

10 Secrets to Going Faster

By Bill Gilbert

In this article, tips that I hope will improve your driving during the upcoming DE season. Much should sound familiar to those with DE experience. But, somehow, many drivers lose sight of these basics as they gain experience and start to go faster. Never mind what we lose over the winter...

I've included quotes from many pro drivers and coaches who have spoken at NNJR events including our annual Instructors and Driver's Seminars (see the end for a complete list). This year, Randy Pobst will be answering your driving questions at both seminars (Instructor Seminar: by invitation only), so I hope you have March 1 reserved!



1. Focus on Technique, not Speed

When a new driver shows up at a DE, they have no choice but to focus on the line and other track basics. However, after a few events, it is too easy to focus on going faster, rather than the basics. Modern video and data apps that display lap times have made this bad habit worse. To the point that the first thing I hear from many drivers is, "I just turned a 1 20 and I know there's two more seconds..."

Compounding this problem, per Gunnar Jeannette, "Modern cars contribute to many drivers who get going fast without knowing the fundamentals." Dave Scott says, "Modern cars abilities are far above their driver's ability. They allow incredible mistakes without consequences, until it's too late. These cars are perfect and their drivers think they are!" Andrew Davis says, "It takes years for skills to get up to the level of the car."

Andrew Davis went on to say, "DE is about education; the purpose is to focus on perfect technique, speed will come." Per David Murry, "Do everything correctly from a physics point of view; don't think about lap time."

For those of you focused on lap times, let me suggest the technique I learned from the Jim Russell driving school. They were uninterested in "fast" lap times. They stressed consistent lap times and that is what you should focus on. Pros can run within a tenth or two of the same times

for a whole session or race, even with traffic, etc. Some NNJR drivers can do the same: that should be your target.

2. Do the Basics Well

So what are the techniques to focus on? I think a quote from Ross Bentley fits here, “Advanced techniques are often just doing the basics really well.”

So a quick reminder of the basics. Almost every expert starts with VISION. If we aren't looking far enough ahead, we feel rushed and driving will be choppy. Look (much) further ahead. At the same time, increase the number of reference points (RP's): not just brake point, turn in, apex and track out. How about EOB (end of braking)? Beginning of apex and end of apex for the common situation where the apex is a zone and not a point. Etc. A driver can't have too many RP's.

Smoothness should improve if we look further ahead. But we also need to be smooth with the controls: no movement in the car should be rushed or forced unless it is an emergency. Patrick Long said, “The slower the hands and faster the eyes, the better.”

How smooth are you with the controls? Try this as a test: Randy Pobst wrote in Grassroots Motorsport, “Squeeze the gas oh so gently. Invisibly. After taking forever to release the brakes, move lightly to the gas—like a butterfly landing on a leaf—and slowly roll it on.”

The next basic: string theory. If you don't know and practice it, time to do some homework. Make sure you understand how your driving affects the physics: weight transfer, the contact patch, etc.

A last point on technique. Don't apply undue pressure on yourself. As David Murry put it, “Each driver has a limit; you can't drive above your personal limit. We learn best when driving slightly below that limit.” Randy Pobst, “The first objective is to be calm and relaxed in the car, including relaxed hands on the wheel. I do my best driving when I hold back a bit, despite my natural tendency to want to ‘go, go, go.’”

3. Learn Car Control

Gunnar Jeannette, “To go faster, we have to feel what the car is doing; use all of your senses including smell, don't ignore any of them.”

Ever notice that most pro drivers started in karts? Patrick Long: karts for 10 years. Bryan Sellers: karts from 9 to 16. Plus virtually every F1 driver. This is where they learn car control to the point that a top level pro can feel the difference that a fraction of a degree of rotation makes, even on a simulator!

Since most of us didn't spend years in karts, what are the options? There is the annual NNJR Car Control Clinic. But that isn't enough. Cass Whitehead told drivers that he is a big proponent of Autocross to learn car control—and I can reinforce that based on my own experience. As will Randy Pobst on March 1: he started his competitive career in Autocross.

Sometimes there is a skidpad available (e.g. Lime Rock, VIR) if you take the initiative to use it. When it snows, a big parking lot can teach a lot at very low speeds. A good simulator can allow a driver to push beyond their normal limits without worrying about the consequences.

Bottom line: take every opportunity to learn. Including what Ross Bentley calls Sensory Input Sessions. As he says, "More sensory input means more references, resulting in fewer errors, more speed and consistency."

An important addition for newer cars from Shane Lewis, "Until you get a kinetic feel for the car, you won't feel the nannies cut in." If your PSM or other nannies are kicking in (e.g. rear brake pads being consumed) and you don't feel it, time to work on your "seat of the pants" feel.

4. Have an out

Most of us have heard David Murry or others say, "Never get scared too late!" and "Don't run out of talent in the middle of a corner!" So: how to avoid a (big) mistake?

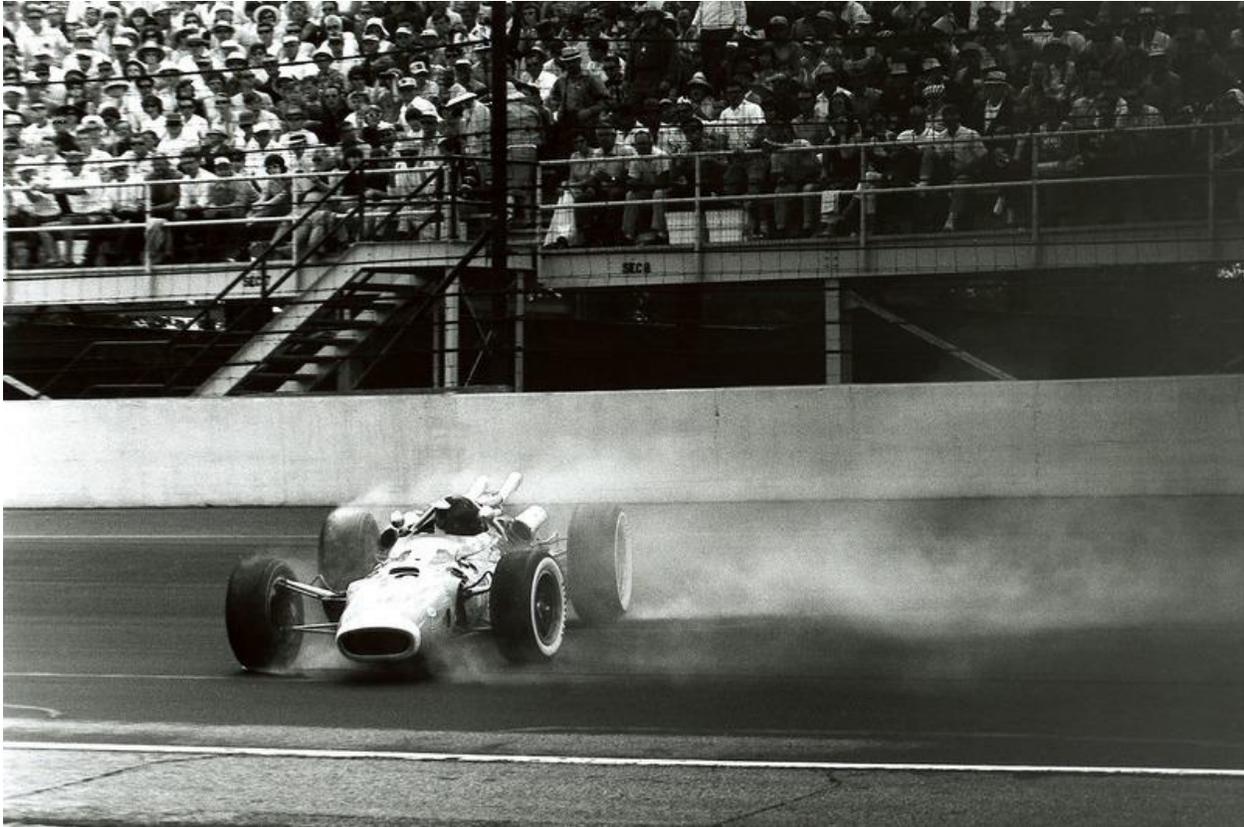
Per Mario Andretti, "No one is perfect in a race car. The difference between the world class driver and the average racer is that *the champions recognize their mistakes sooner.*" And the no-nonsense version from Skip Barber, "If you're any good, the *instant you turn your hands into the corner*, you know if you've made a mistake. . . . When you see it early you have all that time to get out of the throttle a little and get the car headed in the right direction. If you're any good, you make mistakes constantly but never go off the road." (Emphasis added).

Some of you will remember me talking about "the switch:" when you turn into a corner: if it doesn't feel/look/seem right, time to flip the switch! From normal driving to "bailout" mode. Early in the corner (i.e. at turn in), bailout means straighten the steering wheel and stand on the brakes (as long as we are on pavement). Later in the corner, straighten the steering and drive the car off. Either way, we (and the car) survive to drive another day. But if you don't flip the switch and try to drive a normal corner or, worse, force the car to stay on track, the consequences can be severe: a tire wall or worse.

So how do we develop a good sense of whether the corner is "right"? Seat time is a trite answer. More RP's help. Indexing helps (i.e. knowing the corner entry speed). Another key aspect: better situational awareness. As Gunnar said, "Don't use 100% of your ability just to keep the car on the track. There is no excuse for missing a car in your mirror or a flag." Similarly, we need bandwidth to observe and learn the run off areas at each corner. Hopefully, your instructors have asked you where/how you would drive off in each corner. If they haven't, time to learn.

A Sensory Input Session focused on vision can and should force you to see hazards and safe zones that you didn't see before. Try driving a session where you see at least one new thing on each lap.

The worst case situation is a spin at speed. This is where we hope your car control skills can help. But on the track a spin happens very quickly: meaning reflexes must be very quick. The technique to catch a spin is called CPR: Correct, Pause and Recover. Correct must be immediate. Pause is often missed or too short. Recover may still be off track. In all cases, the eyes must be focused where we want the car to go. A fantastic photo is this one of Jim Clark in a mega spin at Indy: notice where he is looking.



Of course, our objective is to avoid large mistakes. Dave Scott, “Two mistakes in one session means time to park it. A third mistake may be much bigger.”

5. Warmup

I’m always amazed to see drivers head out of pit lane on the rev limit and attacking corners like it’s a qualifying lap. Setting aside that it’s nicer to let the car warm up (especially the oil) and the tires need time to get up to temp, as a driver, most of us aren’t at 100% when we leave pit lane. Plus we don’t even know the track conditions!

Most of us need to get into a rhythm to drive well. The best way is to do a few warmup laps at increasing pace so that by lap 3, 4 or 5 (maybe later), we are driving at our target pace. At the Jim Russell school, we did 6 warm up laps: 2 at a low RPM limit, 2 a few hundred RPM faster and a final 2 warmups a little faster.

One reason this works is that it makes it easier to focus on technique (see above). As David Murry said, “Warmup and cool down laps should be the most perfect ones driven.” So use those warmup laps to drive as perfectly as you can!

6. Keep a stable platform

Modern Porsches are amazing vehicles that need very little modification to drive on the track (unlike years ago, but that is a different story...). But many drivers insist on making changes anyway. Safety additions like belts, seats and HANS make sense as we go faster. As do alignment mods to keep the tires hooked up. But other changes can make it harder to measure your driving progress.

As mentioned above, consistency is extremely important. One reason: consistent driving means we have a solid baseline against which to make (small) changes. If we want to work on improving brake release in Turn 1, we first have to have a consistent EOB point. Plus consistent speed at EOB and consistent car attitude. Once we have that consistency, we can try an earlier EOB and see if it helps. But we must have that stable (consistent) platform against which to measure changes. Per Gunnar, "Without consistency it's very hard to make gains that stick. Being able to repeat something lap after lap is what enables us to push braking points, increase throttle, etc."

Now I'm as big a fan as anyone of bigger sway bars, sticky tires, etc. But not if they get in the way of learning. Only if they are needed to give you confidence in the car or to fix a handling issue.

7. Focus on Learning, but Fact check

Shane Lewis, "To get better, become a student. Talent is overrated; I don't have more talent. You need to enjoy the learning process." Ross Bentley says, "Apply a growth mindset (i.e. always learning) and achieve the right balance between challenge and confidence." Dave Scott, "With skill and experience driving becomes more mental than physical."

DE means education so learning should be a natural focus. But it's very easy to get into the routine (trap) of going on track with your friends or driving in the same rut. I find myself falling into that trap. That's one reason I continue to read and re-read the experts.

Do I set myself a (written) goal for each session and write down how I did? Most of the time, other things seem to get in the way. I hope you do better!

Many of us look at online video and/or driving articles. A big note of caution: much of what is posted is not great and some of it is plain wrong. So please apply a big filter. We've made a significant effort to make sure the content on the NNJR site is accurate and safe. That includes videos, turn by turn instructions, Q&A, etc.

I'm also a big believer in (gasp) driving books: especially ones by driving schools (Skip Barber, Bondurant) and by names like Senna, Prost, Stewart, Lauda, etc. I'm waiting impatiently for Lewis Hamilton and his colleagues to add to my collection.



It's not surprising that these books offer very consistent driving advice on most topics. Ask me if you need a recommendation.

Of course, no discussion of learning on track can ignore video and data. Video from behind the driver can be used to observe the line, hand movement, head movement, perhaps whether you are looking ahead? How close to RPs? You may be able to listen to the throttle.

Even basic data can help a driver who has established a solid baseline. For example, a focus on longitudinal g can see how well braking is being executed, and how consistently. Lots more is possible if you are willing to go through the learning curve. But “analysis paralysis” can also happen.

The bottom line: we should all be students. Even those of us who instruct. In fact, I believe it was Bryan Sellers who said, we learn twice, once as students and once as an instructor.

8. Know what you don't know

David Murry, “Be honest with yourself with what you know and don't know.” This is where having a goal for each event and session helps: if we are honest, we realize that there is something to learn each time on track. It might be as simple as “I'm going to be more aware of the sealer patches” or “I want to improve v_{min} in Turn 1 by 2 mph.” Without explicit goals, we may miss all that we don't know.

Everyone knows that Ross Bentley (and most driving coaches) are big believers in visualization (Ross calls it mental imagery). But Ross goes on to say, “If you can't mentally drive the whole track correctly, you don't have enough mental programming.” In other words, you can sit in your easy chair (better in your car in the garage) and determine what you know and what you don't know about a particular track!

9. Drive to Learn

At the risk of being redundant, Gunnar Jeannette, Ross Bentley and many others have emphasized that “Talent is overrated.” In fact, there is a book by that name that reinforces the message. What they all emphasize is that virtuoso’s in any field practice much more than others and they do it “deliberately.” While some of this can be controversial, there is science behind the notion of “deliberate practice.”

But just driving isn’t deliberate practice. In fact, “mindless activity is the enemy of deliberate practice. The danger of practicing the same thing again and again is that progress becomes assumed. Too often, we assume we are getting better simply because we are gaining experience. In reality, we are merely reinforcing our current habits—not improving them.”¹

The bottom line; if you want to improve, you need to work at it! Pick one or two techniques or corners per session and deliberately concentrate on how to improve, starting with a written goal before leaving the pits. You’ve heard this many times before but I want to emphasize 1) the science behind the recommendation and 2) the goal needs to be challenging. Same o, same o won’t do.

10. Brake lighter, not later

Virtually every driving book and pro agrees with Brian Till, “Braking is the last place to find time.” This is especially true for beginners and intermediate drivers and I’ve been surprised many times to find drivers in the Black run group using lousy braking technique.

Randy Pobst wrote, “Release the brakes slowly. I see this as a very common issue holding back mid-level drivers.” Dave Scott says, “The biggest area for improvement is braking.” Ross Bentley emphasizes a focus on EOB more than BOB, “The timing and rate of brake release is key to being fast. Why: balance.”

To improve braking technique (for drivers who are already consistent), Dave Scott says, “Brake earlier and softer.” Ross says, “When refining braking, use the same beginning and end points but 5% lighter.” I believe it was Dave who said, “On like a lion, off like a lamb.”

Shane Lewis had practical advice for everyone, regardless of their level of experience, “Treat the brake zone in thirds. First third to slow down, second third to downshift and last third to come off the brakes.”

Much more has been written and said about braking but the main message is crystal clear: none of us release the brakes as well as we could.

Summary

I hope you find one or more of these suggestions useful as you look forward to the 2020 DE season. Be sure to join us March 1: I’m sure we will get some great driving advice from Randy...along with colorful stories!

Sidebar:

Instructor Seminar and High Performance Driving Seminar Speakers
2006: Ross Bentley

¹ James Clear, “The Beginner’s Guide to Deliberate Practice”

2007: David Murry
2008: Darren Law
2009: Randy Pobst
2010: Ross Bentley
2011: David Murry
2012: Brian Till
2013: Andrew Davis
2014: Bryan Sellers
2015: Dave Scott
2016: Kyle Tilley
2017: Cass Whitehead
2018: Gunnar Jeannette
2019: Shane Lewis
2020: Randy Pobst