THUNDER ROAD 2024

November 9, 2024

An SCCA combined National/Regional Tour Rally

Event General Instructions

1.   Overview

THUNDER ROAD 2024 is an ITN/SMSCC/Cal Club/SCCA Time-Speed-Distance (TSD) combined National/Regional Tour rally that is one-third of the 2024 United States Road Rally Challenge. It will use the Richta GPS Checkpoint app system for timing and scoring. The National and Regional events will take place simultaneously using the same Route Instructions, but will be scored as separate events.

This event is a Monte Carlo style rally with emphasis on running open, sweeping, challenging roads while using precise driving and accurate navigation to achieve low scores. We will be running a very scenic course through the Tehachapi and southern Sierra Nevada mountains, and the open vistas of the Antelope Valley. Your goal is to enjoy yourselves following the rally route using the written Route Instructions so as to arrive at each Checkpoint at exactly the correct time. All Checkpoints appear in the Route Instructions and will be referenced with a CZT (Car Zero Time – see Section 12) and Official Mileage. There are no uninstructed Checkpoints.

Each entrant will be required to bring a smartphone (or other device) that is GPS enabled, has a data plan (or wi-fi), and has the Richta Competitor app installed. This free app will monitor your car's location during the rally and will record your arrival time and score at each Checkpoint. You should not stop at the Checkpoints, just continue rallying until you reach the next Restart point as identified in the Route Instructions. There will generally be multiple timed Checkpoints between Restart points.

Being a Tour rally, there are no intended traps of any kind.

2. Committee

Rallymaster and Rally Chairperson	Joe Akerman
Registrar and Chief of Waivers	Larry Scholnick
Safety Steward	Larry Scholnick
Precheck	Larry Scholnick

3. Registration

Car numbers will be assigned prior to rally day with a traditional random draw.

Rally Headquarters is the Hampton Inn and Suites, 2300 W Double Play Way, Lancaster, CA 93536. There will be advance check-in on Friday night in the Boardroom from 18:30 - 21:30 for all three rallies in the 2024 USRRC. (Check-in (re)opens Saturday morning from 07:00 - 09:00 in the same room.) Drivers will be required to show a valid driver's license and proof of current insurance. Everyone who will be in the car during the rally must sign the SCCA waiver, and complete the entry form including vehicle inspection and emergency contact.

Anyone who will be in the car who is less than 18 years of age must submit **in advance** an online SCCA minor waiver AND the online parental release form signed by their parent(s) or legal guardian(s). Email carzero@aol.com for the link to these forms.

Route Instructions will be given out at beginning at 7:30 AM plus your car number in minutes. Cars start the rally at 9:30 AM plus car number in minutes. However, Start time is Free. You may leave Start (and all Restarts) any time prior to your Target Time. There are several breaks during the rally with food, fuel, charging stations and restrooms available.

Each National entry must have two people (and only two) in the car – a driver and a navigator. Regional entries must have at least two people (driver and navigator) in the car, but may have as many people as there are working seatbelts in your vehicle.

You are expected to drive safely and courteously and obey all posted speed limits and the California Vehicle Code at all times. Please respect all local residents, pedestrians, bicyclists, and other drivers.

Questions about this event may be addressed in writing and in advance to the Rallymaster at carzero@aol.com.

4. Schedule for Thunder Road 2024

Friday, November 8, 2024

    18:30 - 21:30   Registration and Check-in in the Boardroom.

Saturday, November 9, 2024

07:00		Registration and Check-in (re)open in the Boardroom (meeting room).
07:30	(+ car number)	Route Instructions issued.
09:30	(+ car number)	First car out.
17:30	(approximately)	First car to Finish.

5.   Timing

Checkpoint timing is to the nearest second. Timing error will be penalized at the rate of one point per each second early or late. Maximum Timing Error is 30 seconds (30 points) per leg. All CZTs will be listed in the Route Instructions as hours:minutes:seconds and in 24 hour (military) clock format. All CZTs are rounded to whole seconds. So 14:30:30 should be read as 14:30:30.0. Timing at each Checkpoint is from the previous CZT Restart.

You may creep or stop on course out of traffic lanes without a penalty, anywhere it is safe to do so. Whenever you creep or stop like this, please use your emergency flashers.

All Restarts in this event are Car Zero Time (CZT) Restarts. The CZT Restart is a specified time of day to which you add your car number in minutes to determine your proper Target Time from that point. For example, if you are car #12 and the CZT is 14:30:00, your Target Time would be 14:42:00. Your Richta app should alert you just prior to your arrival at each Restart point, and **your** Target Time should be shown on the app. START and all RESTARTs are FREE. You may leave them at any time prior to your Target Time.

Times allowed for breaks, lunch, etc. are specified in the RIs, and that time is included prior to the following Restart in addition to your travel time for the instructed route to that point.

All Course Controls are 'on-course' Course Controls intended to verify your position and time on the route. No times will be scored at these Course Controls.

In the event of a tie in total score within a class, the tie will be broken using the Lowest Score method, i.e., the contestant having the most leg scores of zero ("0") will be awarded the higher finishing position. If a tie still exists, this procedure will be repeated by incrementing the score by one, and repeated until the tie can be broken. If a tie still exists, then the most consecutive zeros, etc. will be used to break the tie.

6.   Speed and Distance

Mileages were measured in a 2013 Subaru Impreza WRX with an Alfa Elite Rally Computer using a Hall effect sending unit with two magnets on the left rear halfshaft. Tires were inflated to 35 psi cold. The weather was clear and hot in the desert and cold and cloudy in the mountains with temperatures from $62°$ to $104°$ F. Mileage was measured to the nearest 0.001 mile and then rounded to the nearest 0.01 mile. The wide range of temperatures during measurement caused some variations in mileage in certain areas on subsequent runs, usually less than ±.02 miles. Since all Checkpoints have CZTs, Official Mileage should be used as a navigational reference only.

Official Mileage (OM) is the distance, in miles, from the last point of zero mileage to the specified Route Instruction action point. Official Mileage reverts to zero at each Restart point and at other points specified by a '/0.00' designation in the Route Instructions. OMs at intersections are measured at the near edge of the intersection (per RRRs, 23.E.4).

The rally begins with a Tire Warmup and then an Odometer Calibration Run (during which there are no timed Checkpoints). The Odometer Calibration Run is designed to allow you to compare your odometer to the Rallymaster's odometer, if you wish.

There are no set CASTs (assigned average speeds) on this rally. Timing was at least 1 mph less than the speed limits with pauses included at all STOPs and TRAFFIC LIGHTs, as well as where otherwise needed. The goal was to have speeds that were 'just right' -- brisk, but not too brisk. (Note: California has a 'Basic Speed Law': if no speed limit is posted, the maximum speed allowed is 55 mph on the highway and 25 mph in business or residential zones.)

7.   Route Following Rules

While you're out there enjoying yourselves traveling the rally route, please apply the rules below in the order listed:

I.   Obey an emergency rally sign. These signs, if needed, will be posted in a prominent location visible from the instructed route. They will have the notation 'TR' (Thunder Road) and important information. Emergency signs would be used to compensate for a missing sign, or an unexpected road closure, etc.

II.   Execute a route instruction, even if it takes you in the same direction as Rule iii (below).

III.   Follow the principal road. The principal road is the obvious continuation through an intersection of the road upon which you are traveling. At some intersections this principal road may be determined by pavement surface continuity, a curve warning sign, the center line(s) on the pavement, the placement of a stop sign or a yield sign, the continuation of multiple lanes in your direction of travel (such as when you are upon a limited access highway), or straight as possible, etc. If the principal road is not obvious, a route instruction will be provided.

8.   Controls and Scoring

All Controls (including all Timed Checkpoints, Restarts and Course Controls) on this event will be GPS controls. All GPS controls on this rally are instructed and will be identified by prominent signs or landmarks listed in the Route Instructions and referenced with an Official Mileage.

This rally will utilize the Richta GPS Checkpoint app system for timing and scoring. Contestants must download the Richta Competitor app and keep this app running on their smartphone or other device at all times during the rally. Contestants should have an active data service (cellular or wifi) and keep the device running the Richta app connected to that data service at all times during the rally so that the scoring team can monitor the progress of the event. Contestants may not run the rally with the device running Richta Competitor in Airplane Mode, or otherwise disable their data connection during the event (see page 7).

The Richta Competitor app will monitor your car's location using GPS. At the exact point at which your device begins moving AWAY from each Checkpoint, the app will record your time of arrival, display your score to the tenth of a second, and tell you if you were early or late.

If you are delayed along the rally route for any reason, you may submit a time allowance without explanation and without any penalty. Hence, if you are delayed due to any reason, do not speed to try to make up the lost time. Submit a time allowance by pressing the TA+ button on the Richta app. The first button press creates a 15 second time allowance, the second press a 30 second total time allowance, the third press a 45 second time allowance. In order to keep you off of anyone else's minute, the top of the minute is skipped, so the fourth press gives you a

1:15 TA, the fifth a 1:30, etc., up to a maximum of 29 minutes 45 seconds. Pressing the TA-button will remove time in the same increments. If it seems you and another car have taken TAs that put you at the same exact time, then adjust your TA accordingly. You should always be at least 15 seconds apart.

Any time allowance you entered will persist until the next Restart, at which point it will reset to zero. It is up to the contestants to pay attention to the time allowance and be sure that it shows what you want. If you are delayed, you must enter the time allowance PRIOR TO your arrival at the next Checkpoint. Once you arrive at a Checkpoint, it is too late to submit a time allowance for the leg that just ended there.

9.   Rally Clock Time and the Richta Competitor App

The Richta Competitor app displays a Rally Clock. If you are running this app on an Android device, do not be concerned about any discrepancy between the Rally Clock and official time (WWV). The Richta Competitor app on Android phones uses the time contained in each GPS location message to compute your arrival time at Checkpoints. The Rally Clock is very close to that GPS time, but any discrepancy will not affect your recorded arrival times.

The Richta Competitor app running on an iOS (Apple) device *DOES* use the Rally Clock time (the time shown by the app on your device) to compute your arrival time at checkpoints. Therefore, if you are using an Apple device, you should compare the Richta Rally Clock time to WWV. You can reach WWV via short wave radio at 5 MHZ, 10 MHZ, and 15 MHZ, or by calling 303-499-7111 (use a phone other than the one running Richta). If you are not satisfied with any discrepancy between these two, you can adjust the Rally Clock. Touch 'Settings' in the lower left corner. You will see four gray buttons that allow you to create a custom offset that will adjust the Rally Clock. The Apple iOS operating system does not allow the Richta app to read the timestamp in the GPS location message (like the Android operating system does). The only time available for Richta on Apple devices is the device clock itself.

10A.   National Classes

All National Contestants - please register in one of these four Classes:
Class E (Equipped): There are no restrictions on calculating equipment in this Class. Typical calculating devices in this Class include: Alfa, Chronar, Timewise, and Zeron rally computers.
Class L (Limited): All distance information is derived from any of the following: the vehicle's electronic system, the vehicle's speedometer cable, or pulses generated by the movement of the vehicle (e.g., magnets mounted to the drivetrain, or GPS devices). Calculating devices are limited to those that **require manual entry** of the distance information (e.g., Curta calculators, tables, laptop computers, electronic apps, programmable and non-programmable electronic calculators). Readouts that continuously show the difference from either the perfect time or the perfect distance are prohibited in this class.
Class G (GPS): All distance information must be derived from a GPS source. Calculating devices may be any electronic device (e.g., Simple Rally Computer apps) and a GPS-Pulser or other GPS source providing distance input to a Rally computer.
Class S (Stock): Any distance information used for timing calculations must be visually acquired from the vehicle's stock, non-adjustable odometer in the stock location. Any calculating device may be used as long as the distance information from the vehicle's stock odometer is **manually entered** into the device. GPS odometers may be used in this Class only if their information is not used for any timing calculations or for any determination of earliness or lateness.

10B.   Regional Classes

All Regional Contestants - please register in one of these four Classes:
Class R1: Combines Class E (Equipped) and Glass G (GPS) as described in 10A, above.
Class R2: Same rules as Class L as described in 10A, above.
Class R3: Same rules as Class S as described in 10A, above.
Class R4: Novice Class. No person in the vehicle may have competed in more than three Navigational (Time-Speed-Distance) rallies, or won one (or more) Navigational (Time-Speed-Distance) rally trophy in any class. The Class S equipment limitations, as described in 10A, above, also apply to Class R4.

11.   PRECEDENCE

This event is an SCCA National/Regional Tour Rally conducted in accordance with the SCCA 2024 RRR's (Road Rally Rules). Anything not covered in these Event General Instructions (above) is covered in the RRR's, subject to the following exceptions --

12.   EXCEPTIONS TO RRR's (apply to both National and Regional)

Article 23, B.1.
Delete 'both paved and unpaved' and replace with 'only paved.'
(For this rally, only paved roads are to be considered eligible rally roads.)
Article 23, B.1.
At the end of 23, B.1., add 'When instructed to IGNORE a sign reading Road Closed or No Outlet, etc., do so. Each specific road so instructed will be considered an eligible rally road.'
Article 23. C.1.
Add a second sentence, 'All quoted signs will be on your right or overhead, unless instructed SOL, which means Sign On Left.'
Article 23. C. 3.
Delete 'may or may not' and replace with 'may only.'
(For this rally, referenced signs may only apply to the road you are on, and to your direction of travel.)
Article 27 Glossary.
Between 'Crossroad' and 'DIYC', insert 'CZT – Car Zero Time. Add your car number in minutes to the CZT to get your Target time for that Restart, Checkpoint or Course Control.'
Article 27 Glossary.
Between 'DIYC' and 'Free Zone', insert 'FPR – Follow the Principal Road.'
Article 27 Glossary.
Replace 'Opportunity' with 'OPP'. (A place at which the specified action could be executed.)
Article 27 Glossary.
Between 'Sideroad'and 'Stop', insert 'SOL – Sign On Left.'
Article 27 Glossary.
Between 'Straight' and 'T', insert 'STREET SIGN – a small rectangular sign at the joining of two or more roads (eligible or not) identifying the name of at least one of those roads.'
Article 27 Glossary.
Between 'TA' and 'Traffic Light', insert 'Target Time – your intended time to pass the referenced Restart, Checkpoint or Course Control. Add your car number in minutes to the CZT to get your Target Time for that Restart, Checkpoint, or Course Control.'

v10

Instructions for the Richta Rally app.

(If you have experience with the app, you probably know all this already. You may have your own way of doing it even better. This information is for reference and to help new entrants.)

1. Load the Richta Competitor app on your smart phone or other device.
2. Make sure your device is not in Airplane Mode.
3. On your smart phone or other device, close all apps other than Richta.
4. If you are using an Android device, go to phone setting under locations and set for high accuracy and remove permissions for all apps other than Richta.
5. Open the Competitor Richta Rally app. Accept the privacy policy
6. The first page is 'Select Event.' Find '24 Thunder Road' in the list and tap it.
7. The second page requires the rally password. Enter the password given in your Route Instructions and tap the Continue or Save button.
8. On the next screen, enter the car number you are assigned in the first box.
9. Enter your own password in the second box. Use a simple one you won't forget. (This prevents other people from logging in with your car number.)
10. Tap the Continue or Save button.
11. The next screen is to enter needed information, including your Class.
    Please enter only one of the following Class designations: for Nationals – E, L, S, or G. For Regionals – R1, R2, R3 or R4 (see 10A and 10B, above for definitions).
12. **Please** enter your active, primary email address in the email box.
13. **Please** enter your partner's and at least your first names in the 'Team Name' box. (Example - 'Jeanne/Larry').
14. In the 'phone' box please enter the number of a cell phone in your car that is <u>not</u> running the Richta app, so we can contact you in case of an emergency.
15. Tap the Continue or Save button.
16. You will then see the rally screen.
17. Check the GPS Accuracy. If it displays a number like 8 meters or less, then you are ready to run the rally. If it does not, come and talk with us.
18. Your device will NOT need to be in cell phone service range during the entire rally in order for this app to work. The app only needs location information from the GPS signals during the rally.
19. You MUST keep an eye on your device to make sure that the Richta Competitor app is still running and is on your device's screen. If your device reverts to its home screen, then the Richta app may not sense your arrival at a checkpoint.
20. The Competitor app will normally have the display on at all times. This uses a lot of power. To avoid having your device shut off during the rally, please keep it charging at all times.