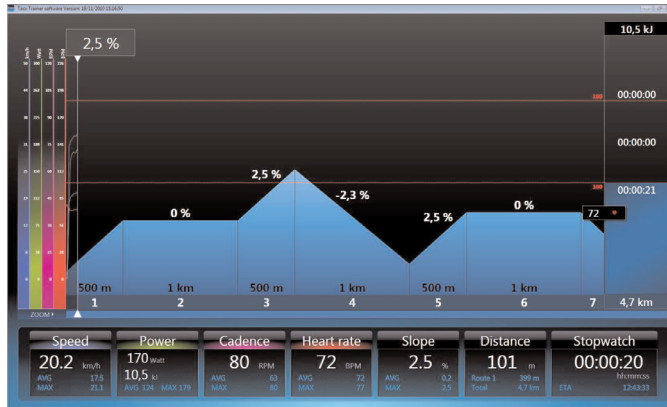


Catalyst

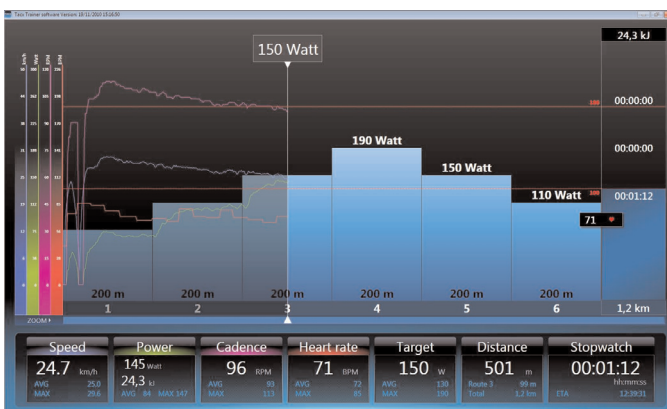
The Catalyst consists of professional training programs for scientific analysis. There are three different program types adjustable for distance (in 100 meter increments) or time (in 10 second increments).

Slope (incline resistance)



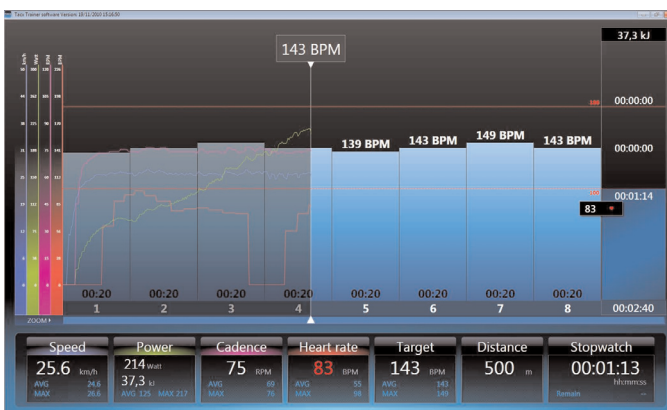
The program can be adjusted from -5% till +20%. This training ride is comparable to riding outside on the road, when you ride faster the brake's resistance increases, and of course this is also the case when the percentage of the climb becomes higher. Adjustments are made in 0,1% increments.

Watt (output)



With a program in output, the computer will adjust the resistance on the roll in such a manner that you will be constantly riding at the power you have set the program at. If you change your pedalling frequency or gear, the computer will adjust the resistance on the roll. You can adjust the power output to a level anywhere between 10 through 990 watt in 10 watt increments.

Heart rate



With a program in heart rate, the computer will continually check if your heart rate is still around the set value for the duration of the training and will adjust the brake's resistance accordingly. You can set your heart rate to a value of 30 till 230 heart beats per minute, 1 beat at a time.

Choosing a program

The last 50 training rides

This button is the fastest way to start a training session. A list of choices featuring the last 50 training rides by the selected user will appear.



At one time you have ridden these training rides (possibly with opponents) and you can now repeat one. There is a picture underneath and information about the program on the right. Choose one and press the button **Select for training** when you are ready to start.

Select program



This is where you choose the training type. You can choose from 6 types of training rides that vary from Slope to Watt to Heart rate. After you have made your choice the training programs corresponding to this type appear in the list. There is a picture underneath and information about the program on the right. Choose one and press the button **Select for training** when you are ready to start.

Free training

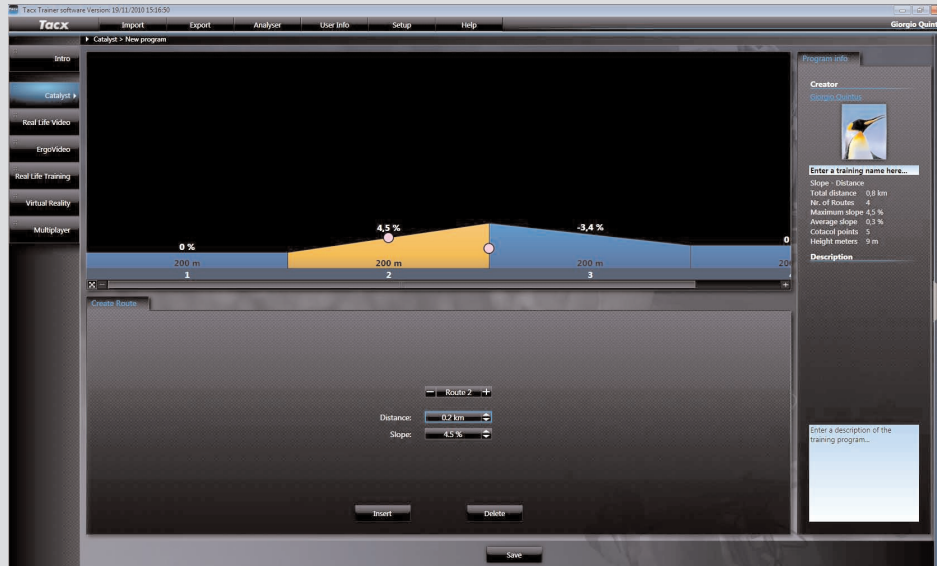


This is not a program; therefore you cannot select any opponents. Choose the type of training you wish to ride in. As soon as you have made your choice you can start. While you are riding you manually set the settings. When you have finished your training you can save this training as a program.

Edit program

New program

This is where you set a new program. After having selected this button, a list of choices with the different types of training and a brief explanation will appear. After having made your choice you should click **Create**, which leads you to the settings screen.

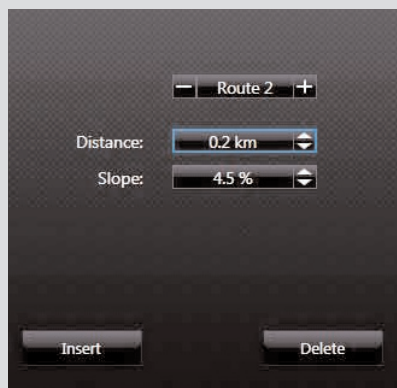


At the top left hand corner the program's picture, underneath setting boxes for the routes and buttons Insert and Delete. To the right you'll find program info and a box to enter the name. Underneath is an open space for any remarks.

Route

A program consists of different routes (partial courses). Each route has its own setting for

- Distance or Time
- Slope, Watt or Heart rate



Routes can be added with **Insert**; the button **Delete** helps you to remove a selected route. Setting the route is done with the arrow buttons near the field to be filled in or the little white balls in the picture. You can also modify the setting by holding the little white ball with a left mouse click and dragging it to the left, right, up or down.



After having edited the program you can name it in the right hand top corner. After clicking **Save** the program has been selected and you can immediately start training.

Editing & making a new Program from

Both buttons work the same way. The difference is that under **Adjust program** all previously ridden scores will be deleted. When using **Create new from** you are renaming the program and the original program with the corresponding scores will be saved.



After clicking choice the list of choices with training programs that correspond to the type will appear. Make your selection and choose **Edit**. The settings field appears; in it you adapt your route as described under New program. Then you rename the program.

Remove

You can remove the entire program including the scores. Removing the scores separately can be done through the button **View scores**. Choose from the list and press **Remove**. When you confirm the task in the warning field the program's score will have been deleted.

Start training

Before the start you may select opponents and set your heart rate parameters for your training session.



This is the screen you will see before the start with, at the top, a picture of the selected program. Underneath the picture you will find information on the program you are about to ride. On the right side you can set your opponents, next to the button **Start training** you'll see the tick box for Heart rate and limits.n.

Power Mode

The Power Mode helps you affect the course's power; you can either increase or diminish the brake's functioning. This way you can ride at the level that is yours, for example in films that would normally be too hard for you. The tick box indicates if the Power Mode is switched **On** or **Off**. When **On**, you can use the arrow keys to determine the value (10-200%). You can even adjust this setting while you are training.

Heart rate

The tick box indicates if heart rate is switched **On** or **Off**. When **On** has been selected you can set the upper and lower limits of your heart rate with the arrow keys and mouse. During your ride these limits will be displayed.

All analogue transmitter belts can be used, and most coded belts as well. For Bushido and Vortex you may also use an ANT heart rate transmitter belt. The Suunto transmitter belts (ANT) and Polar W.I.N.D transmitter belts are not compatible with Tacx trainers.

Opponents

An opponent is an adversary who has already ridden the same program. That could be you, or a score you have downloaded through BikeNet. Only with a Slope/Distance program you can enter a maximum number of 19 opponents (this is not possible for the other program types). You can select them on the right side of the screen. All of the possible opponents are listed with their average speed and time. They will only participate in the race if you have selected them through the tick box.

Using the button **Duplicate** you can copy the opponent. Rename the opponent; adjust his speed (faster or slower). This new opponent will stay near you during the training ride; this is a very clever way of enhancing your performance.

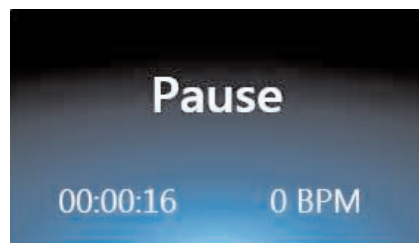
Functions during the training session

Start training

After pressing **Start training**, the Count down appears. When it has reached 0, you can start riding. Watch out: this is the starting sign for the opponents, so they will start. When there is a false start, the Count down will start again.

Pausing during the training session

If you wish to stop training before crossing the finish line, a pop-up Pause will appear on your screen. This pop-up will indicate the time paused and current heart rate. All rider data will be frozen during the break. When you start riding again, the computer will continue to calculate based on these data.



Power Mode

Adjusting the brake's function, as regards difficulty, can be done at any give time during your training session with the button **Enter** (VR interface) or **arrow right** (Bushido/Vortex computer). A pop-up will appear in which you can adjust the Power Mode using **arrow up** and **arrow down**. When you do this you need to save the program under a different name at the finish line and the current opponents will expire after you've modified the route setting.

Route Mode

This function is used to adjust the setting of the current route, as regards difficulty, during your training. You can do this at any given time by pressing the button **Enter** (VR interface) or **arrow right** (Bushido/Vortex computer). A pop-up will appear in which you can adjust the route setting using **arrow up** and **arrow down**. When you do this you need to save the program under a different name at the finish line and the current opponents will expire after you've modified the route setting.

Finish

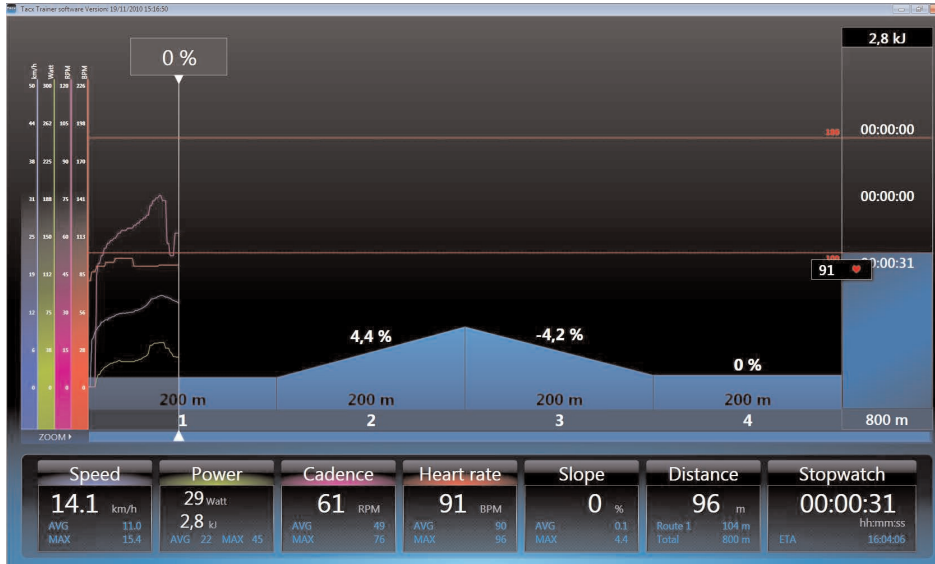
You complete the program and a pop-up appears with your time and your opponents' times. Choose **Save**. If you wish to do so you can look at the scores later in the Analyser.

Stopping early

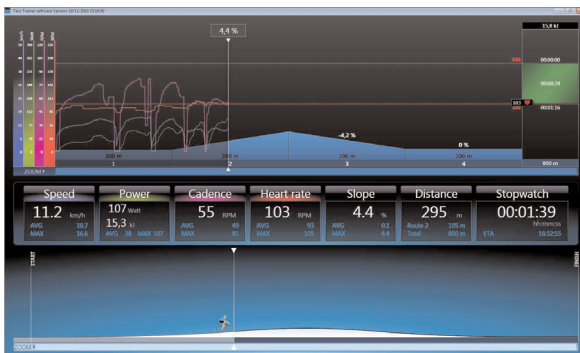
Stopping when you are not yet at the finish is done with the button **Cancel** (VR interface) or **arrow left** (Bushido/Vortex computer). A field appears asking you if you wish to save the part you have completed. If you do, rename the program and choose **Save**. If you wish to do so you can look at the scores later in the Analyser.

Screens during the training session

During the training session you can browse through the different screens using **arrow up** and **arrow down** in the interface on your handlebars.



Catalyst screen 1



Catalyst screen 2



Catalyst screen 3



Catalyst screen 4



Catalyst screen 5

With the **Enter** button (VR interface) or **arrow right** (Bushido/Vortex computer) you can summon other functions. A pop-up will appear in which you can set the settings of the screen in question with **arrow up** and **arrow down**.



Program display

Display of the program at the top of the screen may differ depending on the chosen training type. With a Slope/Distance program, the course is displayed in the shape of a "profile". With the other types you will see bars with on top of them the route setting. The width of the bars depends on the route's duration or distance. The vertical line is your position line. While you are riding the bars will slip away to the left. At the same time the bars to the left of your position line will change colour.



Graph

While you are riding, the training data is drawn in a graph. The standard visible data at every start are Speed, Power (output), Cadence and Heart rate. You can switch these lines **Off** or **On** by clicking on the vertical axis with the graduation.

In the graph you can also see the set Heart rate limits in the shape of a dotted line. To the right of the graph you can see the values for these limits and the duration.

Training data

At the bottom of the screen you can see the values for the training data

Speed

Current speed *
AVS average speed
MAX maximum speed

Cadence

Current pedalling frequency
AVS average pedalling frequency
MAX maximum pedalling frequency

Power

Current power output *
AVS average power output
MAX maximum power output

Heart rate

Current heart rate *
AVS average heart rate
MAX maximum heart rate

Route settings

Slope, watt or heart rate setting
 The setting's average
 The setting's maximum

Distance

Trip distance
 With a distance program you can see total distance and remaining distance for the route.

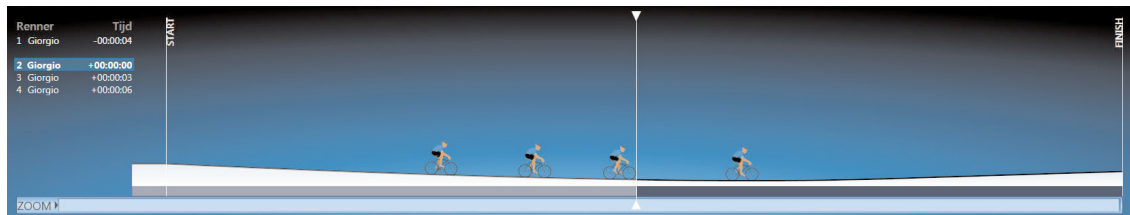
Stopwatch

Duration of a training session
ETA Estimated Time of Arrival in a distance program
Rest. Remaining time in the program

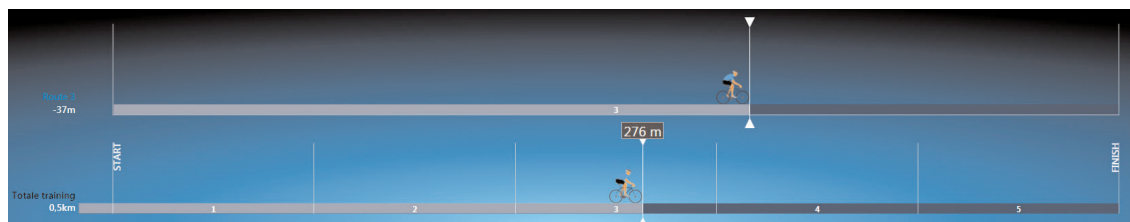
Fields of application *

When the current value is shown in red this means that you are not actually performing as it is indicated at that moment. Because the trainer's roll does not start to turn by itself during descents in the terrain, like it would in the real world, our software engineer has integrated virtual speed formulas. In order to imitate reality as much as possible the rider's speed will increase artificially during descents, and diminish when riding uphill. As a result of this application the indicated speed on the screen will be different from real cycling speed in many cases. This is indicated by means of red numbers for speed under training data. .

Rider positions



The user's position in the program is shown by means of a vertical line. The positions of the opponents are also made visible. On the left you will see the names of the user and the opponents with the differences in Time of Distance between them. You can also **zoom in** on the position display.



The top bar displays the distance in the route with a count down of time or distance. The lower bar indicates the position of the total program.

Catalyst 3D

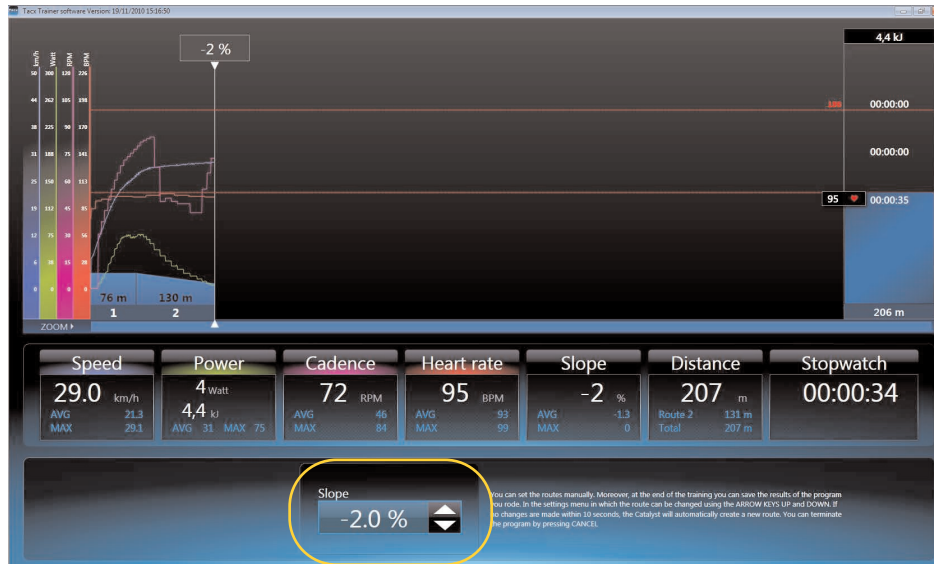
This display is only possible in the Slope/Distance program. Catalyst 3D turns the route into a virtual terrain. If there are opponents competing they will also be displayed. Several **camera angles** are available:

- Near** near
- FAR** far
- Front** frontal view
- Rotate** 360 degree view
- Fixed** camera follows the race from a fixed spot



Free training

When you are riding in Free training you can set the rote settings (Slope, Watt and Heart rate) manually with the **Arrow up** or **Arrow down** key. At the end of your training you can save it as a program.



During Free training you have only one screen choice. When the route setting is being adjusted the brake unit will react immediately and adjusts the resistance. After 10 seconds without modification the Catalyst will automatically create a new route.

You can stop by pressing the button **Cancel** (VR interface) or **arrow left** (Bushido/Vortex computer). A field appears asking you if you wish to save the part you have completed. If you do, rename the program and choose **Save**. If you wish to do so you can look at the scores later in the Analyser or ride the program again another time.