

Technology - Riding Aids

This handout offers advice on a range of technologies now found on motorcycles. It is not exhaustive and further information can be found in your manufacturers handbook or by contacting your motorcycle dealer.

The technology discussed in this handout is:

- ABS
- Traction Control
- Stability control
- Power Modes

ABS

ABS (anti-lock braking system) is compulsory on all new cars sold in the UK and is becoming more common place on motorcycles. It operates by using sensors to detect wheel speed and a modulator to adjust braking effect in order to detect and prevent the wheels locking during maximum braking. It allows a rider to retain steering control whilst braking.

As it will be applying and releasing the brakes to prevent the wheels locking a number of times every second, your overall stopping distance will increase. It is a safety aid and should not be operating as a matter of course during normal riding. Before turning ABS systems off refer to your owner's manual for information on how the machine will respond.

Traction Control

Traction Control is also becoming a more common feature on mainstream motorcycles. Basic systems use the ABS sensors to detect a difference in speed between the front and rear wheel. More complex systems add engine torque sensors and accelerometers. When wheel slip is detected the system reduces engine power. This is achieved by; cutting cylinders, closing the throttle (only on electronic throttle systems) or retarding the ignition or a combination of the three. The purpose of the system is to prevent loss of grip through wheelspin. Sophisticated systems can be adjusted to alter working parameters. Before turning off traction control refer to your owner's manual.



Stability Control

Stability control is a relatively new concept on motorcycles but a lot of manufacturers are introducing or developing systems for the market. The system fitted to each motorcycle will vary from model to model. The most sophisticated systems combine information from the ABS and traction control systems, together with other motion and lean angle sensors to adjust power and braking in accordance with the grip available. They can give confidence in tricky conditions but as with all safety features they cannot operate outside the laws of physics. Your owner's manual will detail the system fitted to your machine.

Power Modes

Adjustable power modes, once available only on sports machines, are now a regular feature on touring and adventure bikes. The systems work by reducing the available maximum power and softening the way in which the power is delivered. A typical system may have three settings: Sports (or dynamic), normal and rain. The systems are usually combined with a fly-by-wire throttle system and can be used to good effect to complement riding when conditions are tricky.

