



MISSION

Control

TPC Racing has developed a clever bit of kit that replaces the PASM control unit on 997-generation 911s. We put it to the test on road and track.

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The premise for TPC Racing's DSC (Dynamics Suspension Control) unit is very simple. A standalone ECU to replace the PASM control unit, it essentially tunes the PASM dampers that were almost ubiquitous on 997-generation 911s. The aim is create what TPC Racing describes as an 'active' setup. It claims to utilise more of the PASM sensor's capacity to improve ride comfort and body control on the road and to cut lap times. It sounds like an intriguing system but naturally our cynical minds won't stop asking awkward questions... Why would Porsche create a suspension system and then not maximise its potential? Who better to define PASM's best parameters than Porsche's incredibly well resourced engineering departments? What does TPC Racing know that everyone else, including the factory, doesn't?

Today with the help of GT contributor Jack Wood and his very lovely 997 Carrera GTS we'll find out, running the DSC system back-to-back with the standard PASM programmes on road and track. Switching between them is the work of a couple of minutes, which is a pretty good start for the DSC setup. It costs from \$1190

(£755) but if you have a 997.1 non-Turbo model you will also need a three-axis accelerometer at \$250 (£159) – Turbos and all Gen 2 cars got this as standard from the factory.

First a reminder of how a PASM damper works. Using a host of sensors (measuring steering angle, body movements, wheel speed etc) PASM regulates the damping force by manipulating a control valve in the damper. With the valve open the oil in the piston can flow freely for comfort, as it closes the damping force increases for greater body control. PASM has two programmes – Normal and Sport – and adjusts the damping force every 100-milliseconds within their base parameters.

TPC Racing felt that the system could be improved and has worked for many years to develop its own programming. The 'active' element is so described because its software works harder to keep the body flat and stable. For example if you brake hard for a corner the front dampers will stiffen up noticeably to reduce dive, then as you accelerate through the corner the loading switches to the outside rear corner so the damper will stiffen to support the car. The result, it claims, is a car that feels more







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does move around in that unique 911 way it's easy to use the car's weight distribution to make really fast, effective progress. There's some in-built understeer but this is easily overcome by using the weight transfer... Will the TPC Racing system's attempts to eliminate body roll result in a similar reduction in adjustability, just as the impressive but strangely frustrating PDCC active anti-roll bar system in the 991 contrives to do?

It seems not. Just a few laps on track are not quite as revealing as the stark differences we discovered on the road, but once again the DSC system impresses. Jack's car is running Michelin Pilot Sport Cup 2 tyres, which provide superb turn-in response and mid-corner grip but with the suspension set to Mode 3 the car's agility

takes another step up. It snaps into corners with a little more bite and the tighter roll control allows you to get on the power a shade earlier as the car settles into the corner more quickly. Overall the GTS is more composed and feels more alert to every steering input. It would be fascinating to see how these changes shake out in terms of lap times, something we'll try to do in future (just don't tell Jack yet).

So from cynic to convert in one afternoon. I was really impressed with TPC Racing's DSC system and the way it seemed to endow the GTS with an oiled smoothness on the road combined with greater body control, and an added pinch of agility and composure on the track. For the price it seems a really worthwhile upgrade for

those who don't want the hassle or expense of getting new manually adjustable aftermarket dampers. Most importantly the DSC doesn't radically alter the character of what is already a superb car, but instead refines the package with subtle but tangible improvements.

The softest Mode 1 setup wasn't for me but Mode 2 and, on track, Mode 3 both seemed to have a wider operating window than PASM Normal and Sport, and greater depth of control. Furthermore you will soon be able to create your own programmes through a new software system (presumably so you realise how good TPC's own work is!). TPC Racing is also working on DSC programmes for the 991 and 981 platforms. We look forward to trying them out ◎

