



Tech Articles

Racing Blackhawk Farms

by Erik Guldborg

Blackhawk Farms Raceway is located in Rockton Illinois near South Beloit. This is a 2.1 mile road race circuit comprised of 14 turns. The track is run clockwise and you will notice that not all the turns are numbered or named. We will be driving the course as you would for one of Midwestern Council's time trials events. The car is a 1987 Fiero GT 5 speed which is stock except for suspension modifications and BF Goodrich road race tires. Because we like our car and will have to drive it to work on Monday, we will be lifting on upshifts and limiting our engine speed to 5,500 RPM. Speed shifting is very hard on the powertrain and the peak horsepower is seen at about 4,800 RPM. We begin at the end of the pit lane about 2/3 rds of the way between turn 7 and turn 1. When the stoplight on the bridge turns green, we have 1 or 2 seconds to start. Our timed run will not begin until we break the timing light beam which is about 50 feet or so in front of our starting point.

Depending on the outside temperature and the condition of our tires, we will bring the revs up to about 4,000-5,000 RPM and unload on the clutch as hard as possible without excessive wheel slip or losing too many revs. A good launch will show up as about .7 G's on the G-Analyst. Upshift into second at about 5,500 RPM as you go under the bridge staying inside the white line on the pavement until you have checked your rearview mirror for traffic. (There shouldn't be anyone coming, but if there is, the next car will be closing on you at 80- 100 MPH!). Start moving the car left to the outside of the track, upshift into 3rd gear, and set up the car for turn 1.

We will be going about 70 or 75 MPH when we brake for turn one. Brake quickly but smoothly in a straight line on the left side of the track, and turn in as late as possible. Accelerate hard, still in third gear, letting the car drift left using up all the track as you exit turn 1. When the car stops drifting, start moving to the right and upshift into 4th just before turn 2. As soon as you can clearly see the curbing at the inside apex for 2, aim for it and try to put the right front tire on the left edge of the pavement. The tire may actually hang half off the pavement at this point, but don't let it drop over the edge because you're traveling at 90 MPH with your foot flat to the floor. Let the car drift right until you can feel the tires hooked up and steer left setting up for turn 3 (the Carrousel). Lift smoothly and brake hard in a straight line, running from the right side of the track to the left, aiming for the concrete strip at the outside. Heel and toe downshift into 3rd and turn in, aiming for the curbing at the first apex in turn 3.

Accelerate hard letting the car move out to the center of the track and hold that constant radius until you see the curbing for 3A. Head straight for the left curb and turn in without lifting. The engine is probably at about 5500 to 6000 at this point, but don't upshift because as soon as you turn left for 3A you will be braking hard for 3B. You should be at the left side of the track entering 3B, taking a very late apex as this is the most important corner for a Fiero.

Heel and toe downshift into 2nd gear and accelerate out of 3B, drifting left. Grab 3rd gear just before the entrance to 3C, drift the car right and get ready for a late apex at turn 4. Stay to the extreme right at the entrance to 4, in third gear, and lift gently for a split second to put weight on the front end and turn in immediately standing on the gas. Let the car drift right and use all the track and a little bit of the curbing at the exit. Stay right until you just pass the back exit road and turn left aiming for the apex curb for turn 5 and upshift into 4th. The car will drift right at about 90 MPH using all the track. (If you drop a wheel off the pavement here, don't even think of trying to come back on at speed.....you will be upside down or stuffed into a tree if you try.)

When the car settles down and stops sliding right, turn slightly so the car will be on the left side at the entrance to turn 6. Brake hard for 6, heel and toe downshift into 3rd and turn in, accelerating from the turn in point. Again, let the car use all the track and drift left to the outside. As you cross the entrance road to the track, turn in for 6a using a very late apex again. As soon as prudent start moving the car towards the center of the track and upshift into 4th @ 5500 and sit back and enjoy the scenery for a few seconds as you build speed heading for the kink at the entrance to turn 7.

Pay attention here as you are probably doing about 100 MPH in 4th as you enter the kink. Get the car to the left side of the track and try to clip the right side apex of the kink and let the car move left. You are closing on 7 at about 150 feet per second at this point and you must not panic or you will be off the track and into the swamp. The car will drift left as you exit the kink and you are running out of pavement in a big hurry, but DO NOT brake until the car has stopped drifting and all four tires are rolling again. I usually count one thousand two one thousand and stand on the brakes. Heel and toe downshift into 3rd and take a late apex drifting left until the outside tires get up on top of the alligator curbing a little bit. If you hear a rumble strip buzzing noise for a half second at the exit, you did it about right. Now accelerate hard, upshifting to 4th at about the beginning of the pit lane entrance and don't lift until you pass the timing lights under the bridge. This long straightway is a good place to check your gauges and make sure everything is fine.

Resist the temptation to continue accelerating into turn 1 as you need to start cooling off your brakes immediately. You should cruise the track quickly in 4th gear, using the brakes as little as possible, until you reach the back gate and turn into the paddock area. Our timed run is over when we trip the timing lights under the bridge, and racing all the way to the back gate will guarantee coming in with superheated brakes and boil the brake fluid for sure.

If you don't feel comfortable with the speeds, if your tires don't stick as well as my Comp T/A R1's, or if the track is slippery, don't try running Blackhawk this quickly. Take your time building up to these speeds, as the ARMCO barriers and tire walls are not very forgiving when you make a mistake. If your Fiero has a stock suspension, it will understeer (push) until it reaches the limit and then snap to oversteer. If you lift suddenly in a fast corner, the car will probably exhibit what is known as drop throttle oversteer, and turn around. Never fear.....Koni shocks and alignment settings can make your Fiero handle like the newer 911 Carreras.