

From Lab to Track--it's torture all the way...

MicroStrain sensors inertial and torque measurement application

Andy May founded **ZETA Performance Vehicle Technologies** in 2015, to provide a full service automotive engineering company specialized in vehicle testing and development. He's been in and around motor sports and racing teams since before he earned his BSME at UNC Charlotte. He's served as engineering manager, director of engineering, and lead engineer for world class racing teams. There's a banner on his website that echoes his experiences: **Dream it. Test it. Race it.** Whether it's roll-pitch-yaw data to evaluate chassis and suspension, or slip angle to see how the rubber meets the track, Andy May is data driven.



He may not 'bake 'em', but he surely does shake 'em. The Servotest Shaker rig offers 7-post contact. That's 4 shakers with programmed vibration on the wheels, and 3 more to load specific areas of suspension or chassis. It's one of only four sites in the western hemisphere to offer this capability! Here's what it looks like under the hood...errr... deck:

"We specialize in vehicle testing and development", observes Andy," with full-service engineering solutions. Race-ready electrical systems, vehicle shaker testing, at-track vehicle testing, and data acquisition - it's complete engineering support".

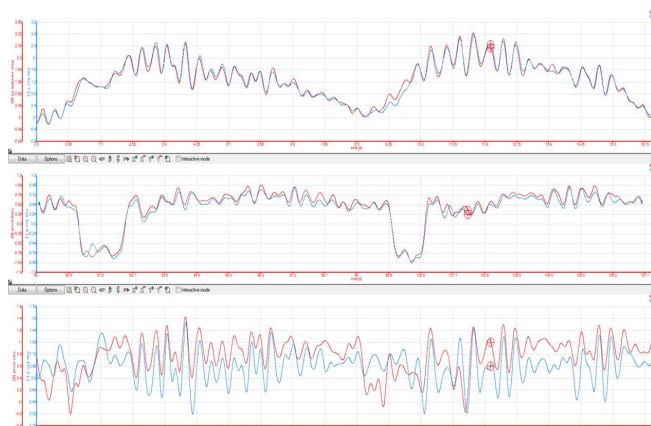


MicroStrain's MV5-AR gyro-stabilized inclinometer delivers precision measurement of dynamic inclination, acceleration and angular rate in challenging environments. Andy is quick to point out, "there's nothing more challenging than the race track. We found that the MV5 plays well with our vehicle data acquisition system, and lets us concentrate on the cars, not the measurement tools".

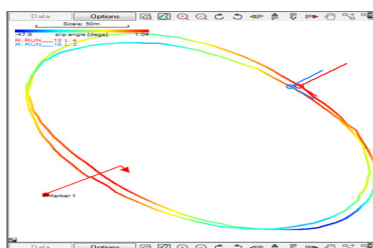
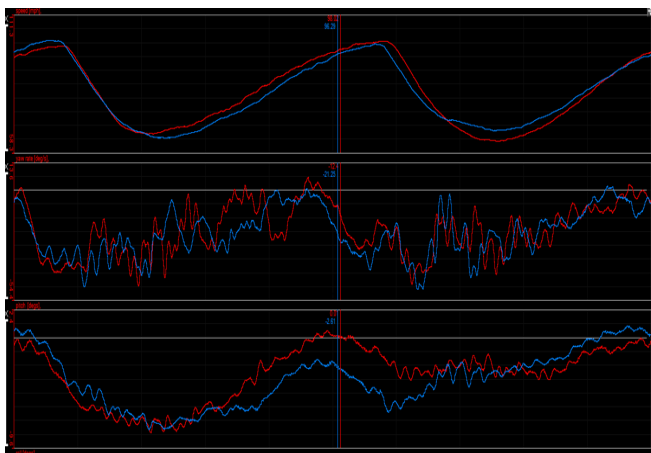


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Product Review: Inertial and Torque Measurements in race cars



“Last week’s data is from a brutal application”: 3+ g’s lateral acceleration with 1-2+g spikes and a lot of roughness, plus large pitch, roll and yaw angles. Not very repeatable and hard to pick up fine detail. Great test of durability and capability”, Andy asserts. “If it works there, it’ll work most anywhere in motorsports. high force, high lateral acceleration but less roughness and spikes, more vertical load and significantly more repeatable”.



Also included is our ‘slip angle’ data channel, which is calculated in our analysis software from the gyro via kalman filter and the accelerometers and gps heading.

CAN bus - Can DO! Whether it’s on a race car, or heavy equipment, the MicroStrain MV5-AR will stand up to the task. It enables Controller Area Networks (CAN) to gather data for vehicle evaluation and control. For ZETA, it adds real value to their engineering performance. Ask Andy for details on his CAN bus ready, race-ready wiring harnesses!



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