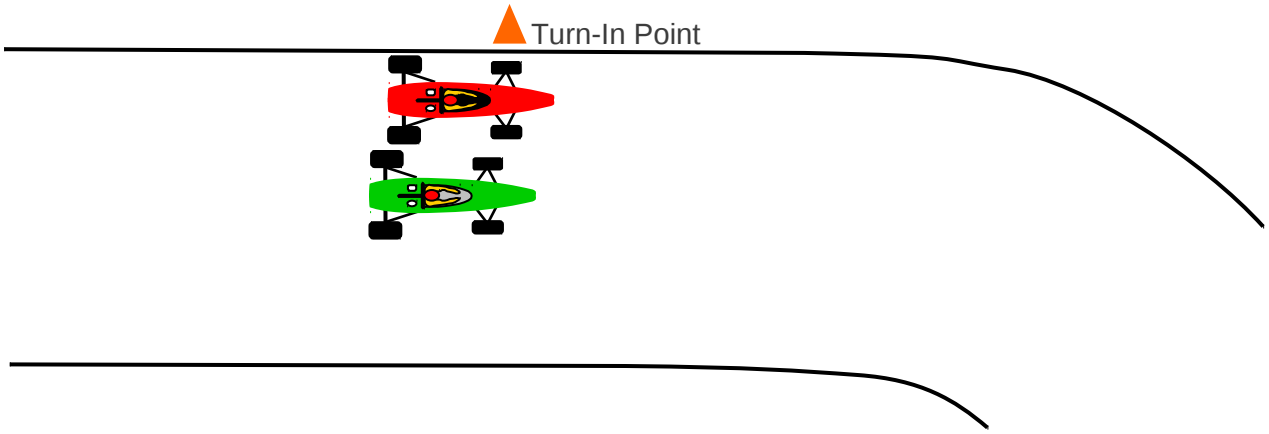
VINTAGE RACER GROUP VRG **DRIVER DEVELOPMENT – Update Series**

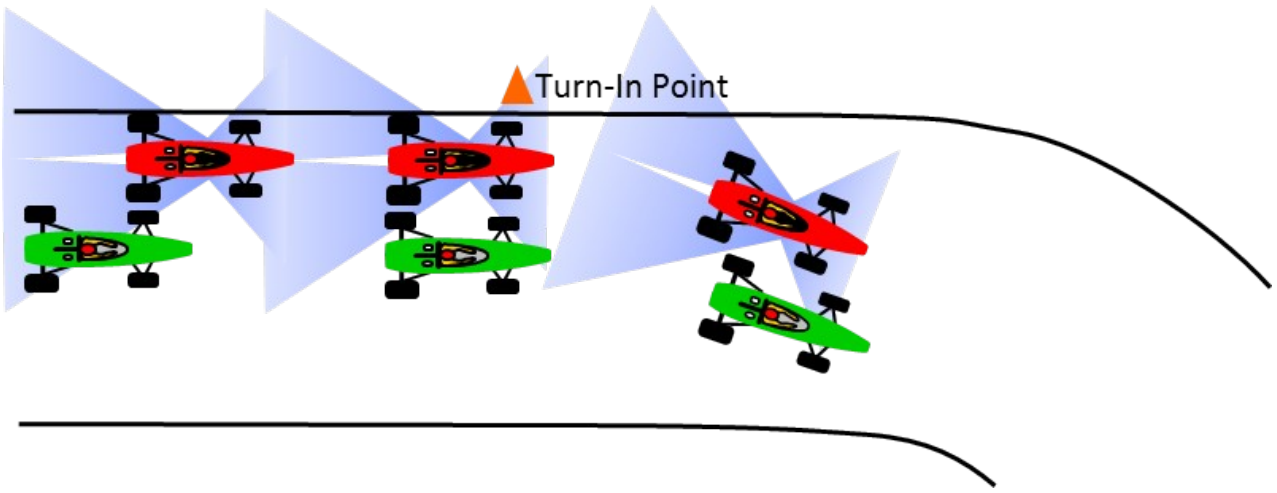
PASSING 101

By Ed Valpey

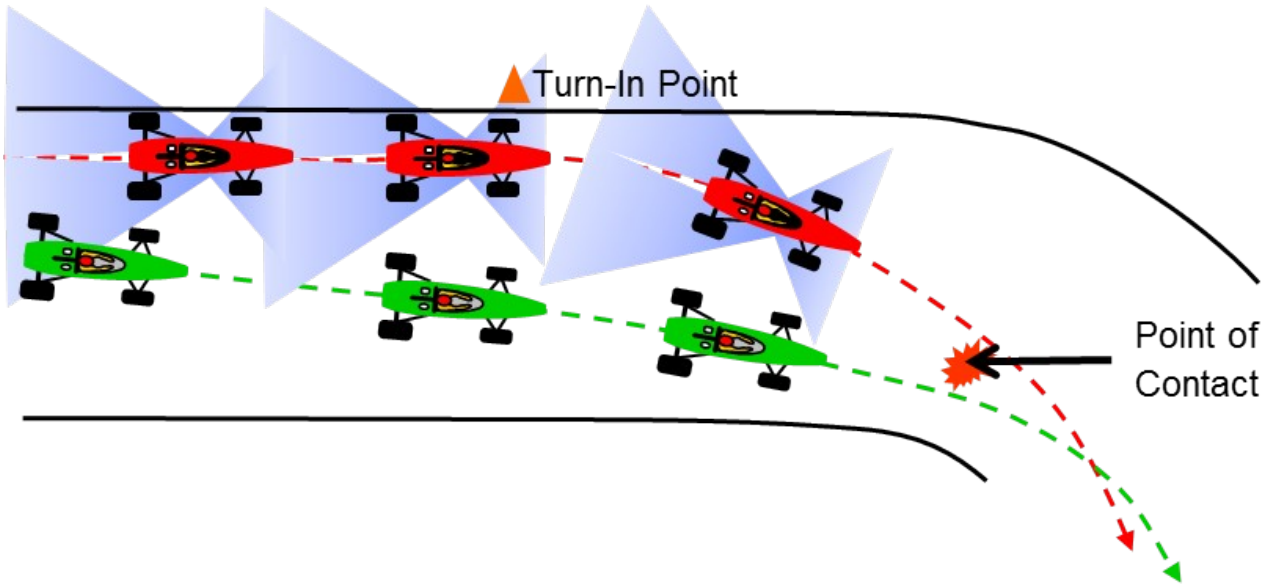
Passing is harder in vintage racing. This is something many participants don't consider. In conventional racing a wheel alongside the cockpit at turn-in is acceptable, and the passing car doesn't need to be fully alongside until the apex. We're required to be fully alongside the car we're passing by *that* car's turn-in point, which can be different than our own and which comes up much more quickly than the apex. As a result, drivers in vintage have less time – the braking zone only – to gain "rights" to the corner. This may help to explain why at VRG events the lion's share of car-to-car contact incidents, rare as they are, result from mistakes during passing. The illustration below shows what would be an ***illegal*** pass, as the green car is not fully alongside the red car by the red car's turn-in point. The green car is close and the red car's turn-in point may not visible to the green car, allowing the driver of the green car to believe that he had been in position in time. Regardless, the pass would be illegal and the green car should concede the corner.



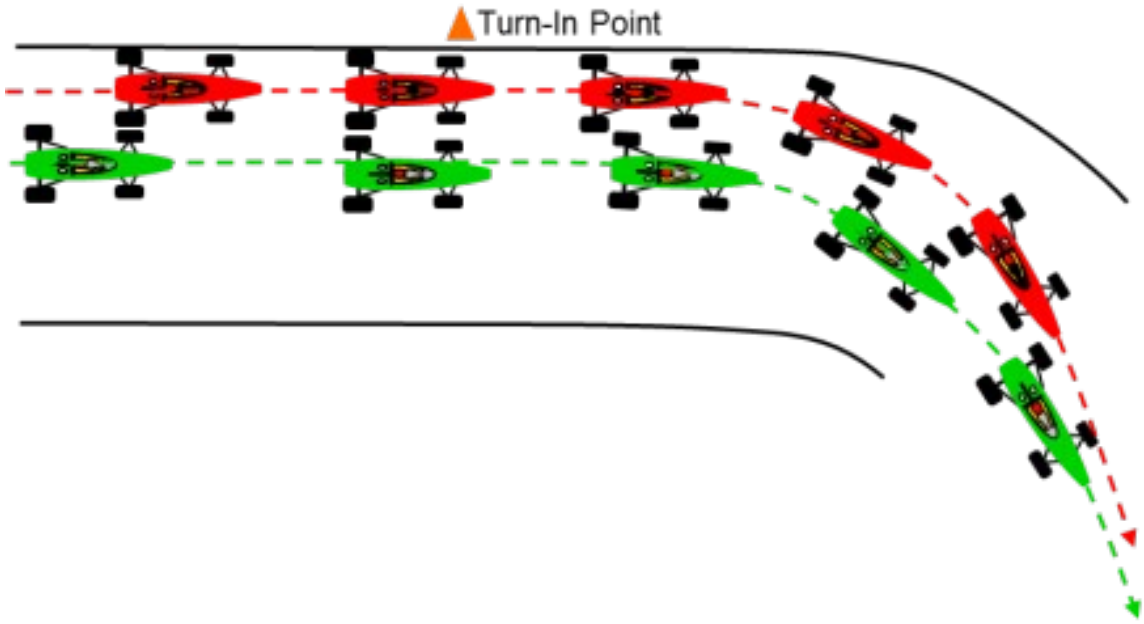
Many drivers focus on gaining "rights" to a corner, rather than controlling the other driver, and this often creates the circumstance that leads to incidents. To begin with, let's look at a typical pass with the field of vision of the car being passed illustrated in blue. This illustration shows an average formula car; some cars provide better visibility, but all have similar limitations.



As the above illustration shows, the passing car (green) spends little or no time completely out of sight of the red car. This is a safe and properly executed pass, and the most effective pass for reasons that we'll discuss later. Next, let's look at a very common pass that, albeit legal, often causes problems… the Dive Bomb pass.



The most important thing illustrated above is that the green car spends the latter part of the braking zone and the early part of the corner completely out of sight of the red car. The Dive Bomb is common for a couple of reasons. First, the overtaking car stays much further away from the car being passed, and this makes the pass more comfortable, initially. Secondly, these drivers are under the misconception that diving for the apex will get them there quicker. This is false because as the green car approaches the apex on a shallow line he must brake much harder for the tighter radius he's forced himself onto at the apex. Often, as shown above, the passing car will not be able to hold this tight radius and he will skate wide, at times into the car being passed. Compounding the problem is the fact that the green car may be at this point traveling much slower than the red car. Note also that the paths of these two cars intersect very soon after the green car becomes visible to the red car…there's very little time to react. Even if the pass is successful, the green car has killed his exit speed. If the red car driver is experienced enough to see the poor line, he will turn-in later, duck to the inside immediately after the apex and re-pass the green car.



The most effective pass is shown above. The driver who stays close to the car he is passing is not only more visible, he is also able to control that driver's turn-in point. He can keep that car to the outside and force a late turn-in. In doing so, he can be the first to turn in and the first to go to power, resulting in a clear lead and greater exit speed. The driver of the red car is forced onto a later, tighter turn-in which, unless he wants to practice his car control skills in the marbles on the outside of the corner, requires that he fall in line behind the green car. This strategy is both safer and quicker… the passing car is not only more visible to the other driver, but also controls the corner, ensures the pass and maximizes his exit speed at track out by driving as close as possible to the normal line.