solicitor to see if anything could be done, but he said he couldn't take the case on because I hadn't called the police. I didn't know I was supposed to call them. Am I going to have to take the hit?

Lester, by email

### 'It used to be a requirement to call the police but not if occurred on or after March 1 2017'

**A** You potentially have a claim against the Motor Insurers' Bureau, the body that compensates the victims of uninsured or untraced drivers. This is because diesel spills commonly occur due to a deliberate act, such as overfilling a fuel tank (necking), or by failing to properly secure the fuel cap. As in your case, they commonly occur at bends or on roundabouts. The solicitor you spoke to was using out of date information. It used to be a requirement to call the police in such claims but that doesn't apply to any accident which occurred on or after March 1 2017. That said, as a matter of best practice I would still recommend calling the police in such circumstances and taking photographs of the spill if you are able to.

Andrew Campbell

Solicitor and author of the MCN Law column for the last ten years

Andrew Campbell, **Bikelawyer**. Visit [www.bikelawyer.co.uk](http://www.bikelawyer.co.uk) or email [andrew@bikelawyer.co.uk](mailto:andrew@bikelawyer.co.uk) or call 01446 794169



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# EXPERT'S GUIDE TO... DATA LOGGING

What all those graphs and numbers on a datalogger mean, who they're for and why they're important



## THE EXPERT

Bob Gray

Ex-Performance Bikes magazine technical whizz Bob is a datalogging specialist and one of the most respected men in the BSB paddock. He even built his own datalogger - for fun!

A datalogger is simply an electronic device that records streams of data that arrive at it as analogue voltages, digital pulses or messages (via a CAN bus network, for example). In the motorcycling the main use of dataloggers is in racing where data gathered from various sensors located around a bike is used to help the rider go faster.

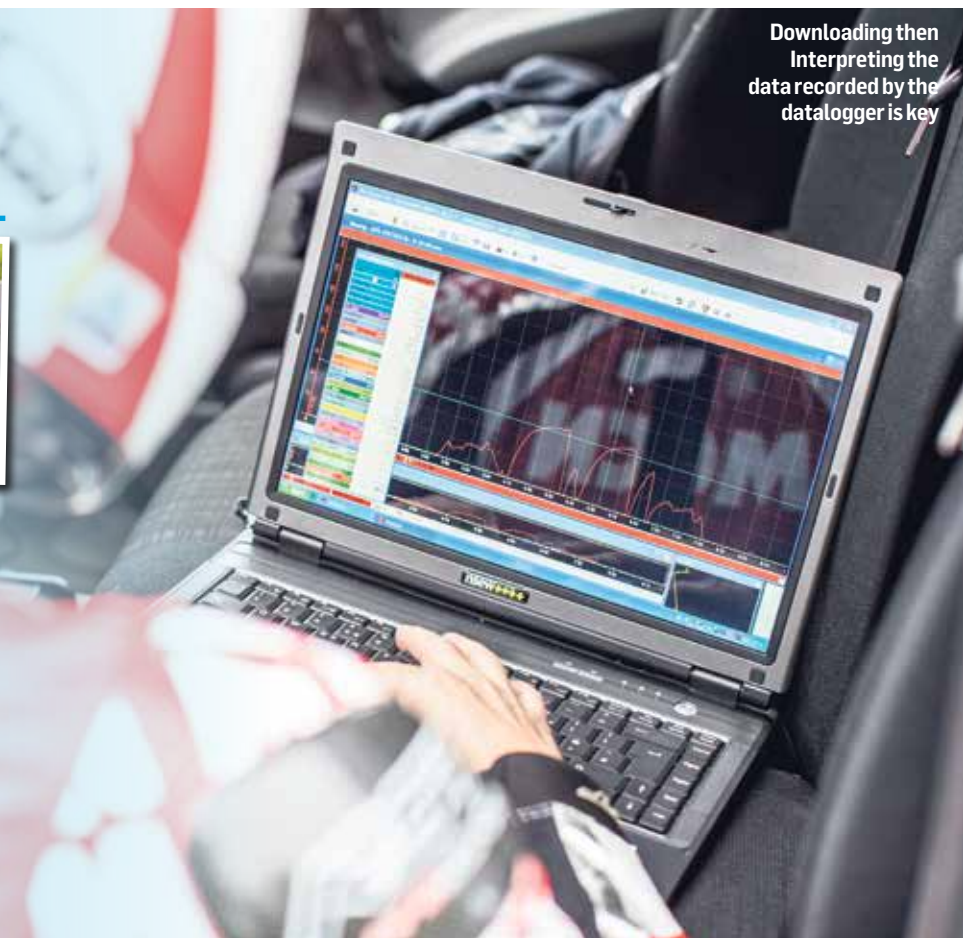
The 'brain' of a datalogger consists of a central processor, various converters and somewhere to store the data. The datalogger records data from various inputs (channels) at what is called a sample rate, which is measured by its frequency in hertz. 1Hz is one sample a second, 200Hz is 200 a second, so the higher the Hz rate the more samples per second are recorded. The data



Datalogging is used most in racing

is captured with respect to time but can later be viewed with respect to distance to make it easier to compare.

Once the rider enters the pits, a data technician plugs a computer into the datalogger and downloads the raw data file. Using specially-designed computer programs, this data is then interpreted and displayed as graphs or tables, all of which can be overlaid to gain a greater understanding of what is happening when the rider is out on track.



Downloading then interpreting the data recorded by the datalogger is key

## THINGS YOU NEED TO KNOW...

### What's being recorded?

A simple datalogger uses GPS to record its position and measures the change of that position against time to generate speed and acceleration data. MCN uses systems like this for speed-testing and lap-time data. But datalogging can go much further. Since the 1970s racebike systems have also record throttle position, wheel speed, engine temperature and revs. As systems and motorcycle technology advanced, information such as gear position, suspension movement, brake pressure, lambda sensor (fuel/air mixture), lean angle have been added to the data recorded. These systems are now available on road bikes, such as Yamaha's R1M.

### How is it gathered?

Most modern bikes run 'CAN bus' electrics, which is a network that allows all of

its systems to talk to each other. Dataloggers can be programmed to listen in and record the data that the bike's sensors are reading.

Where there are no existing sensors you can fit your own and areas such as suspension use

potentiometers, which are variable resistors that record movement through voltage change.

### What do you do with it?

Dataloggers don't tell you what to do on a bike, in the same way that owning a



spanner doesn't mean you can rebuild an engine. All it does is tell you what's happening at certain times. The user must interpret this.

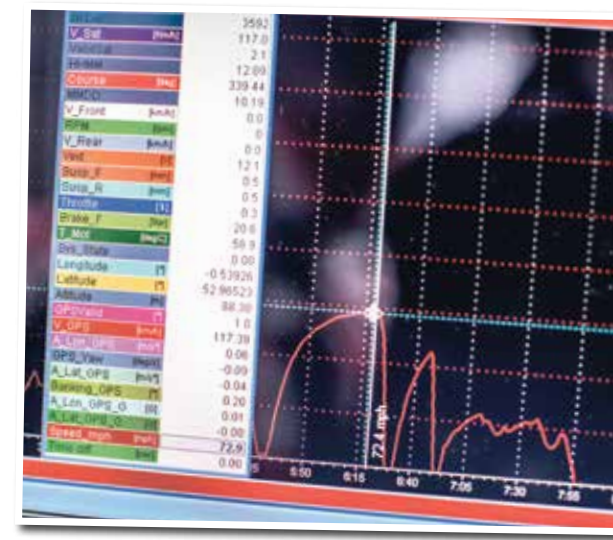
The crew chief will look at the data to ensure nothing is beyond certain limits. If, for example, they can see that a racebike redlines 50m before the braking point, you need to alter your gearing. After the session, the crew chief, data person and rider will look at the data to see if they can improve the rider's performance.

### What's telemetry?

Taken from the Greek words tele (remote) and metron

(measure), telemetry is simply a datalogger that can communicate with a computer wirelessly rather than requiring a cable. It is used in F1 to stream live data to the pit crew, too, but that isn't used in bike racing.

## Next week Steering Dampers



Specially-designed computer programmes help interpret data