

# NASA Rally Sport Novice Competitor Orientation

## Overview

1. Around the room: staff *and* student introduction
2. What this class will teach you:
  - Safety procedures
  - Event procedures
  - Time card and control procedures
3. Reducing confusion on your first event. Be comfortable with the details of the rally.
4. Surviving your first event with body and sense of humor intact.
5. Getting penalties is *not* the biggest thing you have to worry about. Concentrate instead on:
  - Don't get lost
  - Don't drive crazily, watch/count your mistakes or sloppiness as the day wears on.
  - Finish the rally

## Safety

### Components of the Safety Net

1. Your fellow competitors
2. Radios at all starts, finishes, radio blockages (RC in stage notes)
3. Radio net tracks cars at start and finish controls, and with help of sweep radio
4. Medical teams at all starts, spectator areas

### When you Crash or Just Stop

1. Are you OK?
2. Disorientation after a crash
  - a. Plan a safe exit. Consider where your body is going to land when you undo your safety belts
  - b. Your car is not safe to walk on when it's not on all four wheels
  - c. Figure out which direction you were traveling
3. Someone is 60 seconds or less behind you so hurry!
4. Triangle placement: behind car, then 150 feet, then 300 feet
5. Use of the OK sign
6. Use of the red cross
7. If you're OK, where do you wait – in or out of the car?
8. If you have a choice, get the car off the road
9. If you want a tow, *be ready*
10. Are you retiring?
  - a. You need to fill out the form and get it to an official
  - b. You still need to turn in your time card

### When Someone Else Crashes

1. Check for the OK sign
2. Always report vehicles that are off with this info
  - a. Mileage
  - b. Color
  - c. Car number
  - d. Condition of crew
3. Red cross displayed
  - a. First vehicle
    - i. Stop and stay
    - ii. Display your red cross
    - iii. Render first aid
  - b. Second vehicle
    - i. Take information to next radio location
  - c. Third and succeeding vehicles
    - i. Stop and stay
    - ii. Direct traffic – *make* enough room for a big ambulance to get through to the site
    - iii. Remember medical teams have to get to the incident and may be coming in the reverse-stage direction to do so

## Personal Safety

1. Helmets – how tight
2. Suits – various grades / types
3. Belts – how tight
4. Belts – Expiration rules
5. Window Nets
6. Hydration and eating
7. Head and Neck Restraints
8. RallyMoto™: back, ankle, helmet

## Firefighting

1. How to take care of fire extinguishers? Shake to release caked powder
2. Where are your extinguishers?
3. What are the rules on fire extinguisher placement?
4. You also carry your fire extinguishers for the vehicle in front of you.
5. What does 10:BC mean? 10 square feet of B or C. Implications?
  - a. Type A: Wood
  - b. Type B: Flammable liquids
  - c. Type C: Electrical
  - d. Type D: Flammable metals
6. Remember annual inspections, put it on your car preparation inventory
7. Fire schools put on by local fire departments or local race clubs

## Service Area Safety

1. Always have a second person with a fire extinguisher when refueling
2. Always two jack stands when more than one wheel is in the air. “Jack only” is fine for changing *one* tire. Five minute penalty for not doing so.

## The Timing and Schedule of the Rally

### How to Read a Stage Schedule

The stage schedule - the handiest page you'll be given all day.

1. Abbreviations you might see
2. “Secret controls” – depending on the format, not all controls you get time card sheets for are listed
3. How to figure out what the times mean for your vehicle
4. What to do when the rally is late
5. Service: when, how long, and how far away

### Time Cards

1. When you get them
2. When you turn them in
3. What you can write on them
4. Check what the volunteers write on there. Double-check your math.
5. How to figure out when to check in to the next stage
6. The “oh, we got stuck on that stage a long time” case of figuring out check in time

### Control procedures

1. ATC – Arrival Time Control
  - a. When and how to enter
  - b. What to have ready
  - c. Too many vehicles blocking your way in
2. What time is it? Ask the volunteers
3. FTC – Finish Time Control
  - a. How fast to go
  - b. When to leave the control
  - c. Bikes - Stay in line!
4. MTC – Main Time Control
5. Parc Fermé / Parc Exposé
6. Working on your vehicle inside a control: Don't do it!

## Moving Around The Rally

### Closing the road

1. Course opening / Zero / Combo
2. Course closes with the sweep car
3. What happens if sweep passes you

### Transits

1. How to figure out how long you have to get where you're going
2. How rally masters determine allowed transit time: you shouldn't have to speed at all

### Road Book/Stage Notes

1. The purpose: navigation
2. How tulips work
3. Read the glossary. Different regions and rally masters write these differently.
4. Cautions
  - Single Caution – Be Careful
  - Double Caution – Slow down or brake
  - Triple Caution – Slow down or wreck or die
5. Radio locations and other symbols
6. Hints: highlighting, calling turns, count your pages...make it your book
7. Make sure every page is included and is sequential.
8. Beware of very short increments to the first instruction on the following page

### Stage Notes:

1. What's in it and what's not ("stage notes" versus "pace notes")
2. Teamwork is essential: immediate communication of getting lost or other trouble
3. How to recover from getting lost in the notes
4. Consider dropping the + and -, and never repeat an instruction without saying it's a repeat!
5. Driver vocabulary to use
  - Hold / OK – always as a pair
  - Next
  - Repeat

### On-Stage Signs

1. Radio areas
2. Arrival and start control signs
3. Finish signs
4. Caution signs/Turn Arrows - event specific

### Navigation

1. Basic principle of how an odometer computer works: pulses per mile
2. What is the odometer "odo" leg? When do you run it?
3. How to run an odo leg and calibrate your odo: write down your factor!
4. Using a transit as an odo leg
5. How to deal with an odo that is slightly off
6. A measured "rally mile" will absolutely *not* be a statute mile. You're calibrating against the rally master's car that measured the course. Many things can alter measurements even under ideal conditions: temperature, tire pressure. Slippage on gravel roads, which wheel drives the odo, rain, drive train layout also affect it.

### Other Topics

#### Navigator Specific Tasks

1. Understanding the time card
2. At Service
  - Figure out when you're supposed to leave
  - Keep telling your crew when you're leaving*, as they will be focusing on other things
3. After the rally
  - Check your provisional scores
  - Check your competitor's provisional scores
4. Official time: what it is and where to find it

## Technical Inspection

1. Fill in your log book before you arrive
2. Be finished with vehicle preparation
3. Make sure your vehicle interior, exterior, and engine bay are clean
4. Research any particular or unusual requirements of particular events

## Crew

1. Crew can ONLY work in service areas.
2. If they break rules, you get the penalties (for example, getting caught speeding)
2. Explain to them how to read a tulip so they can get to service
3. The rally guide is all they need for service information
4. Instruct them to pal around with other teams competing similar vehicles
5. If they're new, ask us to find someone with whom they can caravan to service

## Speed Factors

1. Created by getting your speed relative to the fastest vehicle.
2. Used to keep people well spaced on course, hopefully preventing passing.
3. Event stewards can still override these numbers for start order placement.
4. Always check your start order and inquire if it seems out of whack.

## Who's Who and What is the Chain of Command?

1. Chairman
  - a. Organizes everything *before* the event, has no sporting authority *during* the event
  - b. In charge of schedules, budgets, routes, recruiting, planning, etcetera
2. Clerk of the Course
  - a. Runs the rally on the day of the event
  - b. Responsible for starting and stopping stages
  - c. Is the final decision maker for all sporting decisions
3. Stewards
  - a. They are here representing the sanctioning body, not the organizers or the competitors
  - b. Their ultimate responsibility is to the good of the sport, not the organizers or competitors
  - c. To remain impartial, they generally shouldn't answer any competitor questions
  - d. They can make recommendations to the Clerk of the Course on actions, but cannot enforce them (short of pulling the sanction)
  - e. They are the panel of judges for all claims and protests
4. Competitor Relations Officer (CRO)
  - a. The CRO is the bridge between the competitors and the officials
  - b. The CRO represents the competitors' concerns and is their advocate during the Stewards' meeting

## Miscellaneous

1. How to pass and be passed on stage
2. Insurance requirements – your rally vehicle *and* your service vehicles
3. Maximum lateness, which cannot be recovered by being early
4. Inquiries and protests - where to find the form, how to make your own, and where to hand it in
5. How shakedown works
6. Passing or being passed inside a control
7. Using ham radios for rally car to service vehicle communications without a ham license: not only is this a violation of federal regulations, it also creates a scenario in which the hams volunteers could get upset enough that they don't volunteer to help the rally next year. Your actions could cost the rally 40% of its volunteers.
8. Your pre-rally inventories.

## Spectator Safety

1. You may become a spectator if you crash, so read as much on this issue as you can
2. New drivers go off on the *inside* of corners just as often as the outside
3. A 10" diameter tree has historically been shown to **not** be big enough to protect you
4. If you attend a official spectator area, remember that the layout there was created by organizers with years of experience and study of spectator safety. Please stay inside the tape and set a good example for the other spectators.

## Towing

For many competitors going to their first rally is the first time they will tow another vehicle any considerable distance. Read up on this subject to be as safe as possible.

Prepare for towing to the event

- Check rig tire pressures
- Check trailer tire pressures
- Check spare tires pressure, on rig *and* trailer
- Check trailer lights
- Maintain bearings
- Check insurance *and* declaration for towing vehicle

Flat towing

- Duct tape both ends of tow strap to the hook
- Rear car keeps rope taut by braking. Failure to do so will eventually mean running over the strap which will abrade it into two pieces
- If you car won't run, you won't have power brakes. Be ready to push hard.

Trailer considerations

- Tongue weight
- Double axle
- Brakes
- How various trailer brake systems work

I very much recommend that after the rally, perhaps on the tow back home, you go over these topics and think about them again. Take a look at some of the areas that make sense at that point in time, and also at the areas where maybe you don't get what it's all about. Find your local mentors and go over this outline, and learn something new!