

HOW TO SURVIVE REGULARITY SECTIONS

This will hopefully help any newcomers to historic road rallying to master the challenge of competing on Regularity Sections, especially the type usually found on UK events in the HRCR's Historic Road Rally Championship.

WHAT IS A REGULARITY SECTION?

The purpose of a Regularity Section on a Historic Road Rally is to test the crew's skill at maintaining a precise average speed over a defined route, usually on public roads.

REGULARITY SECTION CONTROLS

Each regularity section will have a Regularity Start Control, several Intermediate Regularity Time Controls and a Regularity Finish Point. The latter will not usually be a manned control point, but is necessary to define from where you no longer have to maintain the precise average speed.

The aim is to take the correct amount of time between each consecutive pair of timing controls. Earliness or lateness at one control must usually be carried over and not made up, so at each intermediate control you can forget about your timing over the previous section and start again from scratch for the new section.

WHO DOES THE TIMEKEEPING?

Should the driver or the navigator be in charge the regularity timekeeping? In many novice crews the navigator may not be able to cope with timekeeping as well as finding the correct route, so the driver does his best with the set average speed. But when I'm navigating, I prefer to be in control of the timing, and this, as far as I know, is the way that most expert crews work. If the set average speed is a simple one, such as 30 mph (12 secs per 0.1 mile), 24 mph (15 secs per 0.1 mile) or 18 mph (20 secs per 0.1 mile), the driver may be able to cope reasonably well if left on his own, providing he has a good view of the tripmeter and stopwatch, but it's not easy for a driver to read speed tables as well!

These instructions are therefore aimed at the navigator, assuming that he or she will be in charge of the timekeeping. I'm also assuming that there is a proper tripmeter in the car, reading to 1/100 of a mile, a stopwatch and a book of average speed tables.

SPEED KEEPING

At the Regularity Start Control, reset your tripmeter and your stopwatch and be ready to start the stopwatch at the moment the marshal says "GO". Then every tenth of a mile, if possible, compare your stopwatch with the time given in the average speed table and tell your driver how many seconds early or late you are so that he can adjust his speed accordingly.

When approaching a junction where you have to stop and give way to traffic it may be worth getting yourselves about 10 seconds early, but generally running about 3-5 seconds early will compensate for the extra time taken as you slow down to stop when a control appears. You'll find that it's much easier to make up time than loose time. Often after a main road section where you couldn't keep your speed down to the required average you'll find yourselves 30 seconds or more early. In this case it's often easiest to

stop for 30 seconds - but make sure that it's where you won't be observed by any marshals!

You might find that you are booking in consistently early (or late) at controls when you thought you should be on time. This may be due to an accumulating tripmeter error, so you may decide to compensate by always running a few seconds early or late as necessary.

If you're approaching an uphill climb through a series of hairpins where you're unlikely to maintain the average speed, it can be worth giving yourselves a good early margin so that you won't be too late at the top - although cunning organisers have been known to catch crews out by putting an intermediate control at the bottom of the hill, so it's a gamble you'll have to take!

INTERMEDIATE CONTROL PROCEDURE

When you suddenly realise that you are approaching an intermediate control point, DON'T PANIC! Forget about your timing of the previous section, it's too late to make any further corrections as you must now cruise into the control and accept the time the marshal gives you.

Reset your stopwatch as you approach the control and restart it as you reach the exact timing point. If you can see the marshal holding the clock, watch for his finger pressing the button - that's the exact moment that you must start your stopwatch. A word of warning though - do make sure that it is an intermediate timing control and not just a passage control that you are arriving at, before you reset your stopwatch!

Present your time card to the marshal, collect the slip of paper he gives you and put it in a safe place (you might need it shortly). Lastly, before departing, note down the reading on your tripmeter and then zero it. It's a good idea to task your driver with reminding you about this at each control - but don't let him do it himself - I've known a ham-fisted driver to pull the knob off the Halda!

Drive off at a speed slightly faster than required, for the next mile or so, to catch up time lost at the control; if on the public road the next intermediate control will be at least two miles away.

SPEED CHANGES

Speed changes are what make regularity difficult and are usually the reason why novices lose minutes when the seconds dropped by the top crews can still be counted on the fingers of one hand. Talk to several experts, and, if they'll let you in on their secrets, they'll all describe different methods by which they cope with speed changes. It's all a case of developing a procedure yourself and understanding what you're doing. Blindly following a set procedure when you don't understand why it works can get you into all sorts of problems.

Here I'll describe several methods that I know of and have used, but you need to use whatever methods you understand and are happy with.

When speed changes only occur at intermediate controls, you will just have to select the appropriate speed table for each intermediate section. However, when speed changes occur between intermediate controls, they can either occur at a defined mileage, for example, "At 4.6 miles from IRTC6 change to 26 mph", or at a defined point, "As you cross the railway, change to 23 mph".

The simplest solution is to ensure that you are running exactly on time, then simultaneously reset the trip and stopwatch as you arrive at the speed change point. However this method is not the most accurate and doesn't work if you are running late through being baulked, or wrong-slotting.

You need to have a separate watch set accurately to rally time, which you synchronised to the second with the clock placed on display at the rally start. For the first example, you can calculate the time to the nearest second at which you need to change speed, well before you get to the speed change point. Look up the time for 4.6 miles in your average speed table, and add that time to the time you were given at the last intermediate control. As you are approaching the change point, zero your stopwatch, then watch both the trip mileage and your master clock. Reset the trip when it gets to 4.6 miles, and start the stopwatch when your master clock gets to the calculated time, although these may not be simultaneous. If you're running a few seconds early, the mileage will come up before the time. Remember that if your trip is in error you will need to apply a correction to the mileage. For doing all the calculations it's a good idea to prepare some blank forms into which you can fill in times and distances as you do the speed calculations - and rehearse with them before the rally.

For the second example, you cannot do the calculations in advance, as until you get to the change point and read off the mileage from your tripmeter, you do not know the mileage for the calculation. In this case, when you get to the point, read the tripmeter and immediately reset it. Then do your calculation to get the rally time for the speed change. If you are quick with the calculation you may have an answer within a minute. You can now reset and start your stopwatch exactly one minute after your calculated speed change time (or two minutes if your calculation was slow), and continue on the new speed table, mentally adding one minute (or two minutes) to the stopwatch every time you read it.

It's worth noting that accuracy in finding the exact speed change point is not critical if the speed change is small. If changing from 26 to 23 mph, the difference is 19 seconds per mile, so if you did a tenth of a mile at 26 mph instead of 23 mph, the time error will be less than two seconds.

This leads on to another method for the second example which is not quite as accurate but avoids any hurried calculations in your head or on scraps of paper. As you are approaching a speed change point (2-3 tenths of a mile away), estimate roughly how far you have to go and look ahead in the speed tables to your estimated distance. For example, if you're doing 26 mph and you estimate that you'll get to the railway at 3.2 miles on the tripmeter, make a firm decision to do your speed change at 3.2 miles exactly, instead of at the railway bridge. On your 26 mph speed table the time for 3.2 miles is 7:23, so when the tripmeter gets to 3.20 reset it, and when the stopwatch gets to 7:23 quickly reset and restart it. Now if you were as much as 1/10 mile out in your estimate, you'll would not pick up more than 2 seconds error at the speed change.

RECOVERY FROM DISASTERS

If you've gone half a mile or so from an intermediate control before you discover that you have forgotten to reset your watch or zero the tripmeter, or both, you can now PANIC! But do resist the temptation to immediately reset the tripmeter and loose it's previous reading.

You should stay calm and look at the time you were given at the last intermediate control, or the mileage on the slip of paper you collected there, and reset the watch exactly one (or two) minutes after that time, on your rally time clock or zero the tripmeter exactly one

mile later. Then you can mentally add that minute or mile to the watch or tripmeter reading each time you refer to your average speed table.

Something else that can often happen is missing a speed change point and not realising it until a mile or two down the road. Again if you stay calm and collected, you may be able to correct the problem, but if you're not fully prepared for this situation you'll usually run into an intermediate control before you've managed to work out how to correct yourself.

Often if you've been running at the wrong speed, the first clue to your error is when you catch up the car that should be one minute ahead of you, or the car one minute behind wants to pass.

REGULARITY TIMING TO THE MINUTE

When regularities are timed to the minute, accurate timing gets more complicated as there is a one minute "window" during which you can arrive at an intermediate control unpenalised. You can never know whether the distance and speed set will put you near the start, middle or end of that one minute window.

It's best to try to maintain your speed as you would when timing is to the second, but when you suddenly realise that you're approaching an intermediate control, have a look at your rally time clock and see if the second hand is coming up to the top - then if it is, make a rush decision whether to speed up to get the old minute, or slow down for the new one. Sod's law says you'll always get the wrong one!

Remember though, that after you have passed through an intermediate control, your time for the new section will have commenced from the start of the minute at which you arrived at the intermediate control, which could be up to 59 seconds before your actual arrival time, so restarting your stopwatch as you arrive at the timing point is no good! You'll have to start it one or two minutes after the time they gave you at the control and make the adjustment every time you read the speed tables.

PRACTICE MAKES PERFECT

To succeed in regularity you need practice. And you don't need to wait for the next historic rally to get some practice. Set yourself a route in your local area and define the start point, average speeds and speed change points and go out and practice it. You can do the same route over and over again until you get your procedures perfect. You could even get a friend to go out and set up a secret intermediate control somewhere along the route.

CORRECTING FOR YOUR TRIPMETER'S ERROR

Suppose you do the organisers' measured mile before a rally and discover that your Halda reads only 0.98 miles, and you don't have an alternative Halda gear wheel which you could fit to reduce the error. You can correct for this error by always using a different speed table for the set average speed. As your tripmeter reads short, it will make you go further than the set distance in the required time, which is too fast, so a slower speed table should be selected. All you do is multiply the required speed by what your Halda read over a mile, i.e. $30 \text{ mph} \times 0.98 = 29.4 \text{ mph}$, so use that table instead. However, you must remember to allow for the error separately when making a speed change at a set distance.

© Andy Gibson