

PCA Driver Education Lead-Follow Coaching Guide

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Lead-Follow (L-F) DE instruction is an alternative DE coaching format when conditions do not permit in car instruction. This document provides a Program overview of the Lead-Follow requirements and expectations for the instructor. Refer to the PCA DE Minimum Standards and the PCA DE Lead-Follow Minimum Standards for all requirements in planning and conducting a driver education event using Lead-Follow instruction. Any instructor involved in training at a Lead-Follow event must have successfully completed on track Lead-Follow training.

1. Goals for the Instructor

Here's what you want to do at the track and on the track:

- Introduce the track to students in a safe manner
- Demonstrate the ideal track line to students, including appropriate spots and timing for turning, accelerating, and braking.
- Control a student's pace and following distance to ensure they learn DE skills safely -

2. Differences with In-Car Instruction

In Car Instruction Differences	Comments
Tendency is for student to look at lead car, which is usually not looking far enough ahead	At sharper corners, instructors should be able to see the position of the students' helmet as a way to judge where the student is looking.
Rocking or lifting the car with the steering wheel, throttle, or brakes.	With the instructor driving smoothly, the distance between the cars should remain constant once the student has a rhythm for the track.
Coasting.	Gap between cars will change
Firm braking in the braking zone, with smooth release of the brake by turn in.	Ensure the student is braking late enough and not coasting in the brake zone.
Using proper gears	Probably only if you can hear the student's car, and probably not a concern at L-F pace.
Passing requires more room and cooperation	Instructors must help students learning the process and ensure all let-bys are completed and all cars back on-line by the end of the let-by zone.
Run group promotion	Regions will apply their normal criteria for run group promotion. Participation in L-F instruction does not in itself qualify a participant for promotion
Minor problems with students' cars	There is no way to tell if the student has thrown a wheel weight, has a warning light, etc. Students will be able to signal the instructor if there is a vehicle issue.

3. Basic Instruction Skills to Master

A trained instructor should be able to consistently coach a student with the following points:

- Coach the Student to be properly positioned on all portions of the track including Turn-In, Apex, and Track-out for each turn, along with appropriate steering, braking and throttle inputs.
- Communicate effectively to the student the expected pace.

- Ensure that the student is maintaining the proper spacing between their car and the instructor's car and appropriate pace.
- Recognize and take actions when the student's on-track behavior is unsafe and/or interferes with other on-track Lead-Follow pairs. This will typically mean exiting the track to provide in-paddock coaching.
- Conduct a thorough briefing post-session to cover the strengths and weaknesses of the just completed session. This should include instruction on:
 - Specific problem areas for the student
 - Improvement goals
 - Specific skills that may be worked on in the next session
 - Review of vision, smoothness, and weight transfer concepts
 - Respond to student's questions
- Be familiar with the local communication technology used at an event, and be able to quickly setup and verify it with the student well before the session is to begin.
- Inform the student on the pod let-by process prior to the first on-track session and actively coach them during on-track let-bys.

4. Emergency Procedures

If the student has a problem while on track, the student should flash their high beams, indicating a need to pit. The instructor and student will then put their raised fists out the window using the standard PCA hand signal, and the instructor will lead the student in the pit.

If the student cannot make it to pit lane, the instructor will continue to the hot pit and wait for the student or the end of the session. The student should be briefed ahead of time at the drivers meeting and with the initial instructor briefing of how to pull offline safely, if possible. The student should also put his/her fist out the window to indicate a mechanical problem.

If the instructor cannot safely communicate with or control their student, the instructor must immediately proceed to the pit, find a flagging official, and request the student vehicle to be immediately removed from the track.

5. Driving Pace

As discussed in the Instructor Training, a key aspect of the safety of any Lead-Follow event will be the on-track pace. Pace will be discussed and reviewed in the daily instructors' meeting and in the students' driver meeting each day. The instructors' meeting will include discussion of the vehicle speed range in which the communication device(s) are effective.

6. Car to Car Communication

All communication with a student by an instructor **MUST** be done with a car-to-car communication device(s) of the region's choice. All communication is, at a minimum, one-way, from the instructor to the student. Once on track, if the student is not able to hear the instructor clearly and reliably, the student should repeatedly flash their high beams. The instructor should then signal a pit entry to resolve the issue.

The instructor may ask via the communication device a "Yes/No" question. The student may respond with a high beam flash indicating "Yes". Absence of a flash signal means "No". If the student is leading the pod then a rear view mirror tap indicate "Yes".

If the student believes their car has a mechanical problem or any other urgent issue, the student should indicate the need to pit by repeatedly flashing their high beams. The instructor should confirm the need to pit via the communications device, and then give the intent-to-pit hand signal, along with the student.

A fist raised out the window has the same meaning as any other PCA session. This indicates the drivers' intention to enter pit lane when the cars arrive at pit line.

Instructors are required to maintain audible communications contact at all times. Instructors must ensure their communications can be clearly heard at all speeds during a L-F session.

7. Pre and Post Session Debrief

One of the biggest challenges of L-F is the inability to communicate with the student during the session, so the briefings before and after the session become much more important and much more comprehensive. All information must be concise and focused on the biggest areas for improvement or safety. Student generally will not remember many of the details of their track session, nor will instructor have as much student driving information as with in-car instruction. We recommended at a minimum the following topics are covered in both sessions (in no particular order at this time):

- Smooth with the car inputs
- Let-by protocol.
- Vision - look ahead of the lead car.
- Emergency procedures. Minor problems (flash lights, give pit-in signal, follow instructor into pit), major problems (pull off line if possible, wait for assistance, wave to corner worker to indicate physically OK), to emergency (i.e. red flag).
- Demonstrate the 3-car length minimum desired distance.
- Discuss radio procedures, tune student's radio and verify operation.
- Review safety or driving issues post session. Review them pre-session next time out.
- Discuss tire pressure and lug nut torque settings.
- Smoothness, vision, looking ahead (yes, that's a repeat).
- Cover track terminology (even if they've had a classroom session). Track in, apex, track out, hot pit.
- Ideally, have a map to show where corner stations are. A good thing to cover on the first lap and the cool down lap is the staffed corner station locations.
- Reassure the student that the session will be safe, and make sure they have fun.
- Seating and hands position in the car.

- Ask student about safety procedures.
- If student spins, instructor will return to hot grid.
- If you leave the track completely, remain in car, and wait for instructions from corner worker, and then return to hot pit.
- If for any reason you become separated from the instructor, return immediately to hot pit.
- Everything should be smooth, not jerky or abrupt. If your hands and/or feet are always moving quickly, you're not looking far enough down track (i.e. almost all corners on all tracks are slow hand corners, especially for beginners).

In general, try to spend as much time outside the cars talking with the student that would normally happen in car. Leave enough time for the student to get comfortably situated without rushing.

Track Notes for New L-F Instructor

Examples of notes that can be compiled for new L-F instructors, or L-F instructors that may be new to a given track:

Notes:

- Turn 3 apex is hard to see if you don't adjust your right mirror out slightly.
- A lot of students have trouble with the entry to corner 4.

8. The 10 L-F Instructing Points

Even in the best track conditions, an instructor in a L-F pod will NOT be able to see or feel many aspects of high performance driving that would be observed if they were sitting in the student's car. This situation becomes even more challenging when the sun or weather conditions prevent the instructor from seeing into the student's car, such as glare from the sun on the student's windshield, or vehicle conditions such as small or heavily tinted windows.

Effective L-F instruction requires the instructor to overcome these limitations by repeatedly reinforcing the following talking points at

appropriate and convenient times during the on-track sessions. These are not in any particular order, but all are important.

Instructors should phrase questions that require a “Yes” response if the student is understanding or performing the appropriate action. Student will signal a “Yes” response with high beam flash(es).

1. Vision. Looking ahead of the instructor’s car, looking through apexes, looking at track out, looking at key visual references. Avoid prolonged looking at the instructor’s rear bumper. If necessary, advise increasing the distance between the student’s car and yours.
2. Smoothness in all vehicle inputs.
3. Relax.
4. Breathe.
5. Safety, see the corner stations, know the meaning of the flags, know the track procedures, know the passing rules, pass only in let-by zones and when the pass can be completed and the STUDENT is back on-line before the end of the let-by zone.
6. Driving posture and hands position on the steering wheel.
7. Communications checks. Always be in clearly audible communications.
8. Have fun.
9. Enjoy the experience. Provide encouragement and positive feedback.
10. Driver condition, i.e., “Are you doing ok?”

Consider attaching this list to your dashboard until you are accustomed to communicating with students on these topics.