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Operation and rules Transpyr and GPS  
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Tracks and Waypoints 2013



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## Part 1: Operation and rules Transpyr and GPS

TRANSPYR is one of the few MTB stage events that uses GPS technology as the main tool for tracking the route. We understand it is a way of interfering as little as possible on the nature, so that you can enjoy it as we would do, as sports fans we are in nature.

Modern equipment such as the **TwoNav devices by CompeGPS, Official GPS of Transpyr 2013**, have high reliability and accuracy in receiving the satellite signal, have a long autonomy, and offer all technical features necessary to trace the route in a fully satisfactory and pleasant way, something that is part of the philosophy of TRANSPYR.

### The Team GPS

It is not the role of the Team GPS to teach how to use GPS or resolve the doubts of the participants in this regard, however, GPS Team will try to help in unforeseen trouble.

### Very important:

Participants who have GPS devices allowing to load tracks and waypoints of the whole Transpyr 2013, will have to come to the event with their GPS completely ready (tracks and waypoints loaded) and properly set.

Participants who have GPS devices which do not allow to load tracks and waypoints of the whole Transpyr 2013, will have to come to the event with the first stage track and waypoints loaded in their GPS and with the device properly set.

**We hardly recommend that** you know by heart the operation of your GPS device, and that you practice with it, especially for what concerns loading and reading tracks with high number of points. And in any case, take your time during accreditations prior to first stage to check you have correctly loaded the track, trying to follow its first stretch.

In case of whatever doubt or trouble, do not hesitate to come by the Team GPS .

### Which are the participants liabilities and duties concerning GPS?

Each participant must have and use a GPS (this means one GPS device per person) device with at least 10.000 points of track log. It must be a useful GPS for mountain biking, and have autonomy or ability to change batteries or to cover a full day of operation (for some until 12 hours).

Remember that if you don't have a GPS device you can buy the GPS Pack in unmatched conditions or rent one for the whole duration of TRANSPYR.

The participant agrees by regulations to deliver the GPS device to the organization or to whom it delegates to load tracks and waypoints and to review the route taken by downloading the track log (route recording) as often as it is required during the event.

It is very important that each participant places one of the stickers with their race number on the GPS device and on the connecting cable of their GPS. This cable must be transported in the course of the stage to upload and download tracks, if required, on arrival of the stage.

## To monitor each day:

To begin each stage all participants must take care that their GPS has the battery charged (there are enough plugs in TRANSPYR CAMP), it is correctly set, with the track log feature (recording of travel) on, the track stage properly loaded, and have enough free memory in megabytes or points, to record all the route of that stage.

## Part 2: User's guide

### TRANSPYR USER GUIDE: LEARN HOW TO MANAGE YOUR GPS DEVICE

First of all, here you have some basic considerations to manage and learn how to use the GPS during the TRANSPYR race. A GPS is an electronic device that it is used to receive signals from satellite networks. Like mobile phones, this coverage may be affected by physical obstacles such as forests, cliffs, buildings and even large masses of clouds. By knowing this, users should keep in mind that sometimes the GPS might provide errors, so it is always very important to take the information from the GPS with caution.

The GPS device receives data from satellite networks and it processes the information to provide us the exact position where we are. Once set, you can enter a path, called track, and follow it all the way. Remember that in any location of the track you will be able to attach descriptions and specific icons for signaling as well as notify dangerous points, etc. These specific points are called waypoints. The TRANSPYR race is based on a minimal impact to the environment with a few signal indications. The aim of the race is to use the GPS device to get to the destination.

To take part in the TRANSPYR, **it is strongly required to have some knowledge and practice of GPS devices.** From skills and practice in the management of GPS will often depend the success during the race. Another important point is the GPS model which can directly influence on the final result of the participant.

Below you will find the essential information to perform the TRANSPYR. Basic functions for several GPS devices will be presented to you: TwoNav Sportiva / Sportiva+ ; and Garmin E-trex (before 2011) and Garmin C 60, c 62 and Edge. Remember that "upload tracks and waypoints" is one of the most important parts of the race, the recording cannot be corrected during the race; it has to be set before the start. The technical aspects on how to follow the tracks, view waypoints and configurations of GPS device are not described in this document due to the large variety of models and versions of existing softwares. This document describes basic operations that can be done with GPS devices, except for GPS TwoNav Sportiva / TwoNav Sportiva+, which are specifically recommended for the TRANSPYR race.

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The basic functions that any user must learn in order to follow the TRANSPYR are:

- Upload tracks and waypoints
- Follow a track and display the waypoints
- Configure GPS for TRANSPYR needs

## I- UPLOAD TRACKS AND WAYPOINTS

### GPS TwoNav Sportiva / Sportiva+

TwoNav GPS models have the advantage of being able to load tracks with unlimited number of points. **Loads all the tracks and waypoints in their original format** (some tracks are composed of up to 8,000 points, on the other hand, some models limit them to 500 points).

Tracks and waypoints can be sent to GPS from:

- Land PC/Mac software
- Using the GPS device as an external disk. In this case, once the GPS is connected to the PC, open the GPS unit: 'Sportiva / Sportiva+ > TwoNavData > Data'. In this folder you will be able to copy the tracks and waypoints to \*.TRK and \*.WPT formats. Most formats are widely accepted.

You can always verify that tracks and waypoints are properly sent to the GPS from 'Menu > Data > Tracks' or 'Menu > Data > Waypoints'. You can also use the tool 'Zoom to' to display them on the map.

### Garmin GPS Etrex series and C60 with or without memory card

One of the most important points is the preparation of the GPS. Before the race starts, users must have the GPS totally ready for the race: **clean any kind of non-relevant information** from the memory card: tracklog, waypoints and routes.

Tracks must have a short name (approx. 8 characters). Example: Stage 1 1, Stage 1 2. File names must not contain commas or symbols, only spaces between letters are allowed.

Tracks must be loaded into memory card. Usually GPS only allow you to upload tracks with 500 points. TRANSPYR tracks are usually made of 3000/9000 points (each stage). Thus, with 10 tracks of 500 points a full stage cannot be fully loaded, so the user will have to use the simplified tracks for Garmin series (each stage separated into 4 sections of 500 points. Due to this reduction, accuracy is lost, but you can also follow the route.

**You SHOULD NOT** record them as tracklog, so battery will not be consumed and will be able to record everyday stage without problems.

Tracks and waypoints can be loaded using several softwares: **Land (made by CompeGPS)**, OziExplorer, Garmin Mapsource, etc, directly to the device's memory. Tracks and waypoints will always be separated files.

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## GPS Garmin Series C62

Copy the tracks with .GPX extension to the memory card. No additional software is needed. Normally the computer detects the memory card as an external disc.

CAUTION: The computer detects the internal memory of the GPS as a folder named "Garmin", not to be confused with the folder where to copy the files.

### IMPORTANT NOTE ABOUT BOTH MODELS FROM GARMIN:

The participants should clean up or discharge the tracklog on a daily base in order to recover enough space for recording the next stage. For both, the Etrex model, as the C62, if you can't see the tracks on the screen, go to the main menu, section "tracks", select the tracks and pin "Show in Maps".

## GPS Garmin Series Edge

As being a GPS designed for practices, we have two options, each with its pros and contras.

The first option consists in charging the tracks in GPX format. After connecting the GPS to the computer, the files have to be copied to a folder named GPX. Due to the file size of the tracks (thousands of points) the Garmin won't navigate correctly, it only permits to follow a part of the track and the remaining part shows up as a straight line.

Therefore, with these tracks we are not able to use the option for navigating located under:

Menu/Where to/Saved routes/Select route/Navigate

The solution consists in visualizing the track over the map without navigating. Obviously this option doesn't offer advices such as changes in directions, bearing or visualization of upcoming changes in directions, as commonly used when navigating.

### To display track on map, go to:

Menu/Where to/Saved routes/Select route/map settings

Then another screen will give the following information:

- Name of the route
- Distance
- Area
- Screen (choose a color to display track on map)

You will see below a field called "Show on map". You must activate this option.

Then click on "Accept".

Leave the menu by pressing 'Mode' button.

Tracks and waypoints are now displayed on map.

To turn off the track, you should perform the same operation. In the last step, switch off the "Show on map" option.

**The second option** is to load tracks on the Garmin Edge as journey, in TCX format, original Garmin format. After connecting the GPS to the computer, the track files must be copied to the folder named "Courses". In case it's not present, just create one.

This current way of displaying tracks has an advantage over the GPX format. It does offer some navigation functions. Specifically, you can display the compass that automatically points direction of the route. It also displays a warning on the GPS screen if you go far from the followed route, which is

very useful. On the contrary, **it has the disadvantage to not show all waypoints**, something very important for the TRANSPYR race.

**To use this option, follow these next steps:**

Menu/Trainings/Workout/Select track/Do Workout

Track is loaded and you can see it on map.

To stop the display of the track you must perform the following steps:

Menu/Trainings/Workout/Stop Workout

## II- FOLLOW A TRACK AND DISPLAY WAYPOINTS

To follow the TRANSPYR trail, you must use a GPS displaying the track and making sure you follow well the marked course.

Basically, to follow a track you must view it graphically on the GPS screen. The mapping support is a very important point since it helps to follow a track comfortably (not blindly), being able to contextualize it in your environment.

You must take into account the scale of representation used. A small one will offer us few details while a large one will not allow us to anticipate junctions and deviations.

Many GPS offer the option of "NAVIGATION". This option runs the track using current position calculated by GPS and indicating the direction we should take. Depending on the models, you'll get access to remaining distance, proximity to the next waypoint, position in altitude profile, etc.

TwoNav GPS devices allow us to know several very useful data as the deviation to the route or track followed, graph in real time to see what kind of difficulties is waiting for us. Before the race, you should configure the home page data which will always be visible below the map as well as data pages with all the information we will need (time, distance to destination, accumulated ascent, cadence and heart rate if we use TwoNav Sportiva+, Sportiva2+, Ultra sensors).

Speaking about maps, the whole topographic mapping (1:25 000) required for TRANSPYR is available from the CompeGPS Website. Although not required to use, it is desirable and useful, by improving ease of navigation and self-location during the race.

## III- HOW TO SET YOUR GPS FOR TRANSPYR RACE

We must take into account the GPS power supply to ensure that each step will be completed with enough power to operate the GPS. This is a critical factor as the route is fully followed with the help of GPS, and not with signposting placed by the organization. Therefore it is important **to have a spare battery pack always prepared**.

One of the factors that wear out the battery is the constant use of controls, so always try to leave the GPS properly configured to have to touch it as little as possible and to follow without any inconvenience the marked trail.

Another factor which critically shortens the battery life is the illumination of the screen. It's important to know well each model to find out the optimal configuration of the screen illumination to be seen comfortably without using more energy than necessary.

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For TwoNav devices, we highly recommend to bring a spare battery fully charged and the following settings:

- Screen brightness to 50% ('Menu>Setting>System>Brightness')
- Shutdown screen: 'Never' ('Menu>Setting>System>Autonomy')
- Shutdown backlight: '30 sec'

### Bike support

Last but not least, do not forget the GPS placing on the bike. You must use a suitable support, to hold vibrations and shocks that can be received during the race and keep the GPS in good placement to offer a correct display and allow you to operate correctly while navigating. Check periodically the correct GPS anchor bracket on the bicycle handlebar.

To avoid unpleasant mishaps, we recommend using the security cordon that often most GPS devices carry within the accessories that come with your purchase, avoiding loosing or breaking it.

### Part 3: Tracks and Waypoints 2013

You will find enclosed in this email a file containing all the tracks and waypoints for the different stages in various formats.

With the help of this tutorial and your own knowledge, load the files (sorted by folders) on your device in the right format.

We remind your responsibility is to have all the tracks and waypoints loaded in your GPS right before the TRANSPYR race starts.

See you there!

