QUICK TECH: ENGINE



Analyzing Your **Performance**

PERFORMANCE TRENDS OFFERS **SOFTWARE TO** ANALYZE A **VARIETY OF** RACE CAR DATA

BY KEVIN GERTGEN

ront Suspension Geometry At This Track Location

Performance Trends was founded in 1986 by Kevin Gertgen, an engineer from Ford's dyno lab in Dearborn. Their first product, "Drag Race Analyzer." was a drag-race simulation for the Apple II computer. In 1986, performance software was either incredibly simplistic or nonexistent.

Performance Trends made its mark by allowing the user to do more detailed types of modifications. Its "Drag Race Analyzer" program could answer questions like, "Should you go to the drag strip with a full tank of gas?" More weight slows you down, but more weight over the rear axle gives better traction. In this case, the program's answer was, "It depends on how traction limited you are."

The "Drag Race Analyzer" was quickly followed by "Engine Analyzer" and "Circle Track Analyzer."

After getting feedback from literally thousands of users, the product line expanded to include new and more advanced programs, including "Engine

> Analyzer Pro" and "3D Suspension Analyzer." The detailed "Suspension Analyzer" not only calculated suspension characteristics at ride height, but you could have the suspension go into

dive, roll, and steer to see what would happen to bumpsteer, scrub, camber gain, and more on the track.

Their first piece of electronics was a simple RPM recorder, the "Electronic Tach Interface." It was quickly followed by the flow-bench data logger and the "DataMite" line of vehicle data loggers. The first "DataMite" was a three-channel revolutions per minute recorder,

which could record engine rpm, front tire rpm, and rear wheel or driveshaft rpm. From these three rpms, you could analyze much about the vehicle, including miles per hour, acceleration rate, clutch or converter slip, tire slip, engine torque, horsepower, and more.

After that, the electronics floodgate was opened. One early user of the "DataMite" took its torque and horsepower measurement capability and adapted it to its inertia (flywheel) dyno. A new product line was born, the "Dyno DataMite." The flow-bench electronics merged with the "Cam Analyzer" software to produce the Cam Test Stand. Engine builders were now able to measure all 16 lobes on a cam with high precision in five to 10 minutes. Performance Trends added a missing tool for the engine builder,

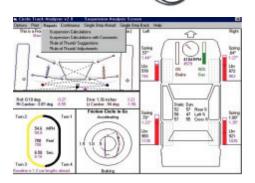
valvespring measurement, an engine logbook, and a circle-track logbook.

Another offshoot was Performance Trend's new Shock Dyno. The hardware is totally different from their valvespring tester, but the software and electronics are 90 percent the same. They have a completely new micro line of electronics, which can work with or without a computer. This line includes a Ouick Cam Checker, Valve Seat Pressure Checker, A/F Checker. and more are

coming.

SOURCE

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