

HOW TO LEARN A TRACK... ***FAST!***

A PROVEN PROCESS FOR
LEARNING A TRACK QUICKLY

ROSS BENTLEY

SPEED SECRETS

CONTENTS

CONTENTS	2
ACKNOWLEDGMENTS	3
IMPORTANT STUFF	4
LEARNING A TRACK	5
BEFORE GOING TO THE TRACK.....	6
AT-TRACK	11
RECAP.....	15
RESOURCES.....	16

ACKNOWLEDGMENTS

I've learned a ton from working with Peter Krause (www.peterkrause.net), particularly about how to study, evaluate, analyze, codify... and ultimately how to drive and coach at specific tracks. We've worked together to put together a series of Virtual Track Walks (SpeedSecrets.com/Virtual-Track-Walks), and it's been fun to collaborate with someone with Peter's passion for driving. Much of this eBook is a result of the conversations we've had. Thank you, Peter.

IMPORTANT STUFF

You know that motorsport of any kind is dangerous. Therefore, I provide my advice for you to use in the way you choose. I can't be held responsible for anything that might happen as a result. You're a grown-up - you're responsible for yourself – and by reading on, you are accepting that responsibility.

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*Having said that, I love helping drivers perform better – I enjoy sharing what I've been fortunate to learn through experience, study, and observation. With that in mind, please help me get this eBook in the hands of more drivers. Please recommend to other drivers that they **download their own copy**. It's free! All anyone has to do is download it themselves (i.e., don't send them your copy). Thank you.*

Have fun!

Ross Bentley

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SPEED SECRETS

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LEARNING A TRACK

What does "learning a track" really mean?

In its deepest terms, it means being able to drive the track at a subconscious level without having to think about it in a step-by-step process. Rather than thinking about where you start braking, turn in for a corner, where the apexes and exit points are, and even what's on the other side of that hill crest, having learned a track means that you process all of these things (in your brain) *without having to consciously think about them*.

How do we learn a track? Primarily through repetition. The more laps you drive around a specific circuit, the deeper all of these references become programmed in your mind. Of course, you can get this repetition in two ways: physically and mentally.

"Some drivers just seem to learn tracks faster than I do. That must be natural talent." I hear that all the time.

It's not natural talent that makes the difference. Some people may have a better ability to visualize a track and line, but is that natural ability? My experience tells me that it has more to do with what they've learned and practiced throughout their lives than it does talent. And there's a lot of research that confirms my experiential findings.

I read Basketball Hall-of-Famer Bill Russell's autobiography a number of years ago and one thing really stuck with me. He told the story of sitting on the bench in college, watching a teammate (one of the best rebounders at the time), play. He noticed his positioning and the way he moved. He would then go home and illustrate what he saw, actually drawing on a piece of paper where this other player stood in preparation for a rebound. He mapped out all of his moves, and then mentally put himself in his place. He mentally rehearsed the positioning and movements. Russell went on to become one of the greatest rebounders the game has ever seen. Was that natural talent or a learned process and mental program?

When I was a 10-year-old kid, a relative gave me a book for Christmas that had track layouts for all the road racing tracks in England. I traced those tracks onto paper, then drew what I thought the ideal line would be around all those tracks. I would "dream" about driving those lines around those tracks behind the wheel of a Lotus Formula One car (Lotus was my favorite!). To this day, I'm good at learning a track quickly. Is that natural talent? No. I've developed a process for learning a track, and it works for me.

The process of learning a track is what this eBook is all about, and I'm going to break it up into two steps: what you do before you even go to the track and what you do once you're there.

BEFORE GOING TO THE TRACK



One of the core concepts, or guiding principles, behind my [Inner Speed Secrets](#) program, and therefore behind the mental game of performance driving, is this: *You do what you do because you're programmed to do so; you sometimes don't do what you want because you either don't have the right mental programming to do it or you've accessed the wrong program (made a mistake).*

When you think about learning a track from this perspective, you can see that what you're doing is getting all of the references around a circuit - and what you do with them - to the point where they have become programmed. In fact, *learning is programming*. Think back to a time in school when you memorized something just long enough to use it on an exam, but if asked about it a week later, you couldn't remember a thing about it. That information had not become programmed, but only stored in your relatively-short-term memory. If it had become programmed, it would still be stored somewhere in your mind today, and the only challenge would be accessing it.

Think about "learning a track" in the same way. The direction the corners go, the changes in radius and banking; how much curbing you can use at the exit; whether the apex is at the third or fourth red panel of the inside curbing; how the surface change affects the grip level; what the timing of where you begin braking is in relation to the sound of your engine changing as you pass the end of the pit wall; whether you use the compression at the bottom of the hill to add more steering; where you should be looking as you crest a hill; how much of the apex curbing you should use.... When all of these, and more, have become ingrained in your mind to the point where you don't have to think about them - and you can access them instantly - you have well and truly learned a track.

A recent survey of performance drivers showed that those who were rated as having above average competence did one thing significantly different from those rated lower: they prepared. They studied as if they were preparing for an exam. But as my example above shows, they didn't just memorize the information long enough to regurgitate it onto the page of a written test. No, they programmed it into their minds.

We've all heard that people learn in different ways. Some learn more visually, some simply by hearing information, and some learn best by doing - by experiencing. While we all use some combination of these three learning styles, it appears that a majority of people in our sport learn best by doing. They may take information in visually and auditorily, but it's not until they experience using this information that it truly becomes programmed into the brain. The good news is this "doing" can be accomplished physically or mentally.

So, let's look at the process - a strategy - to have a track become mentally programmed as accurately and efficiently as possible.

1. **Track Map:** Start with a track map. It may seem obvious, but starting with an accurate track map is often overlooked. Memorize the layout, imagine the line that you'll drive, and then actually draw it on the map.

Fortunately, accurate track maps are easy to find these days - just Google it or go to the track's website. It is important that you take a little time to make sure you have an accurate one. Unfortunately, it's not difficult to find a track map that is either out of date (changes in layout not represented), that shows a layout that you're not going to drive, or is just distorted. Look through a number of maps, compare them to the information you get from your event/race organizer, and also to in-car video showing the layout that you're planning to drive.

2. **Mental Imagery:** Spend a lot of time (and I mean a lot) imagining driving the track - doing mental imagery with you driving. At this point, if you've never seen the track, the mental image you're driving is vague (that's okay), and you're focused on just the direction and basic line. Don't worry about elevation, banking, or anything else. You're just getting a rough layout programmed into your head - this is important to have before moving to the next step.
3. **Video:** Watch almost any in-car videos that you can find. Some are better than others, but you can learn something from even the worst ones.

Yes, here's a news flash for you: not all video on YouTube is worth watching! In fact, some do a pretty good job of only demonstrating what not to do. By comparing video with track maps, and especially finding a lap that you know is well-driven, you can determine which are worth using for your programming process.

If you can find an in-car video driven by a professional driver, even if they are driving something much faster than you, that's the best place to start. At least you know the line being driven is fairly close to what you want to drive. It may be slightly different from what you'll drive due to different cars, but the variation in line will be very small.

Another benefit to viewing a video of a pro in a faster car is what's called "speed acclimatization." Essentially, it's what you feel after you've been driving at high speed for a while, and then you slow down - it feels as though you could almost walk faster. The same type of thing happens when you watch a lot of video of a much faster car; when you drive your car (assuming it's slower), it won't feel as rushed - it'll even feel as though you have all the time in the world.

If you can find an in-car video of someone driving a car the same as yours - or very near - watch that as well. Make note of shift and braking points, but again, be aware that you don't know whether the car has the exact same brakes, tires, suspension components, and even gear ratios as your car. Even so-called spec-class cars can "vary" (and we all know that no one in motorsport has ever cheated...).

4. **Simulator:** If possible, drive the track on a simulator. Drive the track at speed, but also at walking speed. Do a “virtual track walk” on the sim, as long as you know the quality of the track images are good.
5. **Use Technology:** If you're data-savvy, then go for it. If you're able to get your hands - well, eyes - on data from another car and driver, this is another perspective that can help you get that all-important mental image of what you're to do once you get on track. If you're one of those drivers who has the ability to look at the data trace of, let's say, throttle position and brake pressure, and then go copy that, this is a powerful tool. It's as if you're drawing data traces with your feet. But not all drivers are able to do this, so you have to decide how important it is to you.

So you've studied and memorized the track map, and some in-car video and data. What's next? The details. The references. The "what to do, where."

At one time I would have recommended you find an article written by an experienced driver that explains what driving a lap of the track is like - one of those "A Lap of..." articles. And that's not a bad thing to continue to do. The more insights and perspectives you have, the better it is for your mental programming. Often these articles give you a feel that you can't get anywhere else, for it's the human perspective put into words.

But now, here's where technology helps - as does a little sales pitch.

Through a well-designed program of video, still images, data, and commentary from experienced and knowledgeable sources, you can break down the act of collecting references and the subtle details that make learning a track into manageable bites. Bites that you can then program. This is where the Virtual Track Walk videos that Peter Krause and I have created come in (for more info, go to SpeedSecrets.com/Virtual-Track-Walks).

The motivation for the Virtual Track Walks came from recognizing that the step from watching videos to actually walking a track or driving it was just too big. I, for one, had begun watching in-car videos in a start-stop fashion, or in slow motion, so I could soak up the information about a circuit at a walking pace - without having to actually be there. In fact, well before even going to the track, so I could begin to mentally program it.

Manageable bites are a critical part of learning. We all know that trying to learn too much at one time is not the best approach, and yet we're forced to do this all too often. One long class, webinar, or eCourse is not ideal for our learning. Instead, something that can be paused, or even broken up into modules is something that all learning experts agree is a better way of programming the mind. That's why a video that you control is best.

6. **Mental Imagery Again:** More mental imagery of driving the track, based on what you've learned from the videos and simulator.

- 7. Ask for Advice:** At this point, you may want to talk to other drivers who have driven the track you're learning. But here's another news flash for you: not all of the information you get from all drivers is accurate. It's possible for a driver to say one thing, but do another - and not because of any intent to mess with you. No, it may be due to a lack of awareness. For example, I've had plenty of drivers tell me they don't trail brake into a corner, and yet, when I'm standing along the side of the track and able to see the back of their car entering the corner in question, I see brake lights on, well after the turn-in point. Or two drivers, one who claims he brakes at the 300 marker, and the other claiming he brakes at the 250 marker, and yet the data system shows they both brake at the same spot.

Having said that, listening to other drivers' advice is a time-tested resource worth using. Ask questions, listen, ask more questions, listen some more, and so on. Your goal is to soak up as much information from other drivers as you can. Use this information to help you fill in the pieces to your mental image of what you're going to do, once you get on track.

Okay, time for a little storytelling. In 1994, I was going to race in half a dozen Indy car races, as well as driving a World Sports Car (what is now essentially a LMPI or 2 car) in the full IMSA series. Prior to driving Sebring for the very first time in the WSC, I had a commitment to my Indy car sponsor, which meant that I would have to take a red-eye flight from my home in Vancouver to Orlando, drive 1.5 hours to Sebring, get about 20 minutes of practice, and then qualify the car. And as I said, I'd never driven Sebring before.

A couple of weeks before the race, I found and printed out a track map, plus as many photos as I could find of the circuit, most of which were taken by photographers of cars on track - but not from the driver's view. Remember, this was before it was possible to Google "Sebring track map," "Sebring in-car video," or even get directions to get to the track online. And before the invention of the ubiquitous GoPro camera.

Over a period of a couple of weeks, I developed a mental image of what driving Sebring would be like by piecing together the map and images from the photos. I knew that practically every other driver I would be competing against would have driven Sebring before, so I needed to prepare as much as possible.

On my red-eye flight I got an entire row of three seats to myself (remember when that would happen?!), stretched out (as much as one could over three small seats), glanced at my track map and then laid it on my chest, closed my eyes and did mental imagery. My imagery fell into two categories: first, driving the track, lap after lap, with as much detail as I could imagine from the photos I'd seen, and using not just my visual sense, but also my kinesthetic and auditory senses. I moved my hands and feet as if using the steering wheel and pedals, and I imagined the sound of the engine, tires, wind, everything.

Second, I mentally programmed being open to whatever the track taught me. My state of mind was one of "I'm ready for anything." For example, if I had thought a certain corner would be taken in third gear, I was open to the idea that I might use fourth gear, instead. I wasn't locked

into what I'd programmed in my mind. And I programmed getting on track and just driving the car to its limit. I knew the line around the track would take care of itself based on the pre-programming I'd already done and by feeling what the car was telling me. If I drove the car to its limit, and even if I was off-line by a little bit, it would still be faster than if I was overly-focused on driving the line. In other words, I *drove the car, not the track*.

I remember groggily waking up as we landed in Orlando, track map still on my chest - and Sebring imprinted on my brain. By the second lap of my 20-minute practice session, I felt at home. By the fourth lap of qualifying a few hours later, I knew there wasn't anymore left in the car, so I pitted and we began to prepare for the 12-hour race (I qualified on the front row, missing pole by a tenth of a second).

The End (of my story, since I hope you got the message).

As Peter Krause and I first began talking about creating Virtual Track Walks, that Sebring story came to mind. If only I'd had an accurate track map, images of each corner (approaching, turning in, apexing, exiting), overhead and in-car views of reference points and changes in track surface, sample data traces (heck, the current level of accessibility to data systems would have been nice back then!), and most importantly, advice and tips from people who knew the subtle details of not only the track, but of the various driving techniques needed to be fast. Ultimately, that's what lead to the core of the Virtual Track Walks - the information wishlist of every driver.

It comes as no surprise, then, that I highly recommend our Virtual Track Walks. There are other resources out there that do provide similar information and content, but our goal is to provide the deepest level of content possible in this format (at an affordable price, in a way that you can take in as efficiently as possible).

We recommend that you don't just watch the video once and say, "Okay, got it." No, use it as a tool to study. Start and stop it, make the reference points part of your long-term memory, go back and review sections again and again. Do this until you're able to close your eyes and drive a lap in full detail, non-stop, without missing anything. If you find yourself not quite sure what a certain section of track looks like, go back and review that part of the Virtual Track Walk again.

At this point, you've done most of what you can prior to heading to the track.

AT-TRACK

Now that you're at the track...

8. **Get Local Advice:** I'm going to make an assumption here... that the next time you're going to the track in question, you're there to perform at your best. That is, you're not going there with the sole purpose of learning the track. After all, the best way to learn a track is to go there and drive it, but that's not always possible. However, if, let's say, you're going in a month's time to a track you've never been to, and at that time you want to perform at your best, a great option is to get there beforehand and familiarize yourself with it while there's no pressure on you. Race drivers of all levels do this often; they have a race at a track they've never been to before, so they go a few weeks beforehand and drive the track in a school, a track day, or whatever. And yes, it doesn't matter that the car is not the same as the one you'll drive when it matters. What does matter is that you get a chance to familiarize yourself with the track – soak up reference points, understand the direction, elevation and banking, surface changes, and so on. You can do that in any car (even a rental car!).

Having a local instructor help you learn the subtleties of the track is hugely valuable. It doesn't matter what level you're at, you can learn something from an instructor who has lots of experience. Don't be afraid to tell the people at the school or track what your objective is – to simply learn as much about the track as possible – because they may recommend a specific instructor, based on your needs. The instructor may not be the best at teaching you a specific driving technique, but they have thousands of laps driving and instructing here.

9. **Get a Global Perspective:** Many drivers ignore a very important part of learning a track - getting a global picture of the circuit, by looking at every part of it they can from a spectator's perspective. It's simple enough. All you need to do is walk or drive around to every viewing area that you can to view the corners from that perspective.

It's one thing to look at and memorize a track layout from a map. It's another to view it from the perspective of an in-car video. It's another to see it from a simulator. And yet another to see it from the view you get while walking it, or even driving it. But it's different when you view it from the outside, watching other cars go through a corner. And that additional view helps put everything into perspective.

The next time you're learning a new track - or refreshing your memory of a track you haven't driven for a while - include taking a look at all the corners from the outside. Get a global picture of where the track goes, and what the turns look like from the spectators' perspective. It'll help you learn that track faster.

10. **Soak Up References:** When you first get on track, focus on soaking up as many references (things you see, feel, and hear) as possible.

- 11. Focus on the Line:** When you first get on the track, it is important to use **all** the track surface, even if that means forcing the car towards the edge of the track. At the entrance to the turn - at the Turn-in point - it is easy to drive the car to within inches of the edge of the track. At the Apex, you need to be right against the inside edge or curb. And, at the Exit, drive the car to within a couple of inches of the edge - even use the curb or drop a wheel over the edge to see what it feels like (remember, you're driving relatively slowly at this point). This applies *almost* all the time – there are always exceptions to these “rules.”

It's important when you first learn a track to force yourself to use every inch of it; to make it a habit - a programmed, subconscious act.

As your speed increases, the car will naturally flow or run out to the edge of the track - if you are driving the Ideal Line, and **you don't hold the car in tight (pinching it)**. Remember to let the car “run free” at the exit. If you hold the car in at the Exit, you have greatly increased your chances of spinning; and you are scrubbing off speed, or you can't get on the power as early as necessary.

Start with a late apex; move it earlier and earlier until it negatively affects your ability to get to full throttle. Once it begins to delay where you get back to full throttle, move it back a little later again.

Before moving on to the second part of learning a new track - driving at the limit - the Ideal Line must be a habit. Driving the line must be a subconscious act. It is very difficult to concentrate on two things at once - the line and the amount of traction you have (“traction sensing”) to determine whether you're at the limit, if you can carry more speed, or you can accelerate sooner/harder.

- 12. Drive the Car, Not the Track:** It's time to stop thinking about the track and focus simply on driving the car to its limit. Usually, if you drive the car at its limit, even off-line, you will still be faster than if you drove the perfect line with the car not at its limit. It's at this stage where you really forget about driving the track, and you just trust your mental programming to drive the car. Yes, you need to be consciously aware of how close the car and its tires are to their limits, but you don't want to be consciously thinking about which way the track goes and where your reference points are. By now - if you've done all the previous steps well - the track should be well-programmed into your mind, and it will be time for you to simply trigger it and go.

Stop worrying about driving the perfect line. In fact, that might be what's slowing you down. By this point, you should have a pretty darn good mental program for where the car should be – on the line – so it's time to focus on driving your car to its limits (as close as you want to drive it to the limit). When you do that, your car will tell you the very subtle adjustments needed to your line.

- 13. Observe Others:** While you're driving, make note of the positioning and speed of other cars on track. If a faster car (which may be someone who has driven the track before, and therefore have more knowledge of it) passes you, try to hang on to it for as

long as you can, to learn from the other driver. Of course, not all drivers are worth observing, as they may not be driving the track any better than you are.

- 14. Make Notes:** After the first session on track, sit down with a track map and make as many notes as you can about what you learned, and what you think you need to do next time on track. Most important, make note of every single reference point you use, from what you see, to what you feel and hear – where you change gears, where you begin and end braking, your Turn-in, Apex and Exit points, and everything in between. Track notes are critical, and as Robert Cialdini wrote in the book, *Influence*, "People live up to what they write down."
- 15. Review Data & Video:** After you make notes - and not before - look at data and video if you have it. Don't look at it before making notes on a track map, because you don't want it to influence your thinking, your own perceptions.
- 16. Mental Imagery Again:** Before you go back on track, do some mental imagery, preferably for a minimum of 20 minutes, imagining the details of how you're going to drive the track in the next session. After driving the track for a session or more, take all the information you know about the track from your preparation and your actual experience and replay it in your mind. The more repetitions you do during your mental imagery sessions, the more effective it will be. In other words, you will learn the track faster - and be faster.
- 17. Drive the Car:** Now that you have the basic line somewhat down to the point where you don't have to put a lot of attention on it, just drive the car. Focus on driving the car as close to the limit as you can. As you do that - driving the car, not the track - the car tells you where it wants to be. Throughout this session, you can alter your line a little, based on what the car tells you. Experiment with the line during this session, but pay close attention to the feedback you're getting from the car.
- 18. Make More Notes:** After that session on track, sit down with a fresh, clean track map and make notes again - of what you learned, what worked, what didn't, references, and what you want to work on the next session.
- 19. Review Data & Video Again:** Look at data and video again to see what you can learn about your driving.
- 20. Go for a Track Walk:** At this point, try to do a physical track walk. Yes, sometimes you can do it before driving the track for the first time, but you may find that the track walk is most useful after you have a session or two under your belt, as what you note on foot is more meaningful than as you have some real experience. Look for more references, surface changes, elevation and banking, and even where it's okay to go off track (and where not to). Relate what you see while walking with what you saw, felt and heard when driving. You can walk the track, but you could also ride it on a bike; you can feel changes in the track surface better that way.

I'm sorry to tell you, but videos and simulators are not replacements for the learning

you get from doing a track walk. There are things you will notice about a track that you'll never pick up from simply watching a video or driving a simulator.

- 21. Establish a Plan:** After thinking through the track walk, data and video, and your notes on the track maps, sit down with another track map and think about what changes you're going to make the next time on track - and make more notes (the act of writing things down cements them in your mind). Once you've thought about it, and put a specific, well-defined plan (with no more than three things to work on – that's the limit to what you'll be able to accomplish in one on-track session) together for the next session, get in position, close your eyes, relax, and do mental imagery of exactly what you're going to do. See, feel, and hear yourself doing exactly what you thought about, but at a deeper level than just thinking about it. Pre-play it, creating a virtual reality in your mind.
- 22. Repeat:** The process continues, looping through preparation (thinking about it, then doing mental imagery) driving the track (focusing on gathering more references, and driving the car at its limit so it tells you where you need to be), and debriefing (note-taking on a track map, reviewing data and video, and even talking to other drivers).

RECAP



Okay, you now have a solid process for learning a track, rather than simply going and driving around it lap after lap. Obviously, the more laps you drive, the more the track will be programmed into your mind – and the better you know the track. But that's only true if you practice the right things, and having – and using – the process I recommend in this eBook will mean you'll learn it in less time.

One of the most exciting, fun and challenging aspects of performance and race driving is learning a new track. Take advantage of any opportunity to use this process and add another track to your library. The more you have in that library, the easier it gets, and yet it's still a rewarding experience.

So, to recap the process:

1. Track Map
2. Mental Imagery
3. Video
4. Simulator
5. Use Technology
6. Mental Imagery Again
7. Ask for Advice
8. Get Local Advice
9. Get a Global Perspective
10. Soak Up References
11. Focus on the Line
12. Drive the Car, Not the Track
13. Observe Others
14. Make Notes
15. Review Data & Video
16. Mental Imagery Again
17. Drive the Car
18. Make More Notes
19. Review Data & Video Again
20. Go for a Track Walk
21. Establish a Plan
22. Repeat

RESOURCES

If you'd like to make suggestions for future updates to this eBook, or you have questions, please email me at ross@speedsecrets.com.

I do have more resources to share with you:

- The *Virtual Track Walk* videos that Peter Krause and I have put together will do more to help you prepare than anything else. Check them out at SpeedSecrets.com/Virtual-Track-Walks.
- Learning is part of the mental game, and I've put the foundation of my Inner Speed Secrets program – which is all about the mental game of performance driving – into an online eCourse: *Inner Speed Secrets 201*. Sign up at Learn.SpeedSecrets.com.
- I talked a lot in this eBook about the use of mental imagery... and I have an eBook that is all about how to use mental imagery/visualization most effectively. Download it by going to SpeedSecrets.com/Mental-Imagery-Guide.
- You can never learn too much, and one of the best ways I know to stay on top of your driving game is by subscribing to *Speed Secrets Weekly* at SpeedSecretsWeekly.com. It's "entertaining education, conveniently delivered."
- Follow and contribute to the Speed Secrets Facebook page at Facebook.com/DriverCoach, on Twitter at [@speedsecrets](https://twitter.com/speedsecrets), and Instagram at [@rossbentley](https://www.instagram.com/rossbentley).
- If you have a specific question about driving, email it to me and I'll answer it in my Ask Ross column at SpeedSecrets.com/Ask-Ross. Hey, check out that page because I may have already answered your question! And while you're there, listen to some episodes of the [Speed Secrets Podcast](#) – I know you'll pick up a few tips from it.
- Finally, subscribe to my YouTube channel at YouTube.com/SpeedSecretsI, as I post driving tips there.

Keep learning and having fun!