

# Crash Course in Pace Notes

The Canadian Rally Championship is currently in a rest between rallies, and there's nothing much going on. So what better time to better explain the inner workings of the sport of rallying. More so, how a car is capable of speeds on narrow twisty gravel roads, that most people would not think to attempt on the same road with a tarmac surface.

It's always amusing to watch the expressions of a person spectating their first rally. To see a crackling, snarling rallycar hurling down hill, into certain doom, only to pendulate several times from one side of the road to the other under heavy late breaking. The driver pitch's the car into a blind hairpin, turning in 5-8 meters before the corner even begins. The car is now 90 degree's to the corners horizon with dust curling up the side of the car, and all the car's turning motion is finish by the time it hooks the front wheel into the ditch on apex. Thus the driver stands on the throttle, the engine skips as the rev limiter screams to save the engine from grenading, he pulls another gear and the rally car is catapulted out of the corner onto its next adventure down the road.

With that, the freshly initiated spectators eye's are bulging and their jaw is hanging open with a hint of drool beginning to peak out. What comes next is an incohearable stuttering gibberish of questions asking who, what, how, why.

Mostly, the first question understood is "how did they get through there so fast without crashing?" As most know, rallying and racing are two very different beasts. Racing takes place on a well known circuit where drivers get several practice laps and the driver always knows what's coming up next. Rallying on the other hand, is run in more of a tour type fashion. Stages are set up on a variety of surfaces and locations, and drivers only get to see these section's of road two times before the rally to produce Pace Notes.

Any one who has watched rallying on TV has recognized the code words that the co-driver yells out as the car is speeding along a stage. These are the Pace Notes that are called to the driver seconds before the car comes upon the mentioned notes. Pace Notes are a description of the roads characteristics that the diver needs to know while the car is at speed. During the recognize runs before the rally the crews will assign a grad to each corner, straightaway, jump, water crossing and just about any other obstacle that the driver will likely need to know, to keep the car on the road. Now Pace Notes are very much like finger prints, no two are the same. Every driver has their own style of notes that they feel comfortable with.


Most common is the numbering system that will grade a corner from 1 to 6. Some drivers like to use the system with a "1" representing a high speed corner where the throttle is held flat, and a "6" represents a second gear corner nearly as tight as a hairpin. This can also be turned around with "1" representing a tight corner and "6" a slight curve, as some drivers like to grade the corners to correspond with the gear that should be used. These notes can also be more specific by adding a "+" or "-" to the corner grade

The notes are then put together with other road conditions such as hairpins and jumps, as well as straights that are called out by their length in meters. So if you have a stretch of road with a hairpin left leading to a 250 meter straight, then a 3<sup>rd</sup> gear right leading directly into a 2<sup>nd</sup> gear left that tightens. This would translate to "HP 250 into 3L into 2R tightens."

Now the driver knows exactly what is coming up. He knows the grade of corner and therefore the amount of braking and braking distance. He knows what gear is optimal and depending on the description he will even know how high to rev that gear and the surface condition and fastest line.

By Budd Stanley

The Art of Winning



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