

## Situational Awareness

### NNJR Track Side Classroom Series



## ***Disclaimer***

*The techniques shown here have been compiled from experienced sources believed to be reliable and to represent the best current opinions on driving on track. But they are advisory only. Driving at speed at Mid-Ohio, or any other track, requires skill, judgment and experience. These techniques assume the reader has high performance driving knowledge and applies them as applicable to their level of driving experience.*

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- What is it?
    - Flags!
    - Traffic!
    - Track conditions
    - Car behavior and speed
    - Mistakes
    - Your condition
  - Skills to Improve on track Situational Awareness
- “The ability to perceive, understand, and effectively respond to one's situation.”



# Flags: Essential for Safety



<b>GREEN FLAG:</b> 	Track is open and the course is clear. If no flag is displayed at a station, this is a green condition.	<b>BLUE FLAG:</b> 	When pointed at you, this flag indicates that there are faster cars behind you that should be allowed to pass. Check your mirrors and give passing signal(s) at the next authorized passing area.
<b>YELLOW FLAG:</b> 	<p><b>Stationary</b> - There is a potential hazard near or on the track ahead of you. You must exercise caution until you pass a clear flag station. Slow down. Passing is not allowed while the yellow flag is displayed. This flag will also be displayed for the first lap of each run.</p> <p><b>Waving</b> - There is a hazard immediately in front of you. It will require you to alter your course or take evasive action. Immediately slow down and be prepared to take appropriate action as necessary. Be aware of the cars around you as you do this</p>	<b>WHITE FLAG:</b> 	This means that an ambulance, service vehicle, or slow moving (e.g. with mechanical trouble) car is on the circuit. Be alert.
<b>YELLOW/RED STRIPED FLAG:</b> 	This striped flag indicates a surface condition - take care. It indicates that a slippery condition exists or that debris is present on the course. This flag is displayed standing.	<b>RED FLAG:</b> 	Something affecting the safety of the event has occurred. Stop quickly and safely by moving to the edge of the track surface (off line) immediately but look in your mirrors before braking: Be mindful of the cars around you. Do not drive around to see the cause of the flag signal. Remain stopped with your car until directed by a flagger to proceed.
<b>BLACK FLAG:</b> 	<p><b>If directed at your car:</b> There is something wrong with your car or your driving. Immediately pull into the pits and see an Event Official.</p> <p><b>If stationary at more than one station:</b> all cars are to pull into the pits at their first opportunity. No passing.</p>	<b>CHECKERED FLAG:</b> 	The run group is over. Proceed around the track more slowly, cool engine and brakes, return to pits and paddock.

# NJR Flag Skills to Develop



- How soon can I see each flag station?
- Create mental picture of “normal” flag stations
  - Any difference from normal = warning!
  - Flag stations in the distance and up close
- Check each station, each lap
  - Even in traffic
- Wave at flaggers on warm up, cool down laps



# NNJR Passing!



- Only in designated straights
- Only with a signal
- Both drivers know exactly what to expect



# NJR Passing “Mistakes”



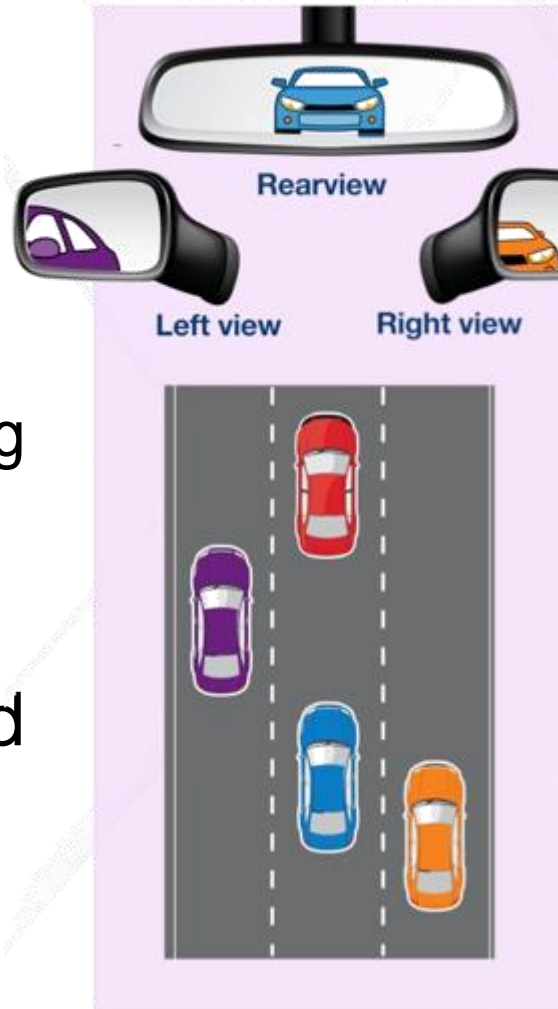
- Fixate on mirrors
- Lack of traffic awareness
- Surprised by car behind
- Poorly timed passes
- Giving a passing signal then moving “out of the way” of rapidly approaching car
- Trains



# NJR Passing Skills to Develop



- Scan/Glance at mirrors
    - Glance again to confirm
    - At the right time; not other times
  - Focus on driving and traffic
    - Mentally note cars behind without affecting your driving
  - Learn speed differentials
  - Pick right time/place to pass/be passed
- 
- Anticipate passing / being passed
    - Objective: neither car slows





# NJR Track Conditions



- We all like sunny days, but
  - Some days are cold, some hot, some rainy...
- The track is usually grippy, but
  - Cars do drop antifreeze, oil, etc.
  - Some tracks have sealer, concrete patches, etc.





- Vision: carefully note track surface
  - Especially brake zones, early/mid corner
  - Develop a mental picture (may change with time of day)
  - Write notes on your track map
- Develop sensitivity to normal track feel and sound
- Rain: damp? Slippery? Wet?
  - Highly variable
  - Changeable conditions are the most dangerous
- Not on street tires?
  - Means less ability to deal with cold, rain, etc.



# NJR What about your Car?



- Most of the time, your car is the same, but
  - Things happen!
- Tires gain or lose pressure
- Brakes can fade
- Leaks can develop
- 
- 
- 





- Develop a keen awareness/sensitivity to normal car sound, feel and smell
- Any difference needs attention!
  - Strange noise?
  - Feels different?
  - Smells different?
- Auditory sensory input session



# NJR We All Make Mistakes...



- How fast do we recognize a serious one?
- Major mistakes
  - Early apex
  - Much faster entry speed





- Focus on the current corner
  - “Forget” previous ones
- Consistent turn in point
- Awareness of speed at turn in
- Reference Points between Turn In and Apex
- Objective: know instantly after turn-in if we are OK
  - If not, “No-Go”
  - Develop a “Go, No-Go” mentality



- Can have a bad day
- Can be distracted
- May focus only on chasing
  - Or a lap time
- May lose focus
- Can get fatigued



- One or two goals for each session
- In staging
  - “How Am I Feeling?”
  - Repeat goal(s) 3 times
- Create a “Trigger” word for Focus/Re-focus
  - e.g. “Eyes Up”, “Look sharp”, etc/
- Self awareness on track
  - Deep breaths on straightaway
  - Relax the hands and neck
  - Repeat your trigger word



# NJR Fatigue: How to Recognize



- Two mistakes in a row
- Three mistakes in one lap
- Failure to see upcoming traffic
- Inconsistent lap to lap
- Feeling overheated
- Cramping in your hands
- Neck and shoulders fatigue
- Loss of attention to “detail” - trance like state.



- Developing situational awareness is essential
  - Traffic, Flags, Track Condition
  - Be sensitive to what your car is telling you
  - You! The Driver
  
- Everyone makes mistakes
  - Most “mistakes” are a learning opportunity
  - But Early and Too Fast can be dangerous
  - Learn to identify mistakes early and correct
  
- Watch out for fatigue

# NNJR Questions?



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