

Using the Richta Competitor App for TSD Rallye

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Overview

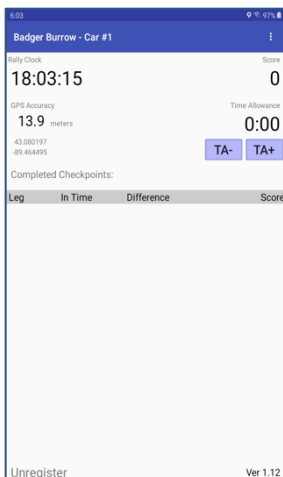
In TSD road rallying your arrival is timed at numerous checkpoints along the rallye route. Your score at each checkpoint is based upon how close you come to the rallymaster's calculated perfect arrival time for that checkpoint. The Richta system is an integrated set of applications which uses a smartphone's built in GPS capability to automatically time contestants at checkpoints. The rallymaster uses a rallymaster app to create the controls (checkpoints) and to monitor progress of the rallye in real time. Competitors use a second app called the Richta Competitor App. This app is run in the competitor vehicle during the event. It detects the vehicle arriving at controls, using GPS location, times their arrival, compares it to a perfect time and displays their score for the leg, as well as their overall score to that point.

Installation

Contestants with Android smartphones must go to the Google Play Store and download the 'Competitor – Richta GPS Checkpoints' app. Contestants with Apple smartphones should download from the Apple App Store. There is no cost to you to download this app. If you have previously downloaded the app, it is usually a good idea to check if there is a newer version available. When installing the app you may get a prompt to grant the app access to your device's location services – you must grant this for the app to work.

Before the Rallye

Competitors should run the app the day before the event to initialize their settings. You should have received an email assigning you a car number. This will identify you within the app.



Initializing on an Android device

Once downloaded, open the app. If you get a message saying "App requires location permission," you'll need to grant permission for the app to use location information from your phone. To do this, go to Settings/Apps/Competitor. Grant the permissions it requires (location). You'll be asked to select an event. Choose the correct event from the list provided. The next screen will ask for the event password. Use the password shown in the event general instructions, and press "Check Password". You'll then be asked for a car number and a password. Enter the car number you've been assigned. Create a password for yourself to avoid having another competitor use your car number. Press "Save." The next screen asks for your personal information. Please enter the driver and navigator last names and your class info. The other fields are optional. Then press "Add" when it appears. You should see a screen that looks similar to this. You're all set.



Initializing on an Apple Device

Open the app. Choose the correct event from the list. Enter the event password shown in the general instructions. Enter the car number you have been assigned. Create a password for yourself to avoid having another competitor use your car number. Press "Done". Press "Continue". The next screen asks for your personal information. Please enter the driver and navigator last names and your class info. The other fields are optional. Press "Submit Info". You should see a screen that looks similar to this. You're all set. Close the app until you arrive at registration.

At the start of the Rallye

Do not run the app until you arrive at registration. If you start it earlier, you run the risk of encountering a hidden control on the course and receiving a maximum penalty for that leg. Once you start the app, find the control location near registration and confirm that the app is showing that a time check control has been logged. If it has not detected it, you need to meet with the person who is managing the apps and let them get it working. Be sure you have mobile data enabled as this is how your scores are reported to the officials. It is also advisable to have the phone plugged in to power at all times as GPS can be a heavy power drain. It is also important that nothing else is being run on the phone being used. Other apps can interfere and prevent the competitor app from detecting controls. It is advisable to have a second phone for everything else you do.

Richta Control Types

There are several styles of controls you may encounter with the app as follows:

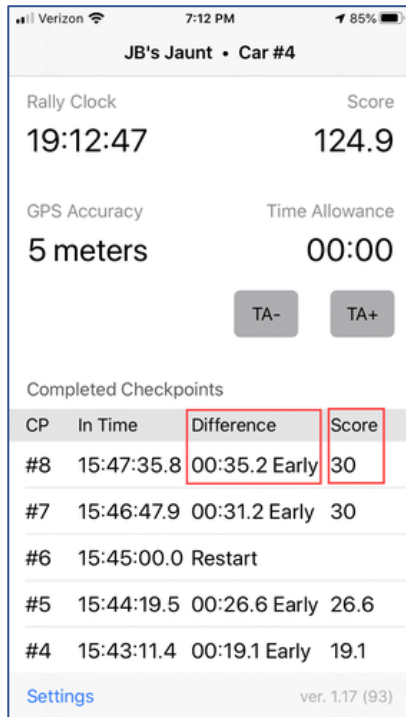
- Time check – This control will return the exact time the control was encountered. It is used just to confirm you are in the right place and to verify your clock. It is not scored. These are generally used at the start, during the odometer check, and sometimes elsewhere when the rallymaster wishes to confirm you are on course.
- Time of Day Restart – This control is used at the start of a leg and is followed by a series of timing controls. You are directed to leave this point at the time specified plus your car number in minutes. For example if the Route Instruction says to leave this point at 11:25:00 and you are car number 4, you would start from that point at 11:29:00. You will hear a chime and see a message confirming your out time. The time shown will be your car's actual assigned out time.
- Restart at the top of any minute - This control is also used to start a leg. The difference is that you are allowed to start the leg at any top of the minute you choose. Simply proceed to a point near the start line and cross it when the clock shows 0 seconds. Do not cross the line early as you will then be timed to the previous minute. You will hear a chime and see a message approximately .1 mile later confirming your out time.
- Timed Control – GPS will detect when you have arrived and will automatically calculate your score for that leg. It will also update your overall score for the event. Do not stop at a timed control, but continue on to the next control or restart.

Odometer Check

The odometer check is an untimed piece of the course whose purpose is to allow you to compare your car's odometer against the official one. It will generally begin with a time check control associated with instruction #1 in the routes. The route will get you familiar with the instructions, and will provide intermediate mileages along the way. It will end at an easy to read sign and will have an official mileage noted. The timed portion of the rallye will start a short distance later.

Running the Rallye

Shortly after the end of the odometer check, you will encounter your first restart. Leave this point at the time specified plus your car number in minutes (or at the top of any minute if the routes specify this). There will be a CAST (Change Average Speed To) associated with this instruction and you should attempt to average driving at this speed. About 0.1 miles after leaving the restart the competitor app will chime and will display the time of the restart.



At some point the route instructions will indicate a control is approaching. Continue driving at the CAST until you pass the control. A chime will sound and the app will display the time you entered the control, along with your score for the leg. You should continue driving as there may be other controls coming up. The figure to the left shows what you would see. Note that the difference field shows this car was 35.2 seconds early. The score is shown in the right column for that leg. Note this example shows the score as 30 because the rallymaster chose this to be a max penalty for this event. Your event may have a different max score. The total running score for the event is shown in the upper right (124.9 in this example)

There are two styles of control operation available and each has its advantages. The event general instructions will describe which style is in use for this event.

1. After each control, you are starting a new leg from the time you entered the last one (In-Time from last control {the one you just entered} = Out-Time for next leg). This means that any error is cancelled and you are starting fresh for the next leg.
2. At each control, your reported error carries over to the next leg. For example, if you were 3 seconds late to a control, you will need to gain 3

seconds before reaching the next control. Each leg is timed from the last restart.

In either case, continue to maintain the assigned CAST until you have passed all the controls in that segment. You then can drive at any legal speed to the next restart point and get ready for the next segment. That's it. A restart, followed by some number of timed controls, followed by the next restart. Some of the restarts will be located in areas where you can take a break, relax and visit with the other rallyists. The point is to enjoy the drive and have fun.

Time Allowances

You may find yourself in a situation where you are running late. Perhaps somebody pulled out of a driveway ahead of you or you missed a turn and had to go back. This is where the time allowance comes in handy. Simply press the TA+ button on the app and you will automatically be granted a pause to catch up. The first time you press it, you pause 10 seconds, then 20, then 30 on subsequent presses. After that each press gives you an additional minute of pause (e.g. 1:30, 2:30, etc.) up to a maximum of 19:30 minutes. Your current amount of time allowance is shown just above the TA+/TA- buttons. It is important to take a time allowance before reaching a control. Once you pass a control, time allowances are too late. For the control type where your reported error carries over to the next leg, any time allowance lasts through all controls until the next restart. For the control type where you are starting a new leg from the time you entered the last one (ie. each control starts a new leg {ie. present In-Time = next Out-Time}), the time allowance lasts only until the next control.

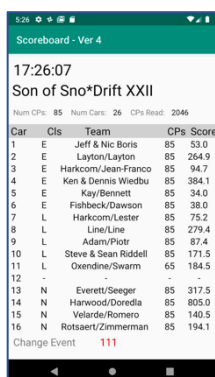
After the Rallye

Head on in to the finish and enjoy the hospitality. Your scores have all been reported by mobile data transfer and should be showing on a scoreboard at the finish line. Check it over and if it looks OK you can be expecting results shortly after the final car arrives.

Hints for Best Results

- Because of processing demands the Competitor app must be the only app running on the device while you're using it. Be sure to close all other apps.
- In order to do its work the app must constantly access the GPS hardware on your device. This requires considerable and constant power consumption. You'd be smart to keep your device externally powered while running the rallye.
- Monitor the app – it should always be displaying on your device screen. If the app should crash or you need to exit the app for any reason, simply pull over and stop your vehicle at the earliest safe opportunity and restart the app. None of the GPS location data or your already passed checkpoint data will be lost, and you'll be able to continue on. Take a time allowance if necessary to get back on time. You do want to stop and do this as quickly, safely, as possible – you don't want to pass through a checkpoint while the app is not running.
- Position the device for the best possible exposure to the sky – the GPS in your device needs visibility to the satellites it uses. Up on the dash with as much visibility as is possible through the windshield is good.
- Mount your device in some fashion. You really don't want the distraction of that thing sliding around while you're rallying.
- Richta Competitor relies on mobile data in order to send results to the scoring committee. At some points, the rallye may pass through areas with poor or no cell coverage. In this case, the app will store your scoring data and send it when coverage is available.
- Drive through controls at Cast to get the best scores. Do not creep or you will get a bad score (seconds off).
- Some competitors like to provide a backup device in case the primary device misses or incorrectly detects a control. You can run a second device, but cannot use the same car number. You should instead use 100 plus your car number for the backup device. For example, car number 8 would have the car number 8 as its primary device and car number 108 for the backup. The use of a backup device is optional.

Scoreboard App



Car	Cls	Team	CPs	Score
1	E	Jeff & Nic Boris	85	53.0
2	E	Layton/Layton	85	264.9
3	E	Harkcom/Jean-Franco	85	94.7
4	E	Ken & Dennis Westbu	85	384.1
5	E	Kay/Bennett	85	34.0
6	E	Fishbeck/Dawson	85	38.0
7	L	Harkcom/Lester	85	75.2
8	L	Line/Lue	85	279.4
9	L	Adam/Plotr	85	87.4
10	L	Steve & Sean Riddell	85	171.5
11	L	Oxendine/Swarm	65	184.5
12	-	-	-	-
13	N	Everett/Seeger	85	317.5
14	N	Harwood/Dorella	85	805.0
15	N	Velarde/Romero	85	140.5
16	N	Rotsaert/Zimmerman	85	194.1

Change Event 111

The Richta scoreboard app is available for download from the same place you downloaded the competitor app. This app will keep a running total of all competitors scores, so you can compare your progress against your friends. This app should be run on a different device than the one running competitor. Simply launch the app and then select the rallye from the event list (You may need to select change event to get the list). The picture to the left shows an example of the display. Lack of cell coverage may delay some score updates. Note that the rallymaster may choose to disallow the use of scoreboard for a particular event.

Some competitors like to provide a backup device in case the primary device misses or incorrectly detects a control. You can run a second device, but cannot use the same car number. You should instead use 100 plus your car number for the backup device. For example, car number 8 would have the car number 8 as its primary device and car number 108 for the backup. The use of a backup device is optional.