

CORNER-TO-CREST

STAGE NOTES

Welcome to Corner-to-Crest stage notes.

These stage notes have been created using a mechanical system that bases the corner-angle numbering data on the steering angle input by the driver. -in the same way that drivers mark their steering wheels for recce in a national gravel rally. This system gives consistent results, regardless of the reconnaissance vehicle speed changes (due to traffic, intersections etc). Whereas, if we look at inertia-based systems, these can give variations where the recce vehicle had to stop at an intersection, and drive away slowly –due to other traffic. A system based on steering angle, and co-driver / reconnaissance team input, will give consistency in these situations.

In order to fulfil our obligations under the Health and Safety at Work Act 2015, and the General Risk and Workplace Management Regulation 2016, in the development of these stage notes, **all** stages have been fully driven multiple times. The first version of the notes is produced by one person, these are checked by another to maintain consistency. Once all parties believe the notes are ready for the final test, the stage is driven again, with the notes being called during that drive through (by an experienced Co-Driver)..... and, inadvertently, further changes are made to “polish” the notes again. Final amendments are made, and the book you hold in your hand at the event was then produced.

As you can see from reading the above, we have taken steps so far as reasonably practicable to ensure that these stage notes are accurate, clear, and legible.

The factors that the developers of these stage notes cannot control are simple:

1. Weather;
2. The Driver / Co-Driver skill level (or “Red Mist”); and
3. Locals / Spectators or Residents

These three things we have no way of controlling.

The notes **are** consistent, but that does not mean that two different vehicles will be able to drive the same speed through the same gradient (numbered) corner. Please drive *your* vehicle in a manner that stays within *your* driving ability (and the Laws of Physics). Pay particular attention to the cautions within the notes. These are there for your safety.

You will see that we have used colours to assist in the early warning of stage hazards, and also to offer more information. By using colours, it allows for words to be used, and run together simply by a change in font colour. It is far easier for an experienced team to delete (white-out) extra information, than it is to wish it was there in the first place. We have also put a small triangle at the corner of the notes on each page that alternates in colour. - Page 1 of the stage the triangle is yellow, page 2 it's blue, page 3 it's yellow again..... This is to assist the co-driver in turning only one page at a time (although hopefully they fold alternating page corners to assist in this too).

The upcoming note for the next page is found on the bottom-right of the current page.

Remember, rallying is like a marathon. There are a couple of sayings that work well here too: *You don't win the rally in the first stage; and..... To finish first, first you have to finish.*

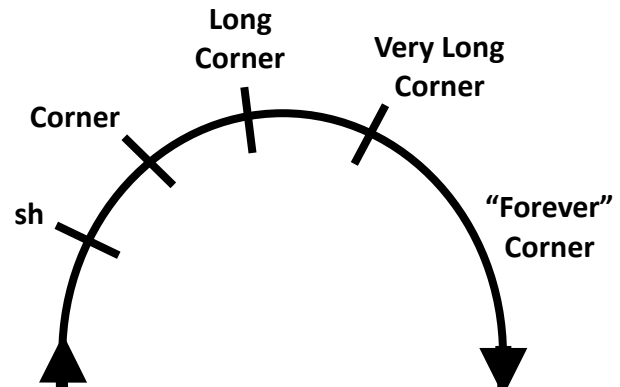
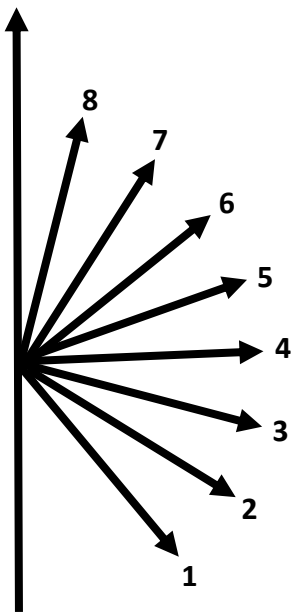
Please drive within your abilities, and that of your vehicle.

All the very best, and we hope you enjoy the rally

Stage Notes Information

Let's start with the numbering..... The numbers are simply based on the steering angle input of the reconnaissance vehicle used to develop these stage notes.

1 being the largest steering angle (and therefore the tightest corner), and **8** being the smallest steering input (anything less will not be noted as a corner, but be put down as a "K" distance (comes later in the glossary, but means kinks for xxx distance).



You will see that main steering angle comes first, then the direction of the turn **L** or **R**.

If there is something between two steering angle numbers (eg; a corner is too tight for a **5**, but not yet a **4**), this will be given either a **5-** or if it is still tighter, but not fully a **4**, then it's a **4+** eg; for a right hand turn **5R-** or **4R+**.

The use of colour in the notes

The way that you can read the above is due to the word colouring. This is how the notes have been developed –with consultation with some drivers in how they get the information that they want, in a timely manner. This is especially good for inexperienced co-drivers, as the information can be read as words, or simpler to understand abbreviations.

The basics are in **black**. Corner angles and distances. -Unless the note is cautioned, or a corner of **4** or below, as then these have been made **red**. This is after discussions with many of the co-drivers that said they spend hours highlighting the lower numbers, to be sure that they don't miss them –so we have done this for you.

Red: Please pay attention. Anything in red the driver must be made aware. Whether it be a very fast approach, or deceptive corner, or where the corner is immediately after a crest, so is blind / not visible (until it is too late). Please treat these seriously. Many will feel that we have gone overboard here, but again, it's easy to remove the information, than to wish it was there in the first place.

Put simply, if it's in red, it's been done for a reason. Assume a higher risk, and drive accordingly.

Glossary of Terms

As with all stage notes, there needs to be some method behind the madness. There are terminologies that are common throughout these notes, and then others that are used less often, but have their own specific meaning. It is always advised that you read through the definitions, and then the examples a few times. Hopefully you have used our videos, and read through a stage or two to get used to these notes, and ensure both driver and co-driver understand the terminology. Remember, if *you* feel that there is too much information, it is far easier to remove (white-out) information you don't feel you require, than it is to wish to have more information that is not there.

Cr = A Crest. A large hump in the road that could “lighten” the car, but also will definitely impede the driver’s vision to the next corner, these will also be used if the road drops off sharply. These are larger than the below **smCr**. The distance noted after the crest is very important. A crest may be linked with **jump** or **jumpmaybe** or **light**. When combined with “long”, then the crest will not be as abrupt.

smCr = A Small Crest. A hump in the road that will either impair the driver’s vision past the crest, or it may have a “lightening” effect on the vehicle. As with any crest, the distance after the crest (if any...) is vitally important information to the driver.

jump = This will be combined with either of the above as a warning to the driver that the car will likely leave the ground. –*remember, a car does not brake or turn when it is off the ground.* This is in **Red**, then you will understand after reading the previous page, that we feel that this will be “emotional”. Needs the driver’s attention.

light = combined with **Cr** or **smCr**, warns the driver of the possibility of loss of steering & braking due to the effect of the crest.

/ = **Over** There are many ways that “over” will be used. Here are three examples

1. This will be put with one of the above to show where in the note you will go “over” the crest or small crest etc. So in the example below you will be turning a **7L** *while* going over the small crest.
2. When a corner is running over a bridge. Below is **6R** over a bridge.
3. When the note is going “over” a distance. So below is a **8R** over 400m

7L+ /smCr120 or **6R/] [** or **8R/400**

Jct = Junction. Will be combined with another note. May be the turning angle of the corner, with the note **@ Jct**, to let you know that the corner is in a junction; or will have another note on whether it is “**past**” or “**through**” the junction.
Note: If only noted to let the co-driver ensure they are in the right spot, then the note will be below in a small text-box –as it doesn’t concern the driver at that time.

[[= One lane bridge. Remember, these don’t have soft sides, so take care on and off.

][= Bridge –standard two lane width.

]=[= Cattle-Stop

sh = Short. The corner is shorter than a full corner (30m or less).

kink = A very short corner (kink in the road): **kinkLinto3R**

“K” distance = If the stretch of road isn’t straight, but can be seen through, A “K” will be used prior to the distance number. The next corner mentioned will be the obvious one you can see ahead

7L+ K180 5R70

long = This will be linked with another note, whether it be a corner, or a crest etc.

very long = Same as above, will be linked with another note.

forever = the corner is longer in length still. Easier than saying “very very long”. (eg <160m)

into = One corner flows “into” the next. This will not be used if the next corner is a **2**. To prevent saying “into 2”. In these cases we use **change 2**

and = The next corner is within a few metres (eg. 20 - 40m away). At speeds these distances are over in a heartbeat. Simply too short to call a distance.

6L and5R200 long5R+ and5L

and will **not** be used when it would be at the start of the next line of notes, as the time for the co-driver to flick their eyes to the next line will take care of the “pause” that “and” is used for. So if no distance is detailed at the end of one line, and the notes start without a distance on the next line, this is the same as **and** (less than 40m, but not **into**).

T = Corner Tightens **long7RT5**

O = Corner Opens **7Rinto5R+O60 7RO/smCr140**

blunt = The steering angle number (**5+**) is **very** late in the corner **blunt5R+180**

link = The corner doesn’t fully straighten, then **tightens** again **5R link4-120**

cont = The corner straightens, then continues to a greater number **3L+ cont5+**

change = changes direction, usually over a crest or small crest **long7Rchange/8L**

again = the same corner angle follows the previous **7R50 7Ragain80**

doubleapex = The corner has two apex’s (two “bites”) **long7Ldoubleapex**

nips = the corner has a small tighten at the end **5ROverylong6+nips40**

dc = Don’t Cut. So don’t cut the corner, there is a hazard on the inside of the corner

dgw = Don’t Go Wide. There is a hazard on the outside of the corner

long5L+dc80 smCrinto5Rdgw

! = Caution; It's in red for a reason. This needs the drivers focus. This will precede a note that has an elevated risk. A blind corner and suchlike. The number of exclamation marks offers an insight into how serious the risk is eg. **!!** (serious) or **!!!** (extremely serious). In the example below, the driver has moved through a **5L**, and accelerated for 300m towards a small crest, that has a blind **3R-** right in a junction immediately after the crest. The vehicle needs to be slowed to make that turn safely, and this will not be visible during the fast approach.

5L 300 **!smCr3R-@Jct**

Underlined Notes:

If a section of notes is underlined, it is important that this is delivered to the driver as a sentence. So the cautioned note below reads: “five left 300. Caution, small crest into five right minus at junction”.

5L 300 **!smCrinto5R-@Jct**

Underlines are most commonly used with the notes carry on into the next line, so look for them at the end of a line, as the start of the next line will also be underlined to show the note carries on.

Other words.....

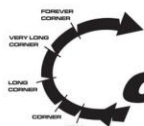
The remaining words used are simple and basic English, so there is no need to explain words like: Start and Finish, or “straight”, “through”, “maybe”, “slight”, “onto”, “off”, “keep”, “stay” etc etc.

Their English meaning is what they mean when used in the notes.

For more *seasoned* teams, this is where you will work out what you want to delete as unrequired information –due to the speed of the car through the stage, some decide to remove almost everything, leaving only the corner notes and cautions. It's your book, you can do with it what you like. Our part was solely on consistency of steering angles, and information to supply to competitors. As mentioned previously, it's easier to “white-out” out additional information, than wish it had been provided it to start with.

Once again, these are stage descriptive notes, and in no way indicate a speed that any given crew (Driver, Co-Driver and Vehicle) can drive through the rally. There are points where “stay right”, or “keep in” may be used, but this is always to keep your car in the safest spot on the road for the upcoming corner, or a hazard that is ahead. You finishing the rally safe and happy is our goal.

These are for consistent clarity of information supplied to the driver..... But the biggest variable is the “loose nut behind the wheel”, so again, please drive to your abilities, and have fun out there.



Targa NZ 2023

Kaharoa Rd

Stage Distance: 11.79

Amazing flowing start to this stage, with smooth corners from left to right. Has a long straight for you to watch your overspeed. At 7km, a very long left links into a **2-dgw**, so don't get caught out there. This stage becomes very busy, which makes a great Targa stage, but leaves very little "wiggle-room" for the co-driver.

In	S 38 00.030 E 176 12.767
0.00	START 30 long6R-O down250 Lights On & Tighten Belts
0.43	sh6L into sh6R into sh6L and 6R 80
0.82	long7L- / smCr 300 sh6L+O / smCr 50 Re- Tighten Belts
1.38	6RO / smCr and 5L into 5R
1.70	into5L-O / smCr 80 4R- 50
2.01	6R nipsinto 5L+ 130 smCr 70
2.42	5LO into 4R- past Jct 300
	5R+ / smCr and 5L+ 100

In

2.93

5R+ / smCr and 5L+100

3.21

7R₂₅₀ smCr₉₀₀ to bottom of hill 450

750m Haybarn on Left

4.89

stay L / longCr K300 !2R-dgw100

Power-Pole

5.39

smCr₈₀ 8R link 5 into 5L O

5.82

6R+ and sh 6L and sh 7R₁₀₀

6.14

blind sh 6L into sh 6R into sh 5L₅₀

6.36

7RT 5 into 4L+ 100 sh 8L₈₀

sh6R K80

In

6.80

sh**6R** K80

6.93

sh**6R** and **!**verylong**6L**doubleapex link**2-dc**
Pothole

7.22

into**4R+** into**3L+** into**5R-**70

7.47

!2Rinto**3L-**40 **4L**intosh**5R**bumpyK170

7.86

sh**5R**intoshsh**5L** andsh**5L**intolong**5R**nips

8.18

into**6L-** linkblunt**1L** into**4R** link**4**again**O**50

8.54

sh**7L** andsh**7R**180 **!****1L+**@Jctdown80

8.96

5R+ and**5L-**into**6RT****4+**130

long **5L-** and **4R-** and **4L** and sh**7R**

In	
9.42	long 5L- and 4R- and 4L andsh 7R
9.87	<u>sh5Linto5R+</u> and 5L-50
10.17	5R+ link <u>4+into4L-</u> 80 3R+ cont 4 Past Jct
10.75	5R- andsh 5L andsh 6R dgw and! 5L 50 Around Washout
11.15	sh 5R K80 <u>4Lintolong6R-</u> 200
11.65	sh 8L 200 !blind4L K130 FINISH
12.08	sh 6L 150 5L+70