

Michael Galati drove the S4 to second place in the Speedvision GT series in 2000.



Back in the USA

JEREMY WALTON records Audi's return to US tracks in 2000

AUDI'S acclaimed quattro system had been absent from US tracks for a decade when the Anglo-American S4 assault arrived in 2000. Created in the Buckingham workshop which now prepares the Audi-derived Bentley GT1 racing coupés, the S4 Competition variant had the outline of the four-door saloon and the heart of the RS4 Avant. It would be maintained and entered by Champion Racing, the Florida-based Audi/Porsche dealer, in the Speedvision GT Challenge.

Last season the S4 scored its first victory in a ten-race campaign across North America and it won the opening event in 2001. The S4, with Cosworth-built RS4 bi-turbo engine, and some external panels from the RS4, carried lead driver Michael

Galati to second place in the Speedvision GT points standings for 2000. Meanwhile, multiple-Le Mans winner Derek Bell drives a second S4, entered by Legends of Motorsport, in 2001.

For 2001, Champion Racing added the ex-factory Audi Sport R8 which finished third at Le Mans 2000 to its competition armoury, but continued to supply S4 hardware to pacemaker Galati, currently tied for the lead of the Speedvision series after two rounds of the scheduled 12. An insider said: "The problem is a very quick Honda NSX driven by an ex-BMW guy who knows how to win. We are competitive, winning one and leading for most of the second encounter, but running a sedan against a dedicated supercar is tough."

Audi North America director, Len Hunt, supported the transatlantic programme which created the Audi S4

Competition. A former director of Audi in Britain, Hunt knew the winning ways of Audi Sport UK at Buckingham. Under the ownership of former BTCC class champion Richard Lloyd, Buckingham had fielded the A4 racing quattro from 1996-97, winning all three 1996 British Touring Car Championship titles. Renamed Apex, the company began discussions about the S4 with the Americans in autumn '99 and Rod Bymaster, the North American motorsport co-ordinator for Audi and an employee of 20 years' standing, had little time to implement the plan.

Audi at Ingolstadt opened avenues to help Audi North America realise its S4 ambitions, with Audi Sport customer liaison engineers Volker Nosek and Dieter Krause arranging for items like unmodified body shells and power trains to come from Audi's quattro GmbH division; Cosworth

was able to give support in terms of engine development.

Champion Racing, of Pomano Beach, is not just a racing organisation with an excellent Porsche record, but is also a major dealer. Founded in 1988 by enthusiastic owner Dave Maraj, Champion is the largest retailer of Porsches in the world, as well as having a thriving Audi franchise. Maraj was so convinced of the racing future of Audi in the USA that he "allocated 25 engineers and over \$200,000 of our own money to support the year 2000 programme, plus an additional test car set to boost our chances of winning". Rod Bymaster pointed out: "In 1995, Audi sold 12,000 cars in the USA; just five years later the figure will exceed 85,000. We have to be doing something right, aside from having a great product."

The quattro drive-train had not been subjected to racing in the USA since 1989. During 1988-89 Audi showed America that the quattro option was not just for hostile weather. Installed in the Audi 200 for '88 SCCA Trans Am and in the '89 Audi 90 for IMSA GT events, quattro drive was as effective in racing as it was in World Championship Rallying.

The point had been proved and American organisers were naturally wary of letting the quick quattros back on the track a decade on. Allowing Audi another chance to crush the domestic 7- or 8-litre V8 and V10s was commercial suicide, so the US organisers used a power-to-weight formula, with restrictions on wheel rim widths, to deliver an astonishing, entertaining racing spectacle.

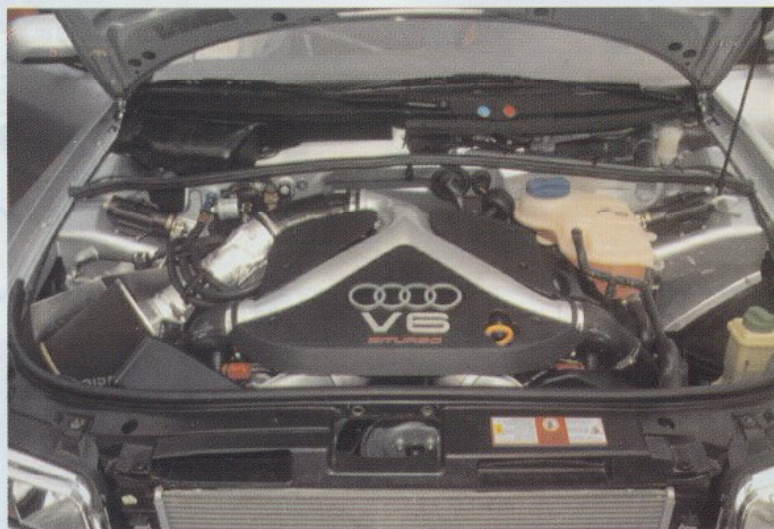
Eddie Hinckley, senior Audi Sport UK race engineer at the time, team manager Gary Blackman and weekend Volkswagen Vento racer Dave Ward were among those involved in the project from the start. Hinckley traced out for me the key technical milestones in the four months between conception and race gestation. "In autumn 1999, we had a meeting with Audi North America's Rod Bymaster and representatives of the American race series organisers at the Sports Car Club of America, to decide on the technical specification of the S4." The RS4, with its Avant body, weighed 1602kg, whereas a mandatory American racing kerb weight for the competition S4 was set at 1409kg by the SCCA.

Veteran of the winning TWR-Jaguar sports racers, Eddie Hinckley, added: "The SCCA employed a power-to-weight formula of 6.9lb. per horsepower to equalise the obvious differences between Dodge Viper V10, Chevrolet Corvette V8, Porsche 911 GT3 turbo and the BMW M3. The American regulations mix



**Above:
Driver's
workroom in
the S4.**

**Right:
Externally,
there is little
to show that
the biturbo
engine
develops
450bhp.**



Group N showroom and 2-litre Super Touring, but the terrific sales point for Audi is that the car used such a large number of showroom parts in 2000. These included the total quattro transmission system. With the exception of the clutch, it is all standard, a tribute to the strength Audi built into the S4 quattro system.

"We raced with the production front and rear drive axles, central differential and H-pattern six-ratio gearbox. Unlike our rivals we had standard gears, which withstood over 400bhp through a tough season."

It was not all straightforward from those standing starts. "The standard clutch was replaced first by a reinforced sintered version and then a twin-plate AP Racing carbon fibre unit. The S4 usually passes any faster qualifiers before the first corner!"

This was no idle boast, as we saw for ourselves at Road Atlanta in 2000: each racing start becomes a perfect advertisement for the merits of quattro. All the rear-drive opposition was shrouded by tyre smoke while the

silver S4 streaked through the huge horsepower ranks.

The critical horsepower allowance for the S4 was 450bhp, this from the bi-turbo V6, used for both the S4 and RS4, although the RS4 was not sold in the USA and the S4 is limited to 250bhp. Since the RS4 developed 380bhp in showroom trim, 450bhp was not hard to achieve. The production five-valve per cylinder heads were mildly modified by Cosworth. Other racing modifications included enlarged RS4 intercoolers, competition exhaust system, Pectel electronic engine management and a single mass flywheel. Unlike any other professional race team, no spare engine was carried to the track in 2000, nor was one required last season. Despite facing ambient temperatures above 112°F, the 30v twin cam V6 was untroubled, aside from electronic gremlins. Reprogramming cured some frustrating mid-season misfires.

■ In our next issue: how the S4 performed on the track. ■

***The S4
usually
passes
any
faster
quali-
fiers
before
the
first
corner'***