

This document was compiled from notes taken at the "Stage Note Seminar" which was held during October 2003 in Cary, NC. All information is based on the opinion of the participants and is intended only as information to help newcomers get started using stage notes.

* This is not the only way to do things, and is not necessarily the right way to do things. Use this information to start a conversation between driver and co-driver and begin developing your own system.

Comments are based primarily on the opinions of: Anders Green (SCCA ClubRally driver and co-driver), Matthew Johnson (SCCA ProRally driver), and Eric Adams (SCCA ProRally co-driver).

"Intro to Reading Stage Notes"

What should be done to the stage notes before the rally starts?

- Review and markup your notes ahead of time! There's a lot of action in the car on stage and it will be difficult to read ahead and interpret the notes. Mark the important and dangerous things ahead of time so that they stand out and demand extra attention.
- First, locate and mark the cautions: !, !!, !!! . These represent danger!
- Then locate and mark abrupt progressions that might sneak up on you:

ie. L5 400 R5 300 L6 500/cr R2>R1

(A series of fast corners leading into a hairpin that is hidden behind a crest.)

- Pay particular attention to any corners that are less than a 3.
- If you think that two notes should be read together because they're closely related, draw in your own lines to continue one note onto the next.
- Make your markups in a different color from the printing in the stage book. For instance, use a blue ink pen to markup the black printed notes. This makes it easier to see your markups. (Make sure that the color that you use is compatible with the map light for night rallies. Red ink will disappear under a red maplight!)
- Exact mileages given below the stage notes usually correspond to a tulip in the route book. Sometimes there is additional information from the tulip that can be transferred to the stage notes.

How do I read/pronounce notes?

- Both the driver and co-driver need to develop a feel for how the other person is doing. Co-drivers reading multiple notes in rapid succession, or hesitant or tentative readings may be the sign of potential problems. Drivers not responding, or not reacting to called notes may be a sign of information overload or loss of focus. Work together to keep things working smoothly.
- Drivers may like to hear something from the co-driver, such as repeating notes during a long straight, to let the driver know that the co-driver is still conscious and hooked into the notes.
- Co-drivers may like to hear a response from the driver when something important is called (such as a hairpin at the end of a long straight) to make sure that the driver is still tuned in and focused.
- Keeping communicating to find out how much continuous information that the driver wants to hear.

- Drivers generally may have much more difficulty in focusing and mental retention of notes during mechanical problems (flat tire, power loss, handling problems). Repeat or rephrase the notes as needed to get the information across.
- A glossary of terms and abbreviations will be in the beginning of each stage book. Read the glossary carefully, and look for new calls/comments that may have been added for this specific rally.
- Make sure that you get all of the pages to your stage note book!

What do the corner grades mean?

- The corners are ranked from 1 – 6. With a “1” corner being a very tight turn like a hairpin, and a “6” corner being a slight bend.
- Look at the corner grading chart in the front of the stage book and on the web at: <http://www.p-sport.com/cornergrades.jpg>
- Remember that this only tells you the radius and length of the corner. It does not tell anything about the road surface or the speed at which you can take the corner.

What is the difference between pace notes and stage notes?

- Stage notes describe the physical shape of the road ONLY. They provide no indication of what speeds may be possible.
- Pace notes describe HOW FAST a particular section of stage can be taken.
- Notes taken during RECCE are considered pace notes, and tell a particular team in a particular car what speed and what line to drive through a section of road.

What are those pluses and minuses?

- The minus modifier (-) means slightly less radius.
- The plus modifier (+) means slightly greater radius.
- The succession is: (from least radius to greatest radius)
1, 2-, 2, 2+, 3-, 3, 3+, 4-, 4, 4+, 5-, 5, 5+, 6
- There is also a "Kinks" call that can be used to represent a section where the road is weaving through a rapid series of small corners. “Kinks” may be a tighter radius than a 6 but it's generally understood that you can see all the way to the end of the “kinks” and can most likely straight line them because they are very short corners.

Options for beginners:

- It's OK to omit + and -. (for beginners, + and - may be too much information to process.)
- It's NOT OK to omit < (opens) or especially > (tightens).

How do you sync up where you are on the road to the stage notes when lost?

- Communicate!! When EITHER DRIVER is confused, communicate immediately that you're lost!
- Look at the rally computer to get your distance into the stage. The elapsed mileage into the stage is printed at the beginning of every line of the stage notes, and this will get you near the proper place in the notes.

- The driver should slow down and begin telling the co-driver what corners he is driving. (Begin to read the road TO the co-driver). The co-driver can listen to the corners being read by the driver and match them to the notes.
- When the co-driver thinks that they are hooked back into the notes, he should begin to call the corners and get agreement from the driver that the road is matching the notes. Continue for at least 4 or 5 successive corners before returning to full attack.
- Look for obvious landmarks that are easy to find in the notes, such as tighter corners, bridges, intersections, crests, etc.

How do you use the rally computer in combination with notes?

- You probably won't (as a beginner). Focus on keeping the note reading constantly in sync with the road, and don't worry about the computer.
- HOWEVER, you may need to look at the rally computer if you get lost in the notes, so you must still reset the distance whenever required to remain matched up with the route.
- You will still use the rally computer to navigate during transits.
- When using stage notes, the transit routes will likely be in a separate book, usually the traditional route book.
- Mark the transits in the other book so that they're easy to reference quickly when you get off stage.

"Intro to Listening to Stage Notes"

How to visualize corners

- Matthew Johnson:" For me, I imagine about the speed I'll want to enter it based on the characteristic of this road and the speed I'm doing now and the speed I'll likely be doing when I get there. I don't spend much time imagining anything more than that. It all happens so fast you don't have time to think about how to set the car up PLUS that's only figured out at the last second based on what the corner looks like, the available traction, the tree line, etc etc... Just get an idea of what '3' means for speed and figure the line and car>>corner setup when you get there."

How to control/adjust the pacing of the notes?

- The notes are useless if the driver is not able to process them, or the co-driver is reading them at the wrong time. Make sure that you are both hooked in and understanding what is happening at all times.
- The driver can use terms like:
 - REPEAT - have co-driver repeat the previous note
 - COPY – or "affirmative". This can be more clear than the more vague "ok".
 - NEXT - read the next stage note Generally, the faster the section of road, the farther ahead that the driver will want to know the notes.
 - HOLD - stop reading stage notes. Used when the driver gets overloaded or confused.

How to do corners with the same number vary?

- The stage notes do not indicate how fast you can drive a given corner grade because they may not tell you road information such as:

- crown
- obstacles (rocks, fallen trees, pieces of MJ's car, etc)
- surface material (gravel, clay, asphalt, snow, ice)
- general condition of road (rough, smooth, rutted)
- size of ditches or banks along sides
- visual sight lines down the road
- Any given stage may use multiple roads, and each road may be different (ie: clay vs. gravel). Be alert at intersections and when turning onto different roads, and evaluate the characteristics of that new road.

How much trust do you give stage notes?

- The Jemba stage notes are mostly machine generated, and have proven to be consistent throughout each event, and also from event to event.
- Regardless of how consistent the stage notes are, they still do not provide any speed information. The driver must still “read the road” to determine how to drive, but the driver has more information with which to interpret what he is seeing.
- Both drivers will need to develop trust in each other and the communication system that they are using.

Is practicing with video games worthwhile?

- Computer games are not very practical for learning to drive.
- Computer games can be useful for practicing driver communication. For instance: Make your own stage notes of a computer game stage, then turn off the computer co-driver, and have your co-driver read the stage notes while you drive the computer course.
- A driver can also use games to practice focusing on and listening to co-driver instructions.

Other general comments:

- Don't write anything (including stage times) in the stage notes unless the rules state that you can. Suggestion: put post-it's at the end of each stage, and write your time on that post-it, then remove it later.
- Make sure that you turn ONE page, and ONE page only as you progress through the notes. It may be helpful to do something like fold over the top corner of every other page to help get only one page each time.
- Record the time that you enter each stage and your finish time. Check that your recorded finish time agrees with the time that the finish control worker has put on the timecard BEFORE leaving the finish control.
- Your “In” time occurs at the moment that you hand your card to the control worker. If you aren't going to be able to drive up to the control worker in the proper minute then the co-driver must get out and walk the card to the worker.
- Information such as transit times that is given on the timecard takes precedent over anything that may be included in the route book.
- Stay alert on transits. It is easy to get talking and miss a turn.