

SPEED SECRETS

Everything Driving

WEEKLY

Hi Bruce. Welcome to the first issue of ***Speed Secrets Weekly***. This week's contributor is Ross Bentley... hey wait, that's me! I guess I better write something - I'll be right back. Hang on. Wait for it. Wait... there you go. See below for this week's Feature article, one about a concept that has had a huge impact on so many drivers.

In future issues I'll post a short opinion, comment or rant here before introducing the weekly feature article and it's author. But since this is Issue #1, let's get into it.

Enjoy!



Drive The Car, Not The Track

by Ross Bentley

ISSUE #1

"With age, you get a little bit smarter. You learn certain things and you get a little more relaxed. But also it's important to stay childish, stay hungry and make mistakes. Otherwise how can you go forward?" Sebastian Vettel

SPEED SECRETS

In the rain, initiate slowly, react quickly.

Want more about driving in the rain? Want to know what those drivers who are "magic" on a wet track know? Then [click here](#) for a video where I provide 3 tips to make you faster in the rain.

What do you think?

Questions or comments? [Click here](#) to send them my way.

Interesting Link

Jackie Stewart shares his

Learning A New Track

One challenge that faces every driver at some point - and usually, many times - is learning a track that is new to him or her. While there are a variety of approaches and strategies to learn a track as quickly as possible, and every driver seems to have his or her preferences and opinions, there is one thing that I've discovered that not many drivers have thought about. It can be summed up this way:

Drive the car, not the track.

Let me start explaining what I mean by this by asking a question. What is your first priority when you first get onto a track you've never seen before? Most drivers' response to this question is "learn the line." That is what I call "driving the track," and in my opinion, not the first priority you should focus on. I will make one cautionary exception to this rule: if you are a very inexperienced driver, perhaps focusing on the line may be best. Otherwise, I suggest you focus on driving the car, not the track.

Think of it this way. If you were to drive off-line - not on the ideal line - all the way around a track, but you drove the car at the very limit of traction, you would be fairly quick. Not the quickest, obviously, but not too far off. But, if you drove the perfect, ideal line, while not having the car at its limit, you would be much slower. In other words: **It's better to drive off-line and at the limit than it is to drive on-line and not at the limit.**

Understand, I'm not suggesting the line is not important. It is. What I am suggesting is that driving at the limit is more important. Obviously, to be the quickest, you need to drive the car on the ideal line at the limit - you need both. But when learning a new track, focus more on driving the car at its limit, and less on the line.

The Steps: Let's say you show up at a track that's new to you...

- You've looked at a track map and/or video beforehand, so you know which direction the corners go.
- You've had a chance to walk the track or ride a bike around it.
- Now you head onto the track for your first practice session. This is when you should just **focus on driving the car at its limit.**

If you take this approach, a funny thing will happen without even trying. You will figure out the line without even trying. Why? Because when you drive at the limit, the car will "tell" you where you need to drive - where the ideal line is. This is what I call "*learning from the inside-out, rather than the outside-in.*"

Learning

Having someone tell you what line to drive is learning from the outside-in. Information is given to you and you follow the instruction. The problem is you haven't truly learned the line - you are only following instructions. The worst part of this is you haven't learned how to learn the track, so the next time you go to a new track you will need someone to once again tell you where the line is.

If you discover and figure out the line for yourself, you've truly learned it. And most importantly, you've improved your ability to

thoughts about driver coaches, and specifically Romain Grosjean in the short Autosport magazine article: <http://alturl.com/9vfoo>

Looking Ahead...

In upcoming issues of SSW:

- **Peter Krause** (*one of the most experienced and knowledgeable coaches out there*) writes about the *5 most important things track day and HPDE drivers can do to go fast and have fun.*
- **Jeff Braun**, *one of the top race engineers in the world*, talks about the *most effective - and simplest - tool he's used to make winning happen more consistently.*
- **David Brabham** *shares his thoughts on mental preparation for driving.*

learn other new tracks in the future. When you learn something from the inside-out, it stays with you for a long time, and it will be easier to learn other similar things in the future.

If you know your car well, you shouldn't have too much problem driving it at its limit, whether you are on-line or not. If you are focused on driving the line, figuring out which way the track goes and where the apexes are, it is doubtful you will be able to drive at the limit. The reason for this is that most drivers have a limit on the information he or she can process at one time. Try to do it all at one time, and either you will not do one task very well, or you will have brain overload and possibly make a big mistake.

I'm not saying you should deliberately not try to learn the line. I'm just saying that if you make driving the car at its limit your first priority, the line will look after itself. You will automatically figure out which way the corners go, where the apexes are, which corners you can use the curbs on, and so on.

"Drive The Car"?

So what exactly do I mean by "drive the car"? I mean drive the car at its traction limit, at every portion of the track. But, that may be a bit much to take on all at once, too. So, start with the corner exit, then the corner entry. If you do that, the mid-corner will usually take care of itself.

The key here is sensing the amount of traction you have. With each lap, begin accelerating a little earlier and harder out of each corner, sensing the amount of traction available. Keep accelerating earlier and earlier until you either begin to run out of track or the car begins to understeer or oversteer excessively. Remember, the car must be sliding somewhat (understeering, oversteering or neutral steering), otherwise you're not driving at the limit.

Once you feel you're getting close to the limit under acceleration, then begin to work on your corner entry speed. Working on the fastest corners first on down to the slowest, carry a little more speed into the turn each lap, until you can't make the car turn-in towards the Apex the way you would like - until it begins to understeer or oversteer excessively in the first one-third to one-half of the corner - or it hurts your ability to get back on the power as early as you could before.

Don't forget that when working on the acceleration or corner entry phase, that just because you sense you've reached the limit, that you can't go faster still. It may be that the technique you are using now results in reaching the limit, but by changing that technique slightly you may be able to accelerate earlier or carry more speed into the corner - raise that limit. For **example**, you sense the car is beginning to oversteer too much under power on the exit of the corner. You've reached the limit - with the way you are applying the throttle now. But if you apply the throttle a little smoother, more progressively, the car may stay more balanced and not oversteer as much. Another **example** : you carry more and more speed into a corner until it begins to understeer as you initiate the turn. You've reached the limit with the technique you're using now. However, if you used a little more braking while you turned (keeping the front tires more heavily loaded), or turned the steering wheel more "crisply", perhaps it wouldn't understeer at all.

The point is not to believe you've reached the ultimate limit just

because the car slid a little one or two times. Once you're used to accelerating that early or carrying that much speed into a corner, take a number of laps to see if you can't make the car do what you want by altering your technique slightly.

Corner Entry vs. Exit

Corner entry speed and exit acceleration are related. If your corner entry speed is too low you tend to try to make up for that by accelerating very hard. The hard acceleration may exceed the rear tires' traction limit, causing oversteer. If your corner entry speed was a little higher, you wouldn't accelerate so hard and wouldn't notice any oversteer. This is the "*change of speed*" problem (something to be covered in the future).

Of course, if your corner entry speed is too high, it may result in getting on the power late. This is going to hurt your straightaway speed - which is the highest priority.

By this point, I can practically guarantee the line has taken care of itself, and that you will pretty much be driving the ideal line.

Mental Practice

It goes without saying, mental practice between each on-track sessions is critical. Often, this is where you really fine-tune the line, first of all becoming aware of specific sections of the track that are not really clear in your mind, and then pre-playing what may happen if you tried a slightly different line. Drive as many laps in your mind between on-track sessions as you can.

By the way, **driving the car and not the track** is not just the key to learning a new track. It's also the key to being quick. Keep this simple *Speed Secret* in mind whether you are learning a new track or driving a track you've driven many times before.

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