



PORSCHE 911 CARRERA 2 TIPTRONIC

Automatic success

IF DANTE WERE alive today, a special circle of hell might depict drivers stuck in traffic in a sports car with a standard-shift transmission. Oh, the agony! Stop. Go. Brake. Accelerate. Upshift. Downshift. Work that clutch. Flail that shifter.

Of course, an automatic transmission frees us of this curse. But the best computer-controlled, electrohydraulic 4-speed with lockup torque converter is no match for a stick, even when one selects the sport

rather than the economy mode. Nor is the slickest automatic gear selector (the one with an intelligently designed shift gate) really suited for extensive, spirited manual shifting.

Because there's still an element of by-guess, by-golly that goes with manipulating the selector lever of an automatic transmission. No one is more aware of this than Porsche, and although Zuffenhausen has bowed to a growing trend by equipping most 928s and some 944s with an automatic, the factory has avoided

sully the sporting reputation of the 911 Carrera with a gearbox that shifts for itself. At least not since it pulled the plug on Sportomatic.

Originally introduced in 1968, Sportomatic comprised an all-synchro 4-speed manual gearbox, a torque converter and an automatic clutch that was used only for facilitating gear changes. Clutch disengagement was accomplished by a vacuum servo unit taking its signals from microswitches located on the shifter stalk and shift linkage.

For driving in traffic and up to speeds of 60 mph, you selected D (2nd gear actually); for driving on the open road, D3 or D4, depending on vehicle speed. For ascending or descending steep grades, you used L (1st). Or you could just row it along like a stick shift, without worrying about that nasty old clutch.

Unfortunately, said clutch would disengage whenever you put your hand on the shifter, even in mid-turn or while accelerating through the gears. Annoying (alarming too!), but no more so than a torque converter whose inefficiency made a Sportomatic-equipped 911 sound like a GM city bus when moving away from rest. Because of converter power loss, top speed of a 1968 911 Sportomatic was substantially less than that of the 5-speed (117 versus 132 mph). Acceleration was lackluster too and our test car (R&T, February 1968) took 1.3 seconds longer to reach 60 mph (10.3 sec.) and 1.6 sec. more to cover the quarter mile (17.3).

When Tiptronic was introduced at the 1989 Frankfurt auto show, 911 fans were skeptical. The fact that this was a true automatic didn't convince them that it belonged in a Carrera. We had our doubts too, but now that we've driven one, most of us agree that this is the sportiest automatic to come down the road.

In most ways, Tiptronic is not unlike automatics found in most luxury coupes and sedans. It has its soft and hard shifting modes. But it also has the capability of being up/downshifted like a manual gearbox, simply by sliding the shift lever into a special gate, then merely tipping it forward or backward.

For trundling around town or sitting in traffic, simply moving the stalk into D in the normal gate will suffice. The specially modified ZF 4-speed planetary transmission does the rest, making shifts based on your demands. For example, drive lazily and it starts in 2nd and quickly shifts into 4th. Get aggressive and it starts in 1st and works its way up through the gears, shifting at about 6200 rpm as long as you stay on the throttle.

Unlike other electronically controlled automatics that have only sport and economy modes, Tiptronic's electronic control unit has five shift maps that adapt themselves to

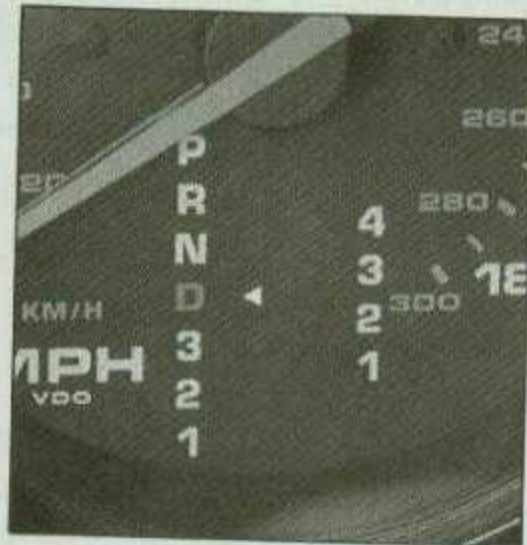
your driving habits and deliver shifts that represent a balanced combination of performance, fuel efficiency, emissions and comfort. The transmission's control unit takes its input from the Carrera's ABS computer and Bosch Motronic, juggling parameters such as vehicle speed, throttle butterfly angle and engine speed. Also, longitudinal and lateral acceleration because, for safety's sake, Tiptronic is programmed to not immediately upshift if the throttle is suddenly released—say, while accelerating or in the middle of a turn where a change-up to a higher gear could reduce the

power being delivered to the rear wheels and cause loss of control.

Like other automatics, Tiptronic can be shifted by moving the selector manually into any one of its four gears. The action is purely mechanical and sliding the lever from D to, say, 2nd gets you just that (like most automatics, this one won't engage low above about 25 mph). There's no notched gate such as those found on most luxury sedans, so it's impossible to shift by feel. However, tiny indicator lights built into the speedometer face make it fairly easy to see what gear you're in.

Using the shifter manually in the standard plane locks the transmission in the selected gear where it remains. Thus, you can run the engine up into the rev limiter without prompting an upshift.

Moving the selector sideways to the right (the Tiptronic mode) puts the transmission into the manual gate where plus and minus symbols represent upshifts and downshifts. There's no tactile reference point such as a detent to tell you what gear you're in. Instead a second set of indicator lights on the speedometer provides that information.



■ Used conventionally, Porsche's automatic is engaged by pressing a detent button and moving the selector to D or to one of the individual gears whose position is indicated by an illuminated arrow on the speedometer face. Sliding the shifter to the right activates the Tiptronic mode where a forward or rearward tilt of the shift lever triggers an upshift or downshift. Because there is no actual shift gate, gear choice is indicated by a separate arrow and scale at lower right edge of the speedometer.

PHOTOS BY DEAN SIRACUSA

