



## TIME TRIAL AND REGULARITY TESTS - HOW TO TACKLE THEM (V2)

*These tests are known as TSD (Time-Speed-Distance) in Europe and there are many websites with information on how to tackle Regularity Rallying*

**If you are not interested in participating in the Time Trials and/or the Regularity Tests drive past them and continue enjoying the touring.**

### Introduction

There are two types of tests in the Targa Florio Australian Tribute:

1. Time Trials - conducted over a short distance (approximately 200 metres) and time measured in seconds.
2. Regularity Tests - average speed tests of between 1 and 7 kilometres on open and closed public roads.

The Targa Florio in Sicily these tests are known as "PC" (for the Time Trial Tests) and "PM" for the Regularity Tests. Targa Florio Australian Tribute has adopted these abbreviations.

### 1: TIME TRIAL TIMING TESTS ("PC") - refer to Supplementary Regulation Article 9.12

Time Trials consist of a series of closely spaced timing devices - there may be two to four such devices over a distance of approximately 200 metres. Most are on open roads where there is little public traffic. In all there will be 16 Time Trials containing a total of 44 Timing Tests.








	Number of Time Trials	Number of Timing Tests
Day 1 - Thursday	2	5
Day 2 - Friday	6	15
Day 3 - Saturday	4	10
Day 4 - Sunday	4	15
Total	16	45

On Time Trials the passage of cars past the timing devices is read automatically by RallySafe from the location of the RallySafe antenna against GPS waypoints (ie: a set of coordinates) stored in all the RallySafe units. Cars are not to stop between the yellow clock board and the beige board (see example below).

### Procedure at Time Trials (see diagram below)

- 1) The car is lined up well prior to the yellow clock board, in order of arrival (irrespective of car number), on the side of the road as directed by a marshal. Then:
  - When instructed the car is to be driven to the beginning of the test, designated by a yellow clock board;
  - The official in charge will advise the crew when to go and the crew is then:
    - to drive approximately 25 metres to the Start PC at which the time of passage past this point will start the timing for PC1;
    - without stopping drive to PC1, aiming to do so in the first Ideal Time (listed in the road book); the time of arrival for the first test will be recorded;
    - without stopping drive to PC2, again aiming to do so in the second Ideal Time;
    - without stopping drive to PC3, again trying to match the third Ideal Time;
    - and so on to the last PC;
    - after passing the beige board DO NOT STOP and continue driving according to the road book instructions.
- 2) RallySafe will instantaneously relay the car number and times to a computer at Central Control in Melbourne and the results will be processed.
- 3) Penalties shall be applied at the rate of one point per 1/100th of a second quicker or slower than the Ideal Time at each timing device.
- 4) The penalty for stopping in between timing devices shall be 1000 points.

- 5) The penalty for not attempting, or not completing, a Time Trial shall be 3000 points.
- 6) The Time Trials will close with the passage of the Sweep vehicle.

TARGA FLORIO AUSTRALIAN TRIBUTE - TIME TRIAL EXAMPLE						
Travel Direction	Marker			Distance between timing boards	Ideal Time between timing boards	Average speed between the timing boards
		PC = Timing Test				
		Holding area prior to commencing Time Trial				
		Yellow clock board located approx 25m before timing start device	Start on officials instruction			
		1st Timing Device (Start PC1) (red bollard indicates location)	Timing <b>starts</b> at this device			
		2nd Timing Device (end PC1 - start PC2) (red bollard indicates location)		40m	7 secs	20.57
		3rd Timing Device (end PC2 - start PC3) (red bollard indicates location)		100m	15 secs	24.00
		4th Timing Device (end PC3) (red bollard indicates location)	Timing <b>finishes</b> at this device	30m	7 secs	15.43
		25m to Board to signify end of Time Trial area; cars must not stop before here				

Results for the above example:

PC	Ideal Time (secs)	Time Taken (secs)	Variation (secs)	Penalty* (points)	Total Points
Start					
1	7	6:882	-0.118	118	
2	15	15:123	+0.123	123	
3	7	7:006	+0.006	6	247**

\*at one point/100<sup>th</sup> second

\*\*this figure will be multiplied by a coefficient factor (refer to Supplementary Regulation 5.7)

### Time Trial Set Up

- Red bollards will be set up on the left side of the roadside to act as visible timing devices;
- Drivers should line up the top of the bollard with the RallySafe aerial preferably located on the left of the car above the wheel.

### Methods of carrying out test

It is possible to compete in a regularity rally using only a stopwatch or two, but many regularity rallyists use various devices in an attempt to be as accurate as possible so as to reduce their time penalties. Some common aids include:

#### 1. Basic system using stopwatches

As there are between two to four time tests in the Time Trials, and as accurate timing is vital, several stop watches, perhaps mounted on a board will suffice:

- From the yellow clock board drive forward to the first timing device (Start PC);
- At the Start PC commence a stopwatch as the aerial lines up with the bollard and call down the time to the next timing device (PC1) - in this case 7, 6, 5, 4, 3, 2, 1 .... and reset this first stopwatch after starting the second test at PC1;
- At PC1 commence a second stopwatch and call down the time to PC2 - in this case, 15, 14 ..... 3, 2, 1 ..... and reset this second stopwatch after starting the third test at PC2;
- At PC2 commence the first stopwatch and call down the time to PC3 - in this case, 7, 6, 5, 4, 3, 2, 1 .....

- Repeat this pattern for other PCs if applicable.
2. Advanced apparatus

There are numerous apparatus available and in Europe quite elaborate equipment is utilised by the Regularity experts. One is an App called 'ChronoMaster', which has been created specifically for classic car Regularity rallying. The App can be downloaded into a Smartphone or Tablet.  
[http://www.chronomaster.eu/chronomaster\\_english/chronomaster\\_english.html](http://www.chronomaster.eu/chronomaster_english/chronomaster_english.html)

**G2: REGULARITY TESTS - refer to Supplementary Regulation Article 9.13**

	Number of Reg. Tests
Day 1 - Thursday	0
Day 2 - Friday	4
Day 3 - Saturday	7
Day 4 - Sunday	2
Total	13

Reg Test (PM)	Ave Speed (kph)	Timing Device Dist (km)	Time Taken (min:sec)	Ideal Time (min:sec)	Variation Between Time Taken and Ideal Time (sec)	Penalty* (points)	Total Points
Start							
1	73	0.61	0:32.2	0:30	+0:02.2	22	
2	73	1.83	1:35.5	1:30	+0:05.5	55	
3	73	2.43	1:56.4	2:00	-0:03.6	36	113**

\*at one point/10<sup>th</sup> second (ie: 0.1)

\*\*this figure will be multiplied by a coefficient factor (refer to Supplementary Regulation 5.7)

- (1) A regularity test may be either:
  - a maintained (constant) average speed (MAS) test, or
  - an overall average speed (OAS) test.
- (2) Maintained average speed tests are where drivers are required to maintain an overall average speed between the start and each secret intermediary timing points and the finish.
- (3) Overall average speed tests are where drivers are required to drive to achieve a specified average speed between the start and finish timing devices. Secret intermediary timing is not used in these tests. To prevent drivers from stopping before the finish timing device a penalty of one point per second will be applied when the vehicle is below 30 km/h as monitored by the RallySafe equipment - unless a lower speed is specified in the road book.
- (4) Variation to the speed (or time calculated from the speed) specified in the road book will be penalised at the rate of one point per 1/10<sup>th</sup> of a second faster or slower.
- (5) The penalty for not attempting or completing a Regularity Test shall be 500 points.
- (6) The Regularity Tests will close with the passage of the Sweep vehicle.

**Procedure at Regularity Tests**

The location of the start and finish of the Regularity Tests are noted in the road book, together with the average speed to be achieved. Times at the start of the test and at any secret timing location/s along the route (in a maintained average speed test) are read automatically by RallySafe, with GPS waypoints (ie: a set of coordinates) stored in all the RallySafe units.

- 1) Maintained (or Constant) Average Speed (MAS) - longer length  
 The objective is to maintain the specified speed in the road book at all times throughout the test. Secret timing devices will be used to record the time of the passage of the vehicle. The last timing device may not necessarily be situated at the end of the test but in a secret timing device short of the end.
- 2) Overall Average Speed (OAS) - shorter length  
 The objective is to arrive at the end of the test having averaged the speed specified overall between the start and finish. There will be no secret timing location/s in this type of test.

**Advise of a Regularity Test by RallySafe**

The RallySafe unit will advise on the screen the following information on a Regularity Test:

- 300m Regularity Ahead (this shows on the screen to indicate that the start of the test is 300m away);
- Regularity Test (this flashes on the screen at the start of the test - this location is listed in the road book as 'START PM');

The RallySafe unit will start to count down (on the screen) the distance to the end of the Regularity Test from 2000m (the location of the end of the test is listed in the road book as 'END PM').

### Methods of carrying out test

On reaching the start of the test you do not need to stop - you continue and adjust the vehicle's speed to that specified in the road book. There is one exception on Day 2 and the need to stop is specified in the road book.

#### Basic System

##### 1.1 Maintained Average Speed (MAS)

The simplest method is by using a stopwatch and a distance measuring device and following a Time-Distance Chart provided by the organisers in the road book, for example:





At the start of a test (when the RallySafe unit flashes 'Regularity Test'):

- Start the stopwatch;
- Reset the distance measuring device to zero (0.00)
- Follow the Time-Distance Chart, calling out every 30 seconds to the driver that they are in advance (or behind) the distance required to maintain the speed. Example for a speed of 73 km/h shows that after 30 seconds the car should be at 0.61 km; after 2 minutes it should be at 2.43 km:

Time min:sec	Distance km
start	0.00
0:30	0.61
1:00	1.22
1:30	1.83
2:00	2.43

##### 1.2 Overall Average Speed (OAS)

The objective is to pass the finish timing location at the precise time calculated from the specified distance and average speed to be achieved (as shown in the road book) - there is no requirement with OAS to 'maintain' an average speed throughout the test. However, competitors are not permitted to drive to within sight of the finish and stop. To prevent drivers from stopping before the finish timing device a penalty of one point per second will be applied when the vehicle is below 30 km/h as monitored by the RallySafe equipment - unless a lower speed is specified in the road book.

Total	Inter	Tulip	Instruction	To Go
0.00	0.00		START SECTION 7 ZERO ODO and continue up the hill 50 kph and FMR	51.48
19.38	19.38		START PM2 Average speed (AS) 81 kph	32.10
20.54	1.16		END PM2	30.94
21.22	0.68		80 kph	30.27

In the test above (PM2) the time for the test is 1.16 km at 81 kph = 51.56 seconds

## 2. Advanced Apparatus

There are numerous apparatus available and in Europe quite elaborate equipment is utilised by the Regularity experts. Information is on the website by calling up Regularity Rally.