



Consistent Lapping Exercise

In keeping with Audi Club's non-profit **educational** purpose, Audi Club SoCal is introducing a new Consistent Lapping Exercise. We encourage Experienced and Advanced Drivers to participate in this fun, optional test of your driving skills. The goal is to drive precise, consistent laps in a session, irrespective of absolute speed.

Tools Needed:

- A smartphone, not visible to the driver, with your favorite track app installed, for example RaceChrono or TrackAddict (both have free versions) or Harry's Lap Timer (various paid levels).
- The ability to email a screen shot of the results of an entire session.

Procedure:

Drive a Session. During a single, designated driving session, typically the one-hour period after lunch on Friday Experienced Driver Day, drive eight or more laps (five laps minimum) while your lap timer is activated. To comply with ACNA policy*, predicted lap times must not be visible to the driver. We suggest you put the phone (lap timer) in your pocket. If it is permanently mounted in the car (to capture video, for example) you must select a screen which does not show lap times to the driver - or cover the display.

Find your Delta. After the session, find your lowest lap time and your fifth lowest lap time. If necessary, convert the lap times from minutes & seconds (m:ss.sss) to seconds (sss.sss). Subtract the lowest lap time from your fifth lowest lap time. That difference is your Delta for that session.

Bring the results of your session to grid or email them to CDI@audiclubsocal.org. We will tabulate the results so you can see how your consistency compares to the group as a whole.

Again, the Speed you drive (the magnitude of your lap time) is not important or considered - only your delta counts. The reason we use your fastest lap as the baseline is to eliminate laps affected by traffic or flags.

Why is Consistency Important in High Performance Driving?

High Performance Driving incorporates many elements into a unified whole. Using **Vision** correctly contributes to Smooth driving. **Smoothness** coupled with **Concentration** allows you to drive with **Precision**. And one measure of precision is **Consistency!**

To improve your consistency, seek **Knowledge** about driving. Use that knowledge to form a **Mental Image** of what you wish to accomplish. Seek **Awareness** of what you are *actually doing* (by using this exercise!) to help you achieve the Audi Club goal of **Constant Improvement** in your performance driving.

Remember that **Fitness + Attitude + Preparation + Judgment** are the four cornerstones of **SAFETY**, the primary goal of Audi Club High Performance Driving.

***Audi Club National HPDE Guidelines** January 1, 2021

2.11. Event Timing

ACNA high-speed driver education or lapping events are not timed events. To discourage 'competitive' or 'racing' behaviors, devices which display only complete or predicted lap times in the car are not allowed.

To preserve our fundamental educational emphasis, **data collection and after-session analysis are encouraged**. In-car technologies and **cellphone apps** which enable this learning environment are therefore allowed, provided they are used to learn the track, **support development of driver skills**, and improve safety.

Aftermarket devices and smartphone apps that provide useful data for self-coaching, instructor-assisted coaching and after session analysis are currently permitted. OEM vehicle cockpit devices can also be used. **In all cases, predicted lap times should not be displayed while driving.**

ANDROID APP EXAMPLES

Harry's Lap Timer

I don't own Harry's Lap Timer and there is no longer a free version, so I did not test it.

RaceChrono

This app shows delta but does not sort on it. Fortunately, finding the five-lap delta was a simple and straightforward process.

This 9-lap session is the sample data included with the Android version of the app. The app automatically marked the fastest lap in blue, Lap 6 in this example. I simply set the laps with the largest Delta as Invalid using the ... menu on the left side of each of those lines, dimming those laps. When there were only five valid laps remaining, the largest of those in the Delta column (lap 8 at **0.59 sec**) is the Audi Club Consistency Score for this driver's session. If your five fastest laps won't fit on one screenshot, you can choose to Hide Invalid Laps using the upper right ... menu.

Lap	Full	Delta	Max. kph	Min. kph
Opt	1:36.13	-0.69	169.1	54.1
Session start 5/25/07 6:09 AM				
1	1:37.00	+0.18	169.1	53.3
2	1:40.28	+3.46	165.4	36.2
3	1:37.39	+0.57	169.1	52.1
4	1:55.44	+18.62	170.0	48.3
5	26:09.91	+24:33.09	154.7	0.0
6	1:36.82	+0.00	167.9	54.1
7	1:37.08	+0.26	169.3	53.6
8	1:37.41	+0.59	166.5	49.7
9	2:32.69	+55.87	167.4	0.0

TrackAddict

I was unable to show delta in this app, so we will need to do some math. I was unable to fit all seven sample laps on one screen. In this case, I was able to get the five fastest on one screen for my screenshot, which I emailed to myself for this document.

In this case we can see that Lap 4, marked in bold, is the fastest lap. A little inspection showed that Lap 1 and Lap 7 are much slower, while there are four close laps in the 2:10s. The slowest of those is Lap 5 at 2:10.611.

130.611 minus 129.988 = **0.623**, which is our Audi Club Consistency Score for this driver's session.

Lap	Time
Lap 2	2:10.095
Lap 3	2:10.584
Lap 4	2:09.988
Lap 5	2:10.611
Lap 6	2:10.172
Lap 7	2:35.444