

EUROPEAN CAR

Tool of the Month

By Dan Barnes Photo by the Author

It is unquestionable that technology makes cars better, but as cars become more sophisticated, those who work on them must grow in sophistication as well. Modern cars, with their many electronic systems, require "electronic wrenches" to be repaired and modified. Generally, these electronic wrenches have been the domain of dealers and well-funded repair shops. Though many new car dealers are excellent, most enthusiasts of any marque have accumulated enough bad experiences to

aligning the immobilizer after swapping ECU's and resetting service reminder indicators. VAG-COM can read any trouble codes in the vehicle, enabling one to diagnose a problem with the ABS, airbags or automatic transmission, and it can communicate with pre-1996 (non-OBD-II-compliant) cars. An OBD-II scan tool can't do any of these things, and it costs more than VAG-COM, too.

There are some things the VAG-COM can't do, such as "roll back" an

Ross-Tech VAG-COM

The Volkswagen and Audi Enthusiast's "Electronic Wrench"

make even the thought of going to one something to be avoided. And yet, if a trouble light comes on, the enthusiast has to take his vehicle to a dealer and pay for the service department to plug it into a computer and give him an estimate, indicating which parts the mechanic thinks needs replacement. This is an incredibly frustrating experience for owners who are capable of using conventional wrenches. Quite a few of us even own a computer, and it would seem to be a major improvement if we could plug our computers into our cars and learn what the dealer's mechanic learns when he plugs in his.

The standard tool in a Volkswagen dealer's service department is the VAG-1551 or VAG-1552 diagnostic tool. It is the dealers' "electronic wrench," and Volkswagen sells the tool only to its dealers. There are two alternatives for the enthusiast, however. VWTool/VDS-PRO was one, but it was an early solution, primitive in today's computing environment. It has not been supported for some time, though an update is planned soon. The other alternative is the Ross-Tech VAG-COM, a more recent development by Uwe Ross, a very talented computer engineer. Basically, Uwe Ross monitored the signals between a VAG-1552 and a car, reverse engineered them, and wrote a program that allows a PC to do everything a VAG-1552 can do, and more.

VAG-COM uses Volkswagen's proprietary diagnostic protocol and will only work in VW/Audi vehicles. In addition to showing fault codes and monitoring operating parameters, VAG-COM allows an enthusiast to make "adjustments," such as reprogramming the locks or the stereo, re-

programming the immobilizer, or "flash" the chip in the ECU with a new engine management program. VAG-COM can do things the VAG-1552 cannot. At this time, the most interesting "extra" is data logging, though due to slowness of communication between the ECU and PC, the sample rate is extremely limited. It would be useful for recording temperatures during a

lapping session, for example, but less useful for monitoring a drag race.

One caveat emphasized by Uwe Ross is that VAG-COM is a tool, not an on-line service manual. To make full use of VAG-COM, you will need a service manual containing the VAG-1551 Scan-Tool procedures for your car. Ross provides several recommendations on his company's website.

Raffi Kazanjian, of Eurosport Accessories, recommended the VAG-COM to us while we were in the middle of testing for the Jetta 1.8T exhaust comparison that begins on page 114 of this issue. We decided it would be the perfect time to find out about this new

tool. After some initial debugging (our problem was already documented on the website), we were able to read and reset engine fault codes, monitor rpm, intake air temperature, coolant temperature, injector pulse width, air/fuel ratio and many other variables that would require expensive equipment to measure any other way. We didn't get into the customization of vehicle features, because we don't own the Jetta we used to test.

Overall, we find the Ross-Tech VAG-COM to be a tremendous value. It is our opinion that any enthusiast who takes working on a 1552-compliant Volkswagen or Audi seriously should get set up with a VAG-COM interface, and consider it as essential as a torque wrench. ❧



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