



TSD Road Rally Rallymaster Guide

February 2022

NOTICE: Events in 2022 will continue to comply with the Cascade Geargrinders [Coronavirus Message](#). Online registration is required. There will be no on-site registration or drivers meeting - no on-site organizer presence at the start. Although a mid-rally break is encouraged, no interaction between contestants or organizers will be required. The event may end at a restaurant or park, but there will be no required end-of-rally gathering. Event results will be emailed to contestants soon after all teams have completed the rally.

The purpose of this guide is to ensure all Cascade Geargrinder road rallies:

- Are designed and conducted to be safe for all participants.
- Are free from errors and ambiguities that may confuse or misdirect.
- Safeguard novices while challenging experienced ralliers.
- Are entertaining and gratifying for all participants so they want to come back for the next event.

The Rallymaster Liaison will guide and oversee development of Cascade Geargrinder road rallies by working with rallymasters throughout event development. The Geargrinders Chair delegates to the Rallymaster Liaison authority to make road rally event-related decisions. (If there is no designated Rallymaster Liaison, the Geargrinders Chair assumes these duties.)

Goals

As the Rallymaster, your goal is to present an event in which contestants can compete safely and fairly.

- Ensure that every aspect of the event strictly adheres to the Road Rally Rules governing the event.
- Set achievable average speeds at or below the posted speed limit, appropriate for conditions.
- Every car should be able to find the finish.
- Set reasonable penalties for all traps in the rally. (Target: 15 seconds.) No max traps.

Schedule

Weeks before event:

6	review course concept, identify area and ending location (for promotion)
4	route instructions drafted and control locations selected, review of course
3	course measured and calculated, route instructions completed, final drive through
2	final pre-event checkout (guinea pig)
1	correct any route instruction errors identified at pre-check. Do a final drive-through, checking every sign, every reference, confirming calcs.

Event tasks

The Geargrinders Chair has responsibility for the Cascade Geargrinders road rallies and takes care of most tasks related to the events. Your responsibilities, as the Rallymaster, are to:

- Name your event. Provide general information for advance publicity. (In what area does the event run? Is there an interesting stop during the event? Where does the event end?)
- Develop the route. Schedule reviews with the Rallymaster Liaison.
- Make break and ending location arrangements, if appropriate.
- Measure your course and calculate event length. (Target: >3 and <4 hours.)
- Write route instructions and calculate leg times (Excel).
- Provide content for the Rallymaster Notes document to accompany distribution of the NRIs.
- Enter the GPS checkpoint locations and leg times in the Richta Checkpoints Rallymaster app (in coordination with the Rallymaster Liaison).
- Participate in the event checkout (in coordination with the Rallymaster Liaison).
- Put up and take down course markers if used.
- Participate and answer questions at the Zoom Q&A meeting Friday evening before the rally.
- Participate and answer questions at the Zoom debrief meeting Saturday evening after the rally.
- Write a post-event article for the newsletter (optional).

Help is available for any of these tasks. Just ask.

Safety

Safety is the highest priority. Safety is your primary concern when developing the event. Emphasize the importance of safety to all participants.

- Use signs that are clearly visible at rally speed. Do not use a hard-to-see sign for course following or as the basis of a trap.
- Avoid residential areas.
- Avoid using or crossing busy highways.
- Use only paved, relatively smooth roads. Do not use unpaved roads. If rough road surface is unavoidable, set the CAST slow enough to permit safe passage.
- Set the CAST with potential rally conditions in mind – icy bridges, roads covered with wet leaves, children and animals in the road.

- Include adequate pauses for signals, busy stops, and other likely delays.
- Use transits where traffic or road conditions make it difficult or dangerous for contestants to safely stay on time.
- Remind participants they should use Time Allowances rather than speeding to make up time.

Roads

Select rally roads that are:

- Rural.
- Lightly traveled during the event time frame.
- Free of delays, signals, parades, construction, ferries. (Check county website.)
- Paved and reasonably well maintained.
- Near you (you will visit them many times).
- Fun, unique, special, scenic.
- Lead to the ending location.

Event development

- Plan for appropriate event length (75 to 100 miles, 3 to 4 hours) including a break.
- Decide which geographic areas to use and an ending location. Confirm usability and availability of ending location. Make the reservation, if needed, as soon as possible.
- Plan a general route linking the areas.
- Explore roads in the vicinity of the planned route until you find a course you like.
- Drive the course and write rudimentary instructions that include:
 - Mileage (from your car's odo).
 - for every instruction (NRIs and Notes).
 - for course breaks and re-joins.
 - for passage control and CZT (time-of-day restart) locations.
 - Direction and reference (note direction and hard reference).
 - Speed limit.
 - Estimated CAST (two methods: guess or calculate).
- Drive the course again and start polishing the instructions. Check for:
 - Occurrence and spelling of references.
 - Reevaluate CAST.
 - See rally pre-check items.
- Drive the course again during conditions similar to rally time – same day of week, same time window. Recheck everything, especially corrections.
- Measure the course, from start to finish, all in one run, in one day. Calculate official leg times.
- Drive the course again, running with a rally computer, and verify measurements and calculations. Recheck everything, especially corrections. (Rallymaster Liaison can provide rally computer check.)

Route instructions

- Instructions should be neat and easy to read. (Note: Use Geargrinders template.)
- Use a font, type size and line spacing that is readable in a moving car. (Use template.)
- When quoting signs, graphics should be unambiguous when compared to the sign.
- Use upper/lower case except for landmarks (4.4), signs (5.2), and glossary terms (6).
- Include columns for CZT, Official Mileage, Route Instruction Number, and the route instruction.
- Include ending location address and rallymaster phone number.
- Don't renumber route instructions after the rally pre-check. (Really, just don't.)
- Don't change anything after the rally pre-check, except the changes agreed upon at the pre-check. (Seriously, bad time to get creative.) (Rallymaster Liaison will control NRIs after pre-check.)

See example route instructions on page 6.

Rally pre-check (aka Guinneapig)

The rally pre-check will be held no later than one week before the event and will ideally occur two weeks before the event date. Rally documents (Rallymaster Notes and NRIs) should be as intended for the real event.

The rally pre-check will include a complete run through the course, with live checkpoint timing. Make sure cell phone numbers are exchanged in case you need to communicate during the pre-check.

The rally pre-check crews should look for the following:

- Are the instructions written in accordance with the Road Rally Rules for this event?
- Is the event format and style consistent with recent events.
- Is the course of the advertised mileage and duration?
- Are the checkpoint and CZT time-of-day restart locations safe and appropriate?
- Are the speeds safe and reasonable?
- Are adequate pauses provided where necessary?
- Are all signs clearly visible and represented correctly?
- Are instructions clear and unambiguous?
- If there are traps, are they in accordance with the Road Rally Rules and well protected?
- Are all planned off course route possibilities protected by something other than an off course marker?
- Are all unplanned but predictable off course routes protected?
- Are leg distance measurements and time calculations accurate? (At least one computer car should run the pre-check.)
- Will the contestants feel satisfied at the end of the event?

Rally Q&A meeting (Friday evening prior to rally)

- Make a plan ahead of time of what you want to cover.
- Safety is the number one topic. Review Time Allowances.
- Emphasize content in the Rallymaster Notes.
- Answer contestants' questions.

Day of event

Plan to use the Richta GPS Checkpoints Rallymaster app to monitor contestants' progress on the Rallymaster Map. Be available to respond to phone calls or text messages from contestants who need help on the rally course. If you notice a contestant team going far off course and not appearing to correct, you may phone or text them to provide route assistance.

Be available to communicate with Geargrinders Liaison / Chair throughout the event.

Participate and answer questions at the Zoom debrief meeting Saturday evening after the rally.

Measurements and calculations

Precise measurements

- Measure the entire on course route all in one day, from beginning to end. Then go back and measure off course from break to rejoin. (If you measure the planned off course route, you'll be able to calc the time difference between on and off course.)
- Record a mileage for every route instruction and checkpoint.
- Use easily identifiable fixed references such as signs for checkpoints.
- Record mileage measurements to nearest thousandth.
- If using a wheel-driven measuring device, attach the sender unit to the driver's side non-driven wheel to reduce wheel spin error.

CZT and Official Mileage

- In the route instructions, clearly display Car Zero Time (CZT) and Official Mileage (OM) in columns to the left of the Numbered Route Instruction number.
- In the route instructions, clearly identify when Official Mileage reverts to zero. Official Mileage usually reverts to zero at each time-of-day restart location (CZT).

CZT	OM	NRI	
10:00	0.00	1.	Begin odometer calibration TRANSIT at "STOP". You have 35 minutes to complete the next five NRIs.
	0.21	2.	RIGHT at STOP.
	0.30	3.	LEFT at SIGNAL.
	0.42	4.	LEFT at SIGNAL.
	2.10	5.	RIGHT at YIELD at SPRINGVILLE.
10:35	3.675/ 0.00	6.	End odometer calibration TRANSIT at "STOP". Then LEFT on KAISER. CAST 35.

Speed Changes

- Speed changes should occur at a specified sign or landmark, or at an official mileage. Speed changes referenced to a sign or landmark are to be executed at the near edge of the referenced sign or landmark.
- Speed changes referenced to an intersection (such as SIGNAL or T) are to be executed at the leading edge of the intersection.

Accurate Calculations

- Accurate TSD calculations are absolutely essential. Use a computer spreadsheet. (Use the Geargrinders Template which includes a calc sheet.)
- Verify spreadsheet calculations with a calculator. Example:
Factor = 60 divided by Speed 60 / 45 mph = 1.3333
Interval time = Distance times Factor 1.488 x 1.3333 = 1.984
- Recheck pauses and speed changes against the final version of the route instructions.
- Run through the event using a rally computer. You should zero every leg.

Common mistakes

- Renumbering and missing a numbered reference.
- Unexecutable instructions. LEFT at T, R ONTO "MAIN", etc.
- Missing a required OM. S at outcone, LEFT at T, etc.
- Forgetting to cancel Notes.
- Not including TRANSIT time as part of the leg time.
- Fixing errors with more errors.
- Pauses and/or speed changes in the NRIs are missing in the calculations.
- Missing speed changes, Notes, ONTOs, TOWARDS, etc., that carry through into the next leg.
- Misuse of capitalization. Stop is not the same as STOP or "STOP".
- Posting an off course marker on a route that is on course later in the event.

Handshake agreements

Over the years, Geargrinders has accumulated a short list of unrecommended and highly discouraged, to the point of being disallowed, rally conditions.

- Do not introduce a vastly different format to a Cascade Geargrinders road rally. Stick to the lightly trapped TSD precedence established over the last couple of years, as reflected in the current Road Rally Rules. Avoid Supplemental Rules (except for Mountains to the Sea).
- Do not discover an entirely new interpretation of a rule. Imaginative creativity in interpretation of the rules does not usually work out too well.
- Do not take advantage of poorly defined areas in the rules. In the interest of simplicity and brevity, we know there are grey areas in the rules that are not quite black and white. Just don't go there.
- Do not exploit hard to read signs or extremely confusing intersections, where opinions may vary.

When things go wrong...

TSD road rally is a game of precision. Don't discount a contestant's claim that your measurements and calculations are incorrect; listen to their explanation. Be prepared to review your original measurements and calcs for accuracy. (Your event will be checked and rechecked and checked again before pre-check, so it is unlikely but possible this may happen.)

If it is determined that measurements or calculations are in error, if possible, correct the official leg times and rescore the event prior to issuing awards. If it is not possible to determine correct official time, consider discarding the leg.

If called upon to recommend a scoring decision, be fair and be generous to the contestants. Send them home happy and wanting to run your next event.

Geargrinders Chair has final authority over all scoring decisions.

Resources

Road Rally Rules and other resources, including this Rallymaster Guide, can be found on the Cascade Geargrinders website on the Resources page. <http://www.cascadegeargrinders.org/>

2/10/2022 vas