Race Track Technology, HP, and what am I doing in an Indy 500 race car anyway?

An email arrived from a contact of mine at HP asking if I'd like go for a spin around Infineon Raceway in an Indy 500 car in two days. In my mind, the short answer was, "yes!"

When I first glanced at the email I was so excited I was ready to book the next flight to Indianapolis. It's a good thing I shared the email with a friend who pointed out that Infineon Raceway is in Sonoma, California, just 80 miles up the road from my home. I tried to relax and get my pulse under control but couldn't , so after waking from a fitful night's sleep on the appointed overcast and cool morning I excitedly hopped into my car, zipped up the freeway and arrived at the race track just minutes before my scheduled adventure.

My host, Jim Christensen of HP promptly introduced me to Indy driver Davey Hamilton (Davey's the young dude below.). Davey, who races for the Dreyer & Reinbold team, has sat behind the wheel of an HP sponsored Indy 500 car in 2007, 2008 and 2009 finishing an impressive 9th in '07 and 14th in '08 then, in 2009 he scrapped the wall crashing out of the race - something that I hoped wouldn't happen when I was hanging on behind him in a specially designed Indy two-seater.

Then, I got a chance to chat with an enthusiastic Scott Jasek co-founder of Indy Racing

Experience who, in Scott's words, "provide fans with the opportunity of a lifetime to experience the high speeds of Indy Car racing with our driving and 2-seater programs. "

HP and Indy 500 Racing

But, what, I thought did all this have to do with HP? Scott and Jim set me straight when they explained that HP technology is not only prevalent at Infineon Raceway, but at the Indianapolis Motor Speedway and around the entire Indy 500 circuit. Virtually every operational aspect of these $600,000 racing machines is monitored in real time to make the critical pit stop and on-track performance adjustments needed to win in this ultra competitive environment. Pit crews use HP notebooks at trackside to monitor and then adjust the car's aerodynamic performance, the complete engine and drive train, and can even remotely adjust the suspension while the car is whizzing around the track.

During the race, performance data is streamed wirelessly in-real time to HP servers which do the number crunching analysis and deliver optimization recommendations to the pit-crew for action. And, they've got HP high-definition printers and plotters on hand for data comparison and analysis before, during and after every race.

But, without the race car none of this would be possible. And, that's where HP Workstations come in. Every aspect of these super high-tech racing machines is designed on HP Workstations to push and squeeze every ounce of performance out of these steel and plastic thoroughbreds.

I was taken for a ride

And now, it was my chance to experience pure speed, and I was seeking divine intervention. I took a cursory walk around the race car to bond with and admire the sleek lines and intricate machinery and got a little concerned when I noticed four parallel and overlapping strips of black duct tape covering half of each of the two air intakes at the front of the vehicle. My initial thought was; 'is that what's holding this beast together?' But, before getting in I learned that these tape strips act as a choke, restricting the flow of air input when the engine is cold and are pulled off one at a time as the engine warms up.

With that mystery solved, I was helped into a cloth-like fire proof head and shoulder cover, a helmet and gloves, and securely strapped into the rear seat by two crew members. Davey Hamilton was waiting and ready in the front seat. Behind my back and out of view I heard and felt the pit crew wheel up the external starter, plug it into the car's protruding drive shaft, and in seconds loud rumbling engine noise engulfed me.

Sounds on the track

I had pirated a small audio recorder onboard and recorded the entire ride, from strap-in to finish for your listening pleasure (*Sorry, but the audio file got corrupted, but don't worry. Just go Grummm, Grummmm, Weeeeeeee, Splat in your mind as you read this.*). A word of warning

though – since I was first out of the gate we did three f**u**ll laps around the 2.5 mile circuit to warm up the car and condition the tires. The sound of rumbling for this long might be a bit too much for some, but if you're a real race fan and want to hear the same down shifting, up shifting, acceleration, and braking as I experienced just give this a click and you'll quickly get the audio picture.

The raceway is a complex series of twists and turns that go up and down hills requiring lots of concentration, precise coordination, and skill to master. Something that I can barely simulate on my PS3 playing Gran Turismo, but something that Davey Hamilton has down to a nanometer. He downshifted precisely at the same point at every sharp turn, and then pulled through at 130MPH plus on the way out, and the line he held throughout was perfection, same spot, same line, every time. It was amazing!

Yes, it was a bone jarring, ear drum piercing exhilarating experience that I'm very fortunate to have had, and yes I'd do it again, and again!

Thank you HP for inviting me to experience this, and thanks for turning me into a fan. Now that I've felt and witnessed the amazing speed, acceleration and precision of track racing I can really appreciate the talent and dedication the drivers and teams put into my new found and favorite sport. Indy 500 2010, here I come!

by

David Heller

Indy 500 Race Car Specifications

- Engine displacement: 2.65 L (162 in^3) DOHC V8
- Gearbox: 7 speed semi-automatic
- Weight: Approximately 714.4 kg (1,575 lbs.), without driver
- Power: 541–597 kw (725–800 hp)
- Torque: 475–576Nm (350–425ft•lb)
- Fuel: Methanol, Mobil 1 lubrication.
- Fuel Capacity: 132 Liters (33 U.S. Gallons)
- Fuel delivery: Fuel injection
- Aspiration: Turbocharged
- Manifold Pressure: 1.4 Bar (41.5 InHg) without "Power to Pass" 1.5 Bar (44.0 InHg)
- Length: 4.8 m (190 inches)
- Width: 2 m (78.5 inches)
- Wheelbase: 3.1 m (122.75 inches)
- Steering: Manual, Rack and pinion
- 0–60 mph time: 2.6 sec (with traction control), 3.1 sec (without traction control)

Rating: ★★★★½
Reviews:

- ★★★★★ **Experiencing race with the real drivers, for real!** September 02, 2009
  Reviewed by 'Trevor the Gamer'
  This article perfectly describes your enthusiasm about your experience on the track!