

Race Studio 3 Track Maps

Understanding How They Work For You



Host:

Roger Caddell

AiM Sports - National Training Manager

Co-Host:

Emiliano Bina

AiM-Sportline - Software



[aimsports.com](https://www.aimsports.com)

Tuesday November 2nd, 2021

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Emiliano Bina

software@aim-sportline.com



- Graduated in 2000 as Road Vehicles Engineer with a Thesis on a Simulation Model for Toyota Prius Hybrid Powertrain
- Software Developer for AiM Since 2000: RaceStudio2 Analysis, DragAnalyzer, GPSManager, RaceStudio3
- Passion for Sim Racing and Motorsport, Cooperated for Data Analysis in Endurance Races
- 13 Time AiM Sports Webinar Co-Host!



Emiliano Bina

AiM-Sportline Software Developer

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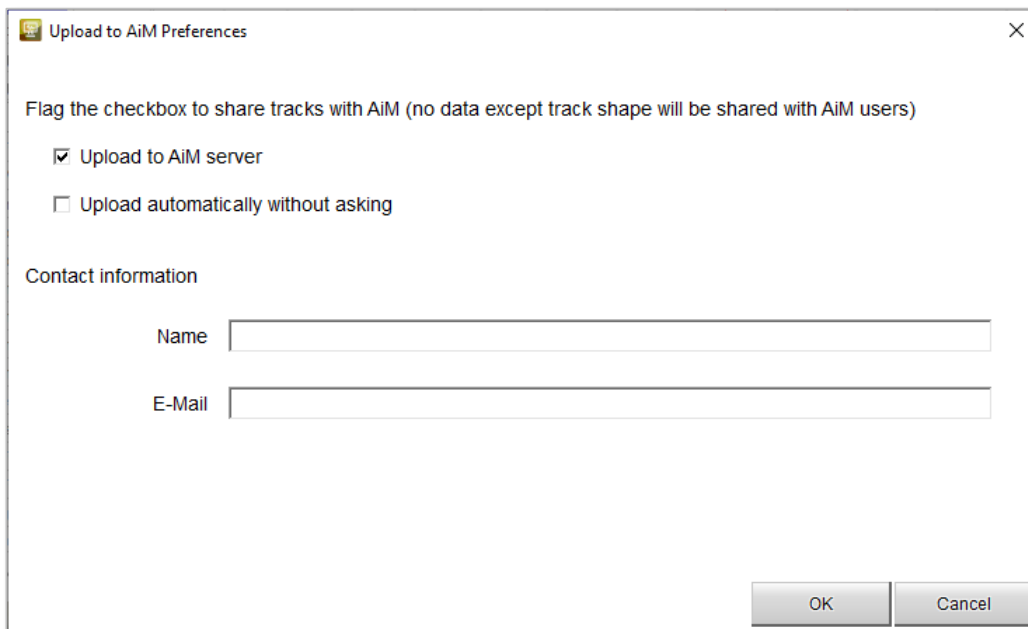


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Track Updates

AiM Constantly Gathers and Processes New Track Information:

- Via E-Mail: tracks@aim-sportline.com, with
 - A Session to Start with Building a Track
 - An Export from Google Earth™
 - Geographic Coordinates and Description of the Missing Track
- Then Back to all Users Through Updates via RS3



Upload to AiM Preferences

Flag the checkbox to share tracks with AiM (no data except track shape will be shared with AiM users)

☒ Upload to AiM server

☐ Upload automatically without asking

Contact information

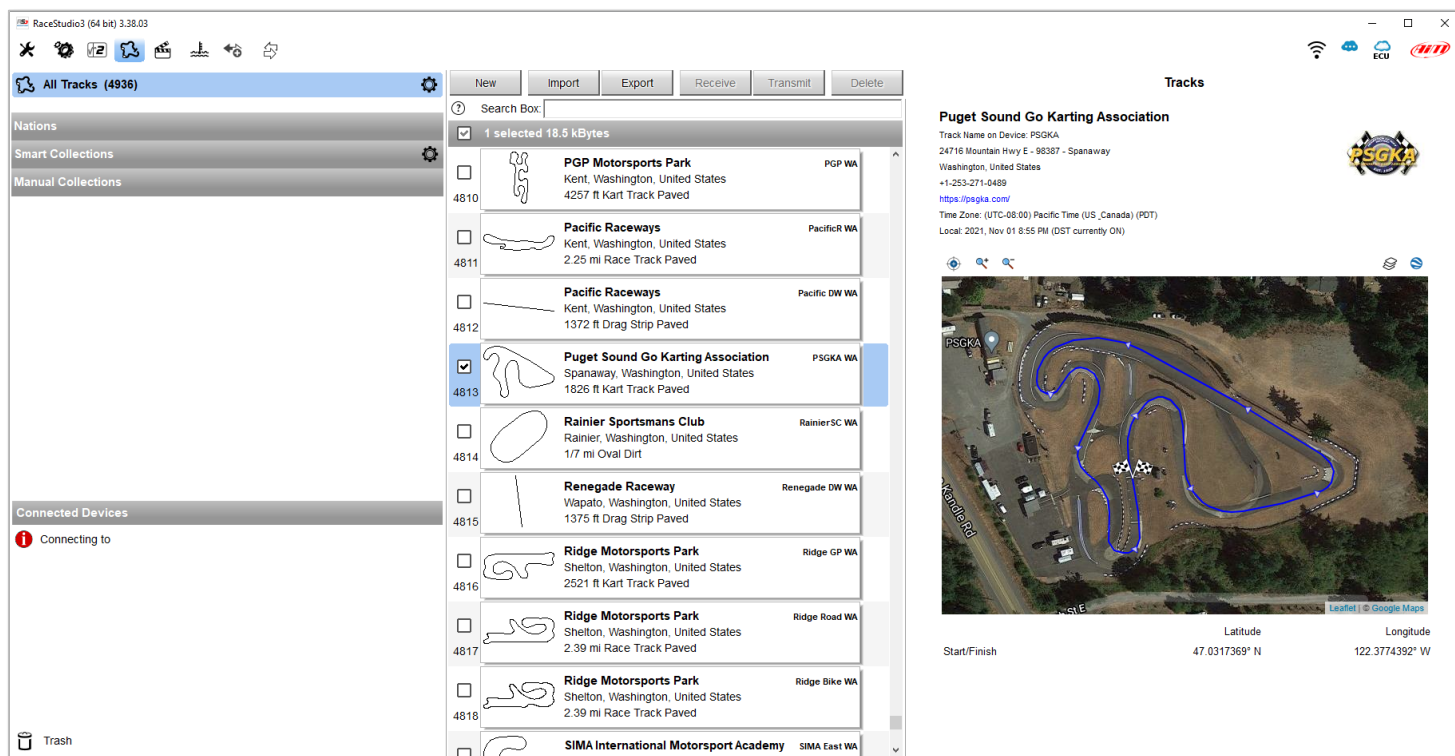
Name

E-Mail

OK Cancel

Track Updates

After Many Years of Creating and Refining a Huge Variety of Racetrack Data, AiM is Proud of What is Likely the Most Complete Track Database in the World



The screenshot shows the RaceStudio3 (64 bit) 3.38.03 interface. On the left, there's a sidebar with 'All Tracks (4936)', 'Nations', 'Smart Collections', 'Manual Collections', and 'Connected Devices'. The main area displays a list of tracks with columns for ID, track name, location, and type. The 'Puget Sound Go Karting Association' track is selected and highlighted in blue. To the right, a detailed view of this track is shown, including its name, location (Spanaway, Washington, United States), length (1826 ft), and a satellite map view with a blue track overlay. The map view also shows the track's latitude and longitude coordinates.

ID	Track Name	Location	Type
4810	PGP Motorsports Park	Kent, Washington, United States	PGP WA
4811	Pacific Raceways	Kent, Washington, United States	PacificR WA
4812	Pacific Raceways	Kent, Washington, United States	Pacific DW WA
4813	Puget Sound Go Karting Association	Spanaway, Washington, United States	PSGKA WA
4814	Rainier Sportsmans Club	Rainier, Washington, United States	RainierSC WA
4815	Renegade Raceway	Wapato, Washington, United States	Renegade DW WA
4816	Ridge Motorsports Park	Shelton, Washington, United States	Ridge GP WA
4817	Ridge Motorsports Park	Shelton, Washington, United States	Ridge Road WA
4818	Ridge Motorsports Park	Shelton, Washington, United States	Ridge Bike WA
	SIMA International Motorsport Academy	SIMA East WA	SIMA East WA

Puget Sound Go Karting Association
 Track Name on Device: PSGKA
 24716 Mountain Hwy E - 98387 - Spanaway
 Washington, United States
 +1-253-271-0489
<https://psgka.com/>
 Time Zone: (UTC-08:00) Pacific Time (US, Canada) (PDT)
 Local: 2021, Nov 01 8:55 PM (DST currently ON)

Latitude: 47.0317369° N Longitude: 122.3774392° W

Almost 5000 Track Configurations (4936 Currently on My PC)

Race Studio 3 Track Maps

Track Updates

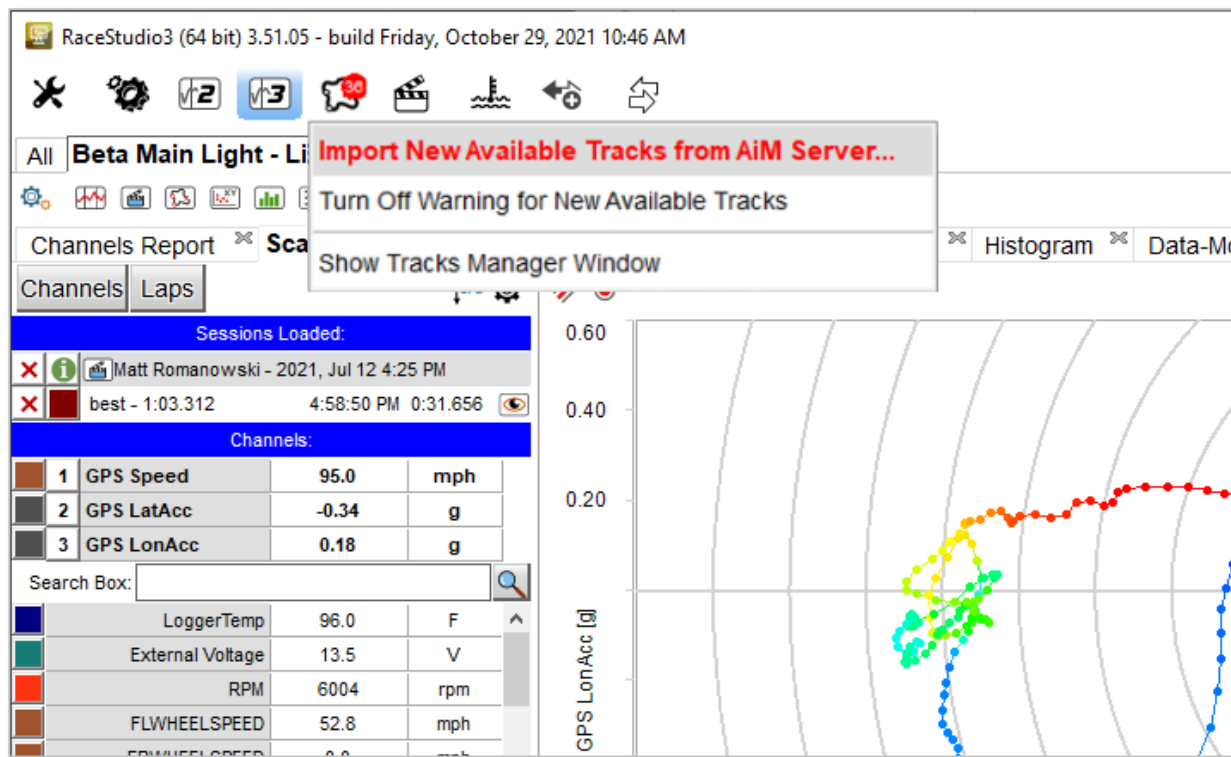
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Track Updates

The Track Map **Red** Notification Icon is Shown When New Track Updates are Available
When You Click on the Track Map Icon When Updates are Available, You are Given Several Choices





Time Zone and DST

RS3 has Included Time Zone and Daylight Savings Time (DST) Information with the Track Files. The Time Zone of a Track Never Changes, and the DST Information is Available for the Next 10 Years.

This Information is Used by AiM Devices to Automatically Set Device Date and Time After Synchronizing with the GPS Clock.

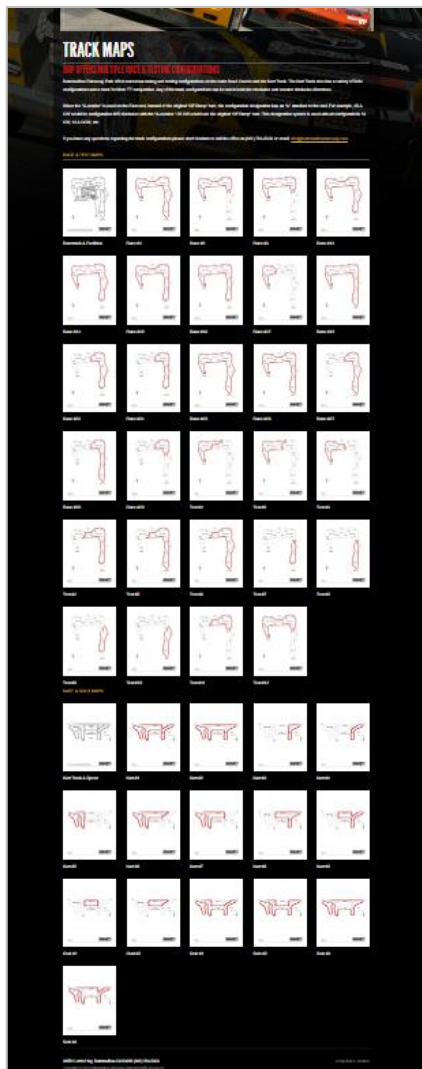
In Case You Turn Your AiM Device ON and You're Not Nearby a Track, the Device Will Use the Time Zone and DST Information From the Closest Track it has Loaded.

It is Extremely Important to Update the Track Database of RS3 and to Update All of the Tracks on Your AiM Devices.

You Can Send All/Many Tracks in the RS3 Database to Your AiM device, This Does Not make it Slower in Identifying the Track.

In the Case of a Facility Having Multiple Track Configurations (Buttonwillow CA as an Example) You can Manually Select the Track Configuration on your AiM device.

Facilities With Several Configurations



This is the Published List of Tracks From Buttonwillow Raceway Park in California.

These are all the Possible Track Configurations as Stated on the Official Track Website.

All These Tracks can Also be Clockwise or Counterclockwise

Race Studio 3 Track Maps

Facilities With Several Configurations

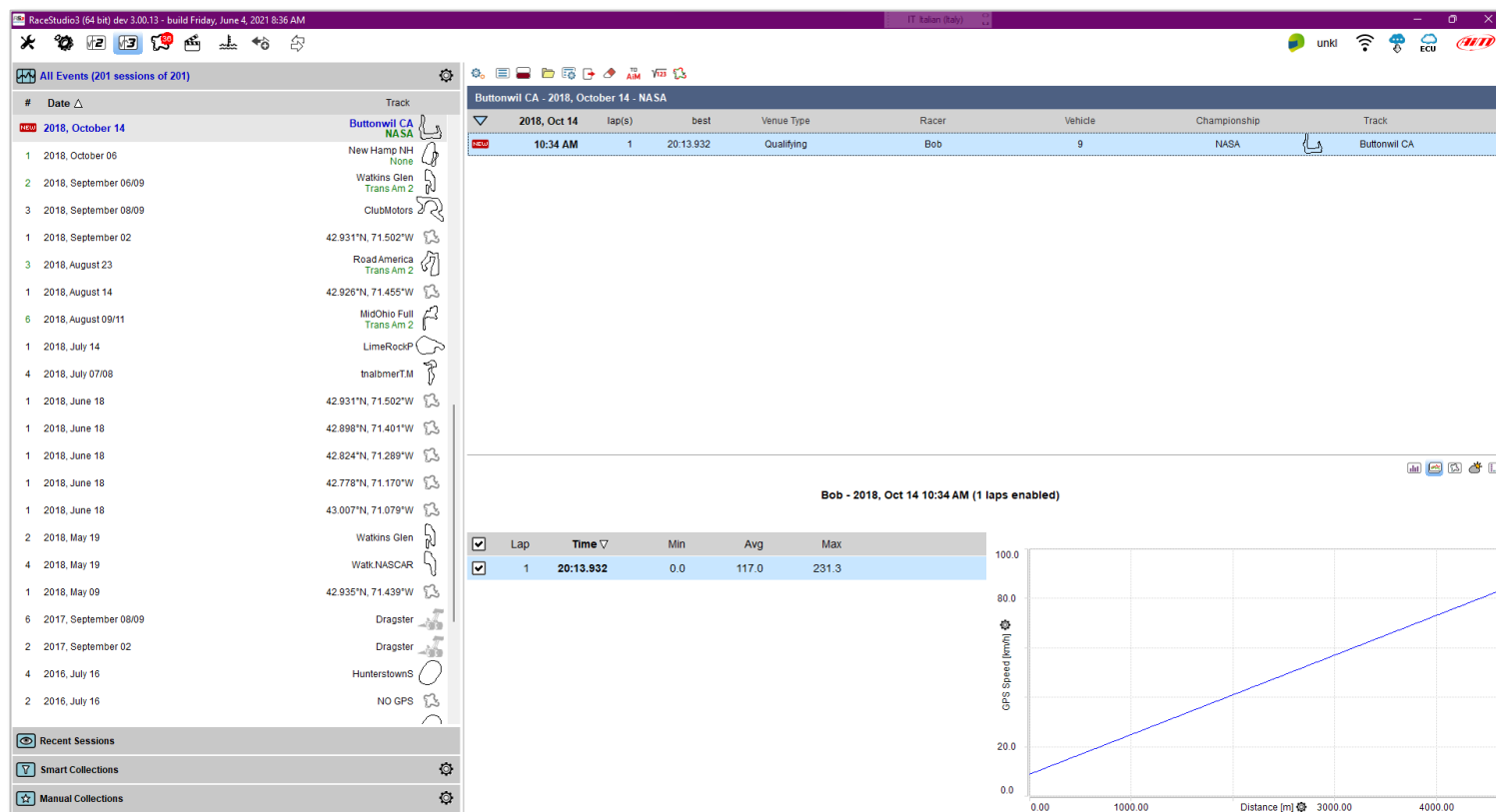
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Unrecognized Tracks In RS3

Suppose you Import a Session into RS3Analysis and the 'Engine' Doesn't Recognize the Track you were at... It Happened in the Example Shown Here: Only 1 Long Lap for the Entire Session.



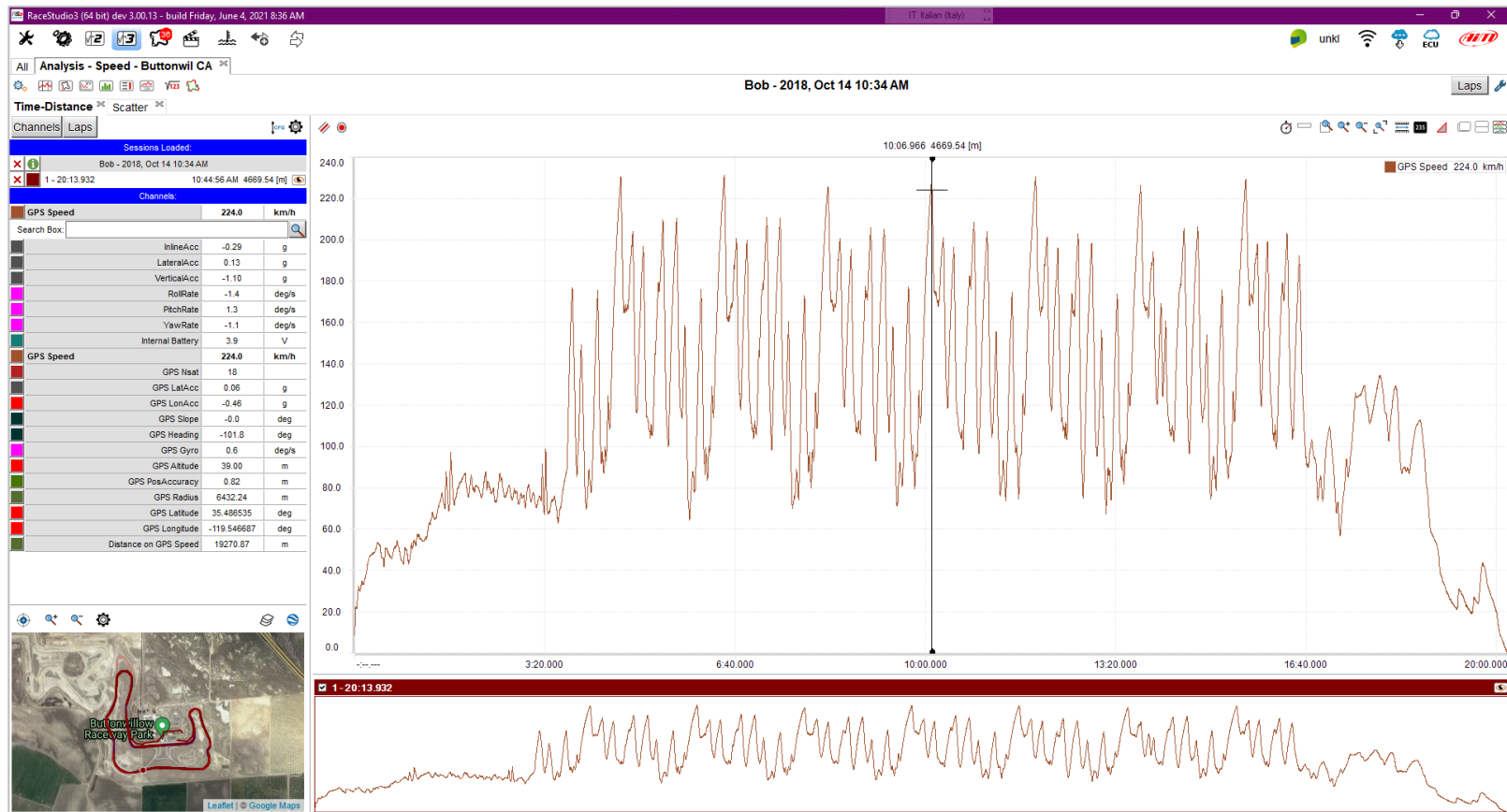
Race Studio 3 Track Maps

Unrecognized Tracks in RS3

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Unrecognized Tracks In RS3

As you Can See Here, the Data Appears as a Single, Long, Lap. Clearly Something Didn't Work.



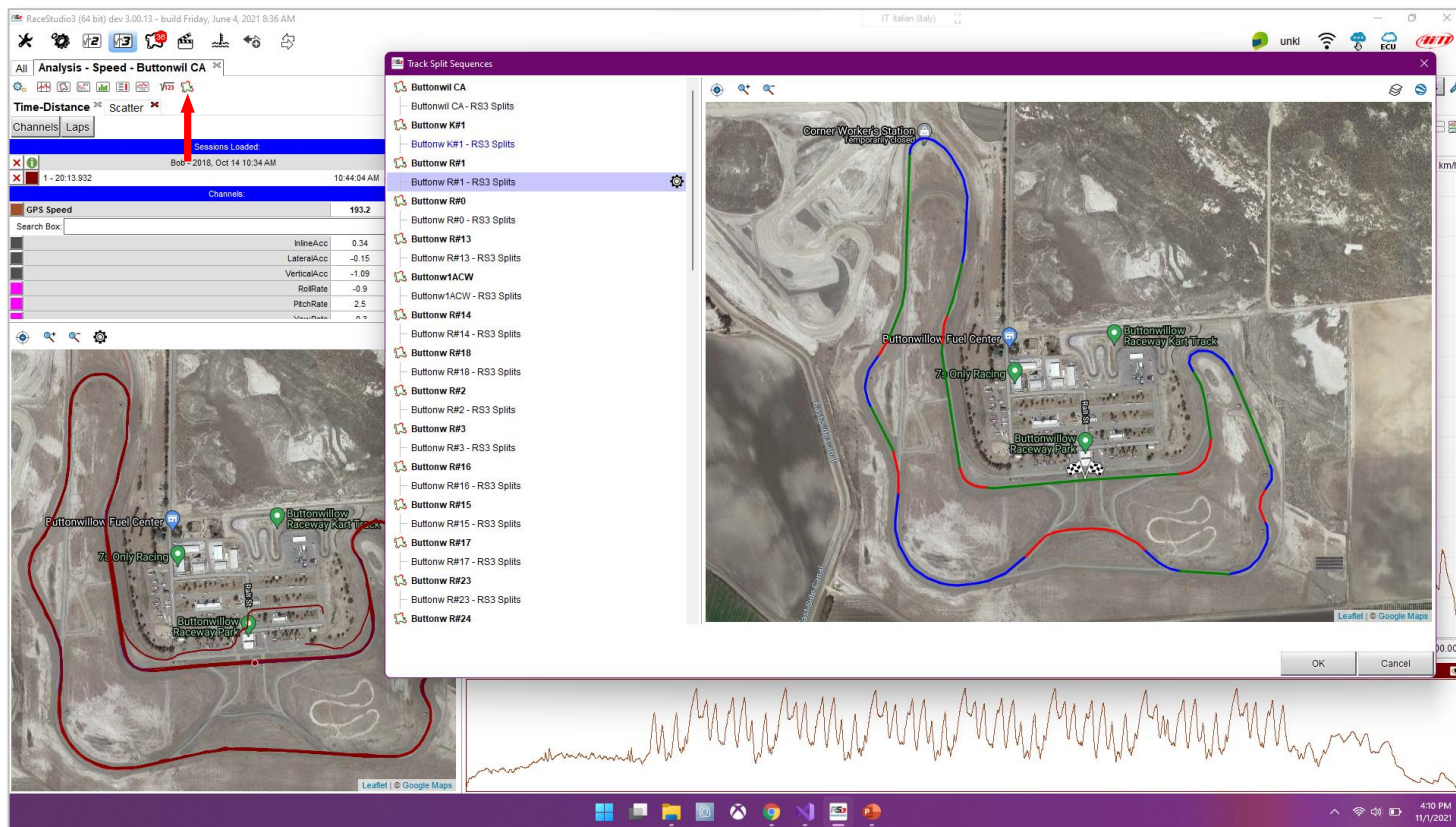
Race Studio 3 Track Maps

Unrecognized Tracks in RS3

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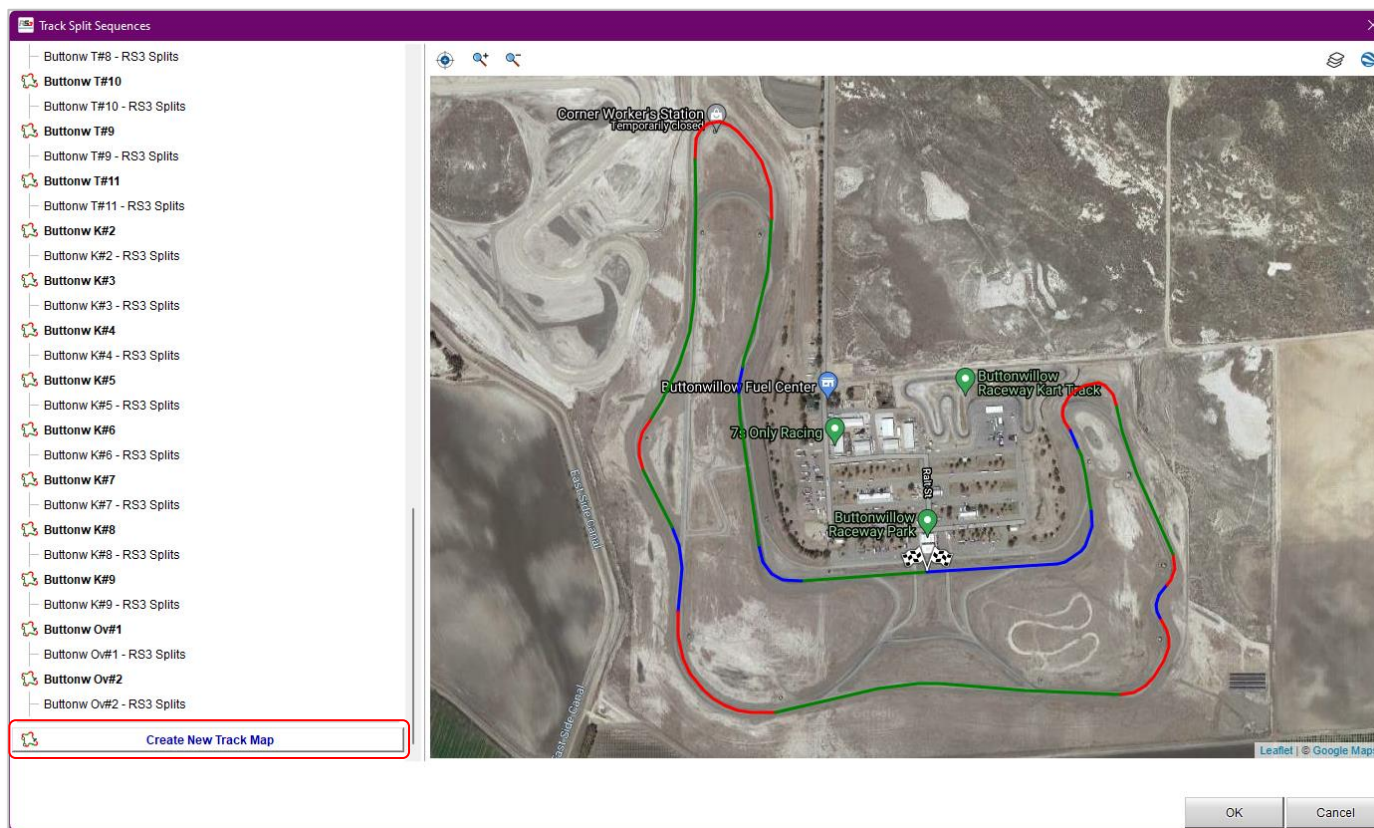
Unrecognized Tracks In RS3

To Fix This Issue, Click on the Track Icon and Open the Track Window.
We can Look at all Possible AiM Track Database Maps... There is no Match.



Unrecognized Tracks In RS3

Scroll to the Bottom of the Track Configuration List and Click on the Button:
“Create New Track Map”



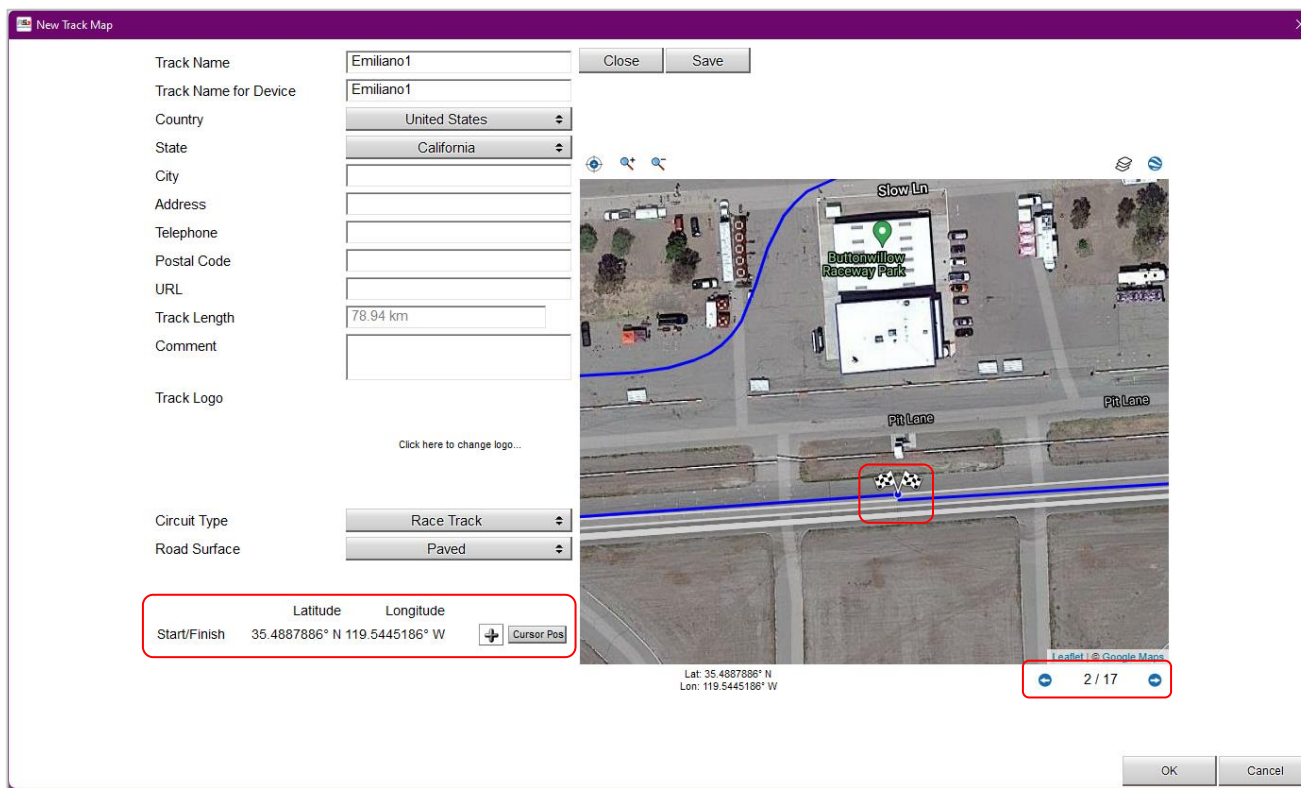
Race Studio 3 Track Maps

Unrecognized Tracks in RS3

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Unrecognized Tracks In RS3

You'll be Taken to the Track Creation Window, With Track Data Already Loaded.
Select a Position for the Start/Finish Line, Select a Good Lap, Then Save the Track.



New Track Map

Track Name: Close Save

Track Name for Device:

Country:

State:

City:

Address:

Telephone:

Postal Code:

URL:

Track Length:

Comment:

Track Logo:
Click here to change logo...

Circuit Type:

Road Surface:

Latitude Longitude
Start/Finish 35.4887886° N 119.5445186° W + Cursor Pos

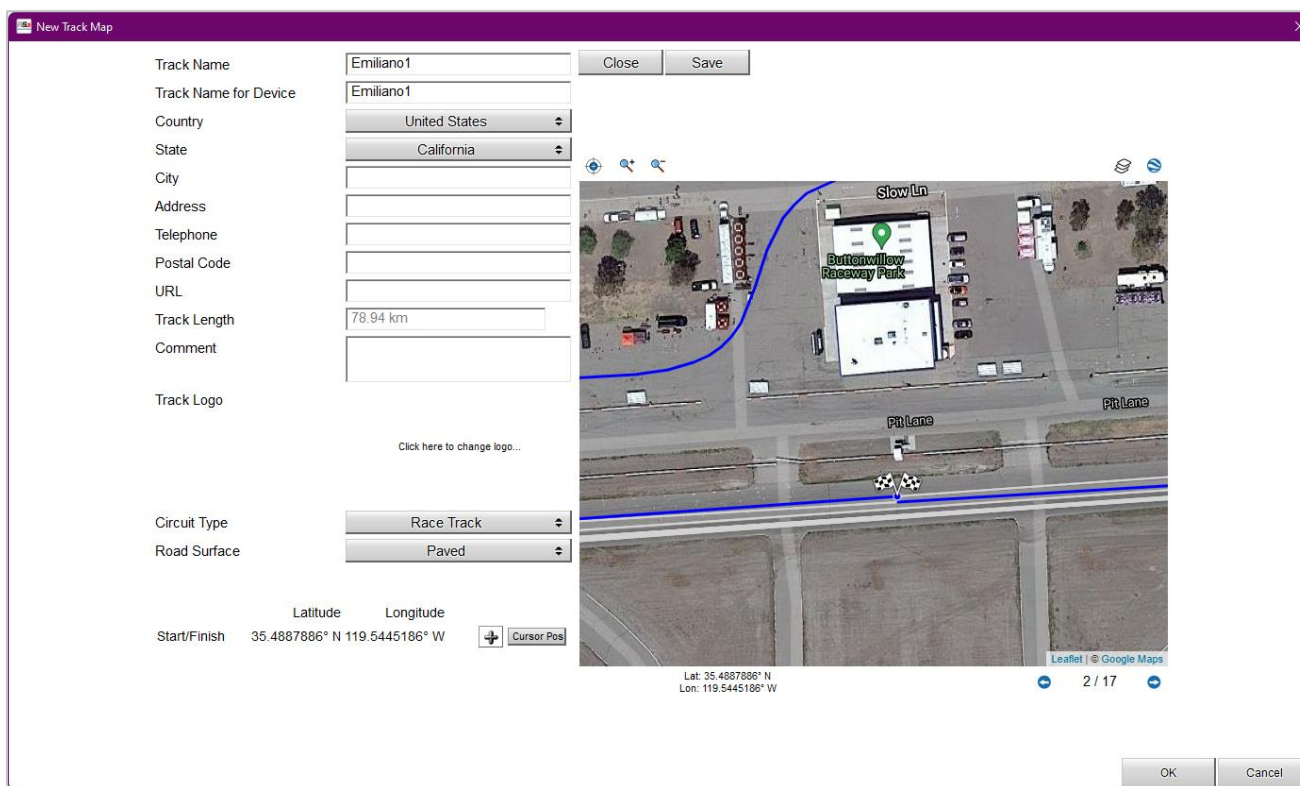
Lat: 35.4887886° N
Lon: 119.5445186° W

2 / 17

OK Cancel

Unrecognized Tracks In RS3

While You're Creating the Track Map, Time Zone and DST Information are Automatically Inserted, Taking this Information From the Closest AiM Track in the RS3 Database.



New Track Map

Track Name:

Track Name for Device:

Country:

State:

City:

Address:

Telephone:

Postal Code:

URL:

Track Length:

Comment:

Track Logo:

Circuit Type:

Road Surface:

Latitude Longitude

Start/Finish:

Lat: 35.4887886° N
Lon: 119.5445186° W

2 / 17

OK Cancel

Unrecognized Tracks In RS3

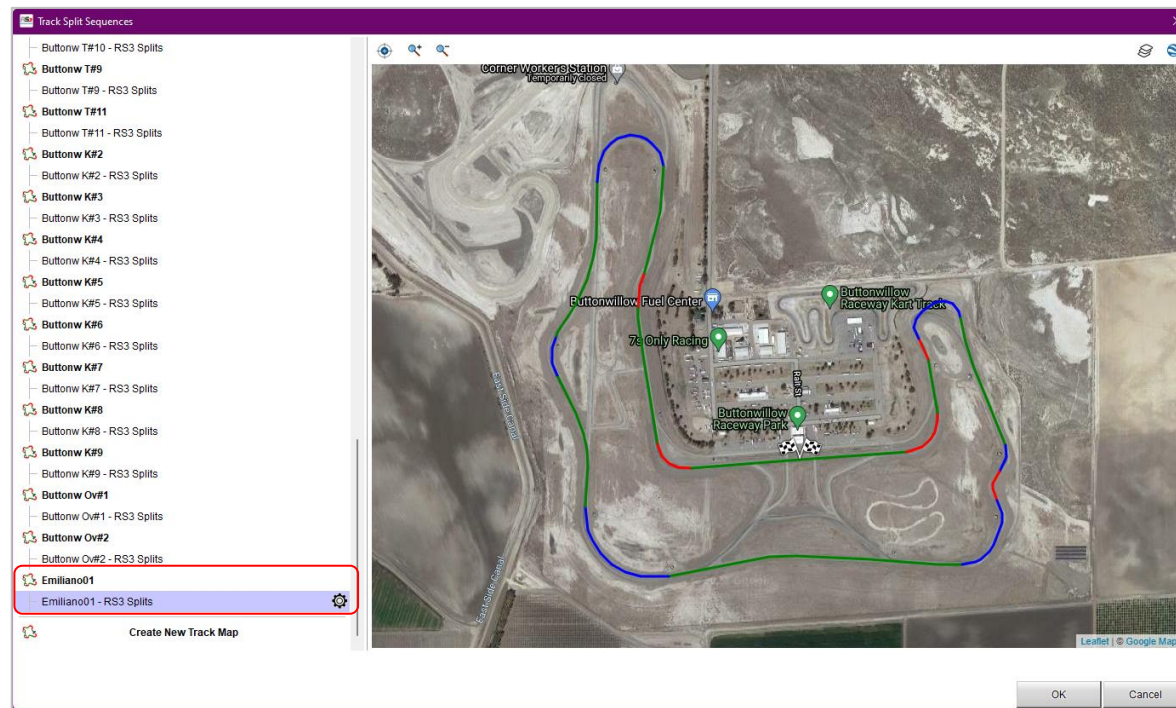
Selecting a Good Lap Not Only Means a Good Driven Line but Also Means Having a Good Match Between the Start and End of the Lap.



Unrecognized Tracks In RS3

As Soon as You Go Back Into the Track Selection Window,
the New Track You Just Created is Automatically Added to the List.

Select It and Click OK



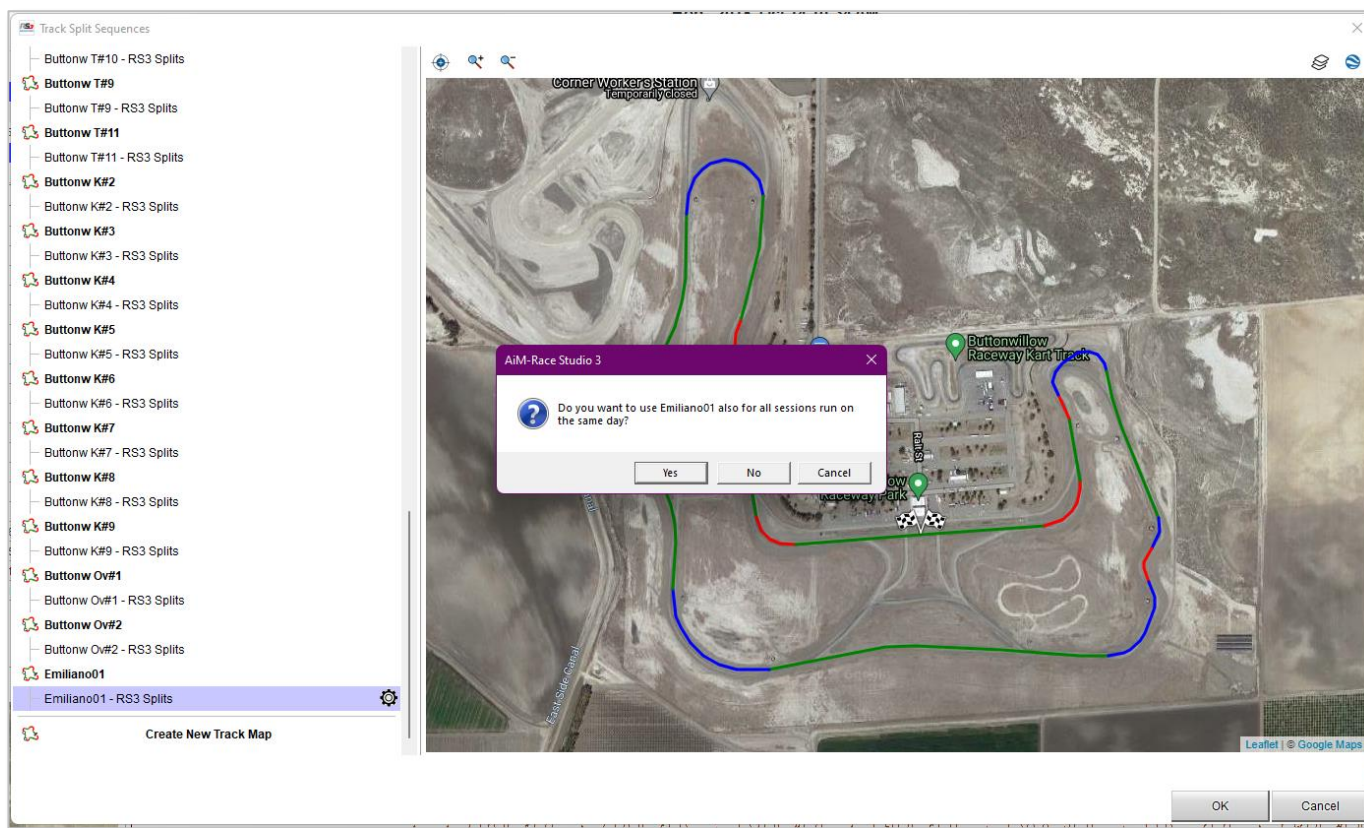
Race Studio 3 Track Maps

Unrecognized Tracks in RS3

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Unrecognized Tracks In RS3

You Will Be Asked if You Want to Use the Same Track Configuration for ALL Sessions of the SAME DAY on the Same Track.



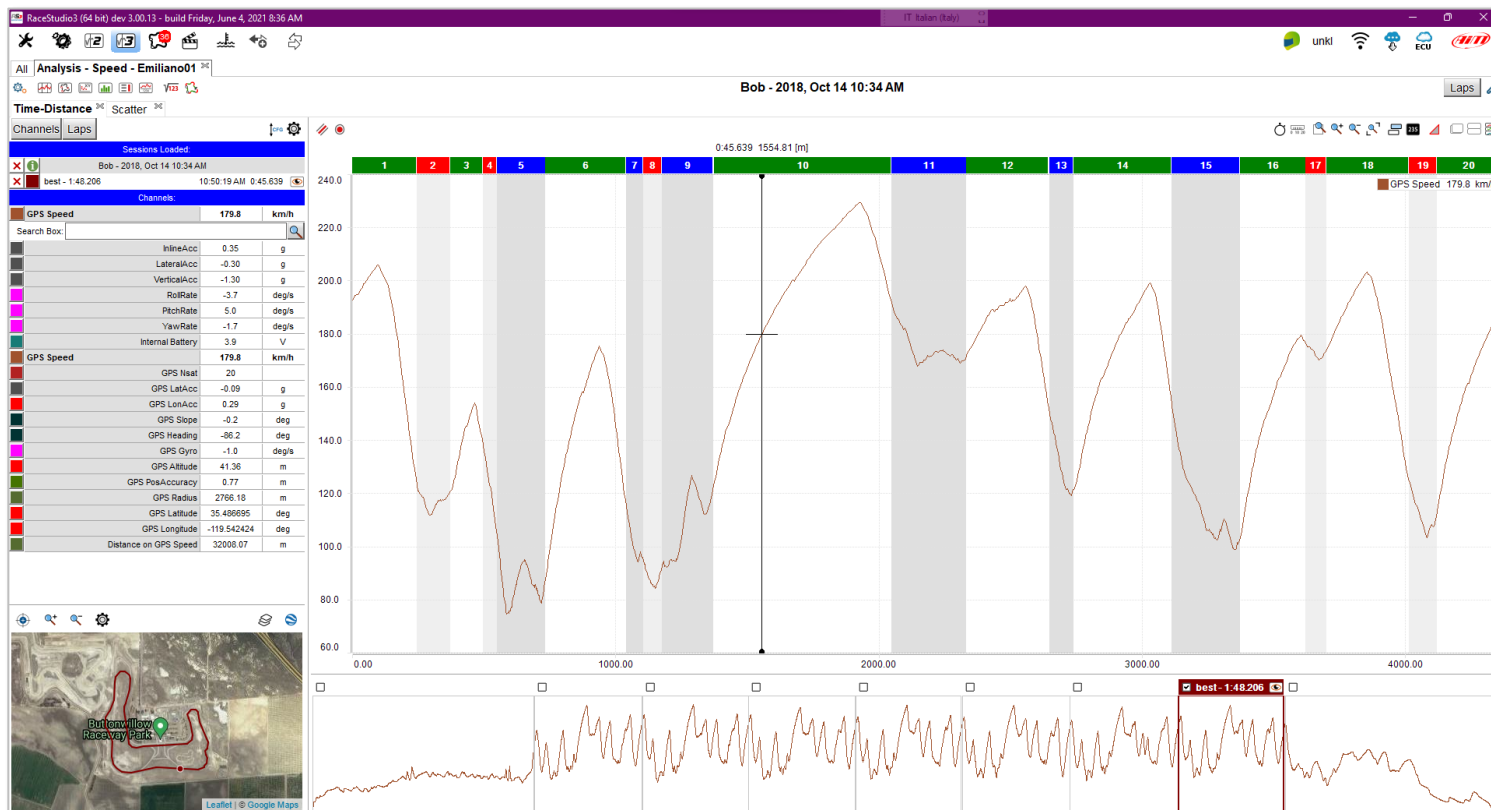
Race Studio 3 Track Maps

Unrecognized Tracks in RS3

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Unrecognized Tracks In RS3

Your Lap Times Will Be Calculated and the Data Will Be Shown as Expected.



Race Studio 3 Track Maps

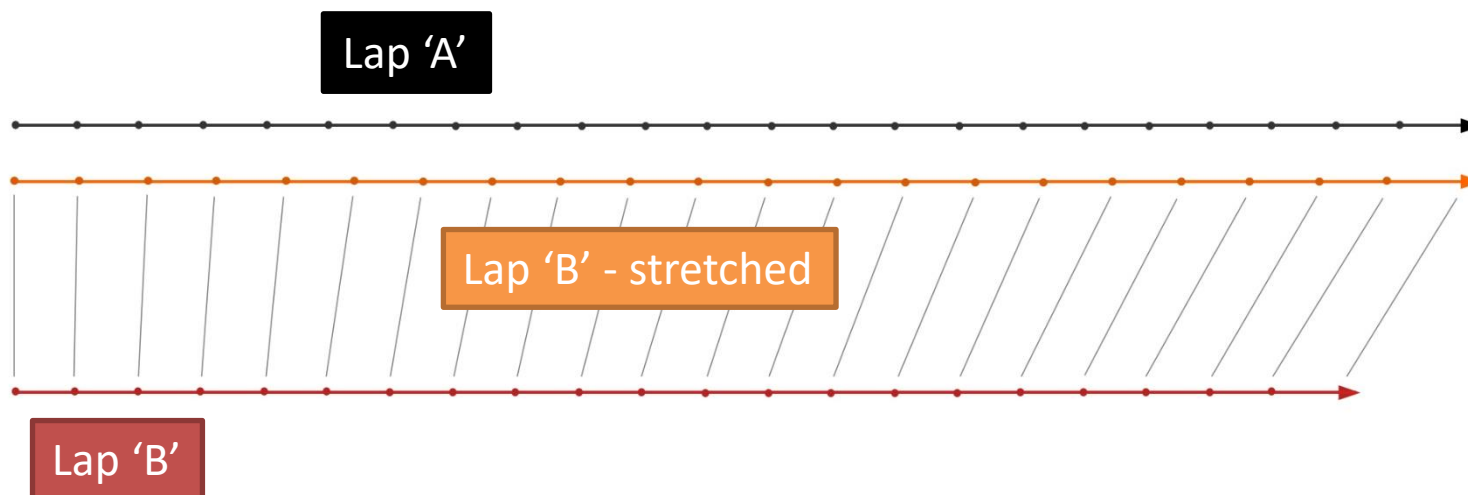
Unrecognized Tracks in RS3

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We Have Answers!
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Smart Synchronization

In RS2Analysis the alignment in distance base was granted stretching two (or more) laps in order for them to feature the same length.



Smart Synchronization

What happens when the differences are concentrated in one or few corners?



Smart Synchronization

Look at the braking zone at the end of the straight line.



Race Studio 3 Track Maps

Smart Synchronization

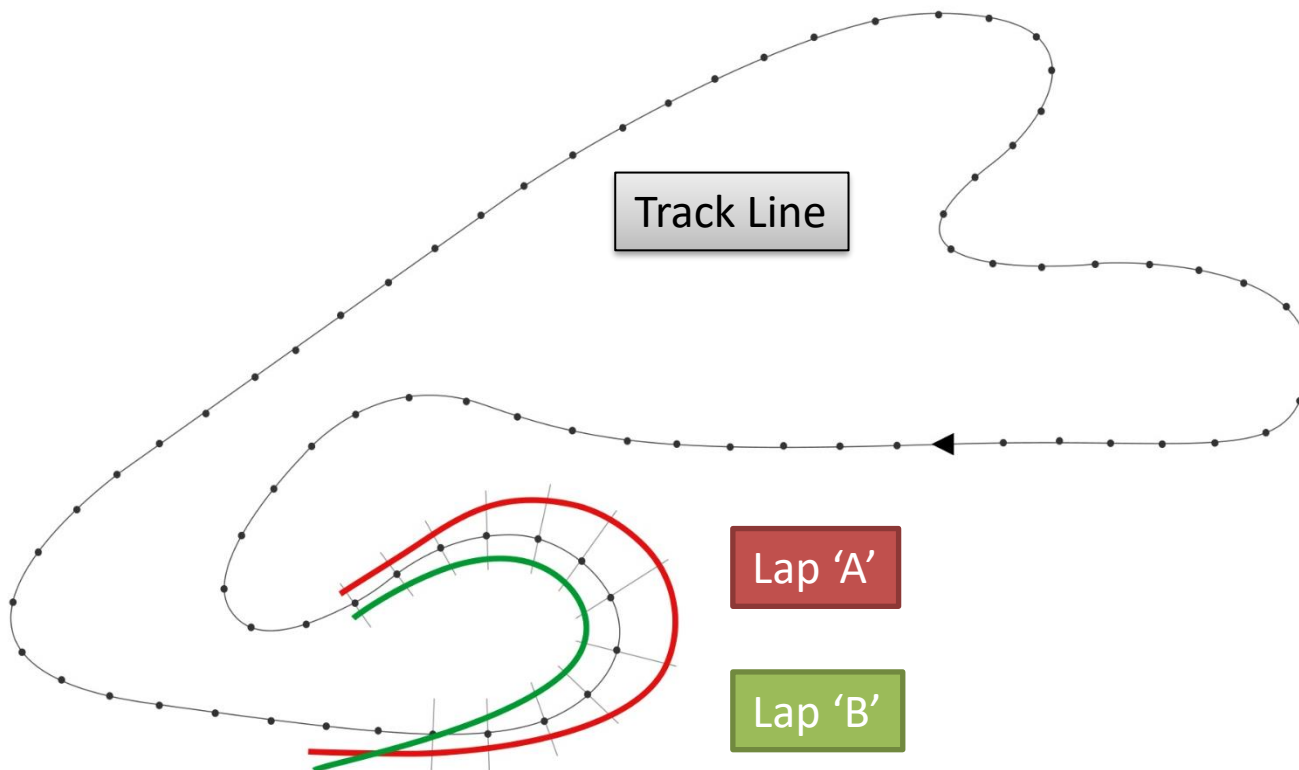
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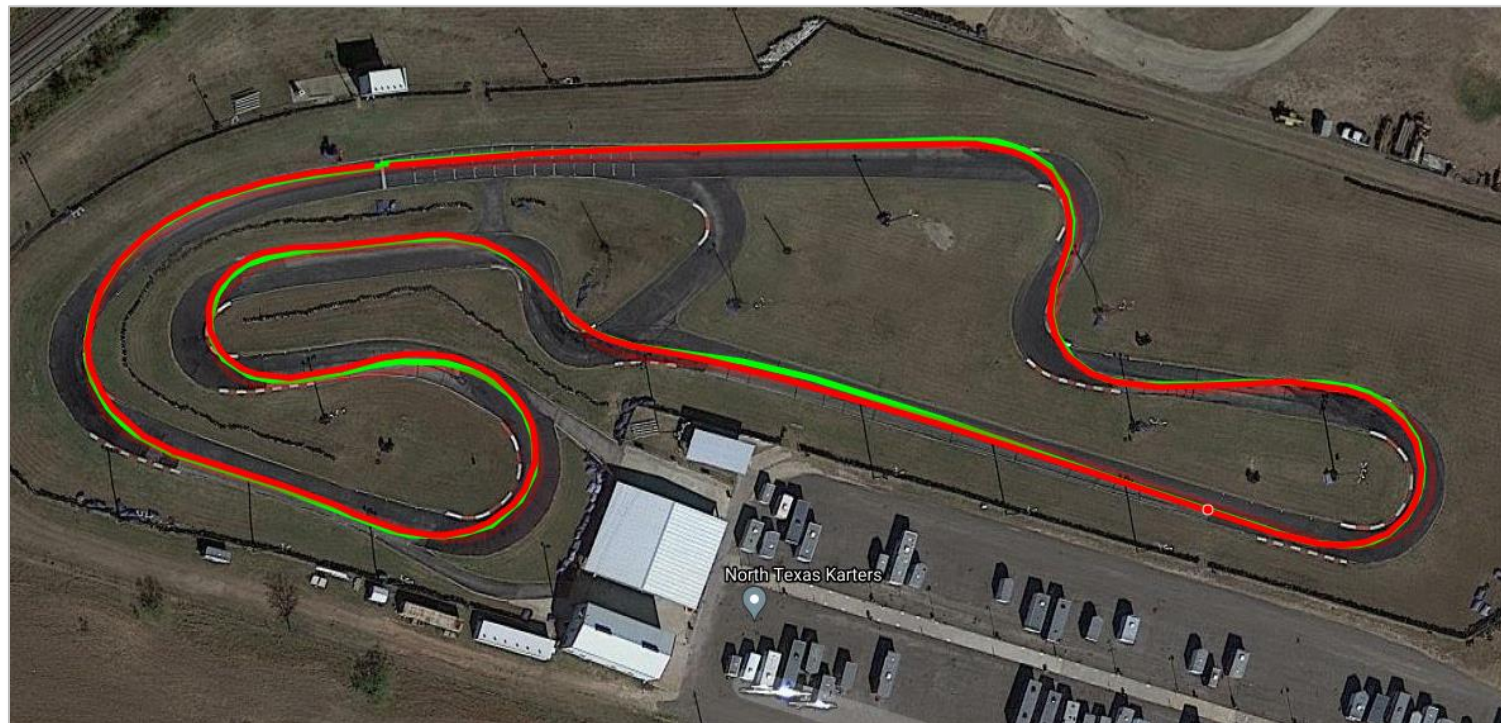
Smart Synchronization

In RS3Analysis the alignment is based on the comparison
between GPS driven line and GPS track map



Smart Synchronization

Same two laps as before.



Race Studio 3 Track Maps

Smart Synchronization

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Smart Synchronization

In RS3Analysis the synchronization on data performs better than in RS2Analysis
(look at the braking phase at the end of the main straight)

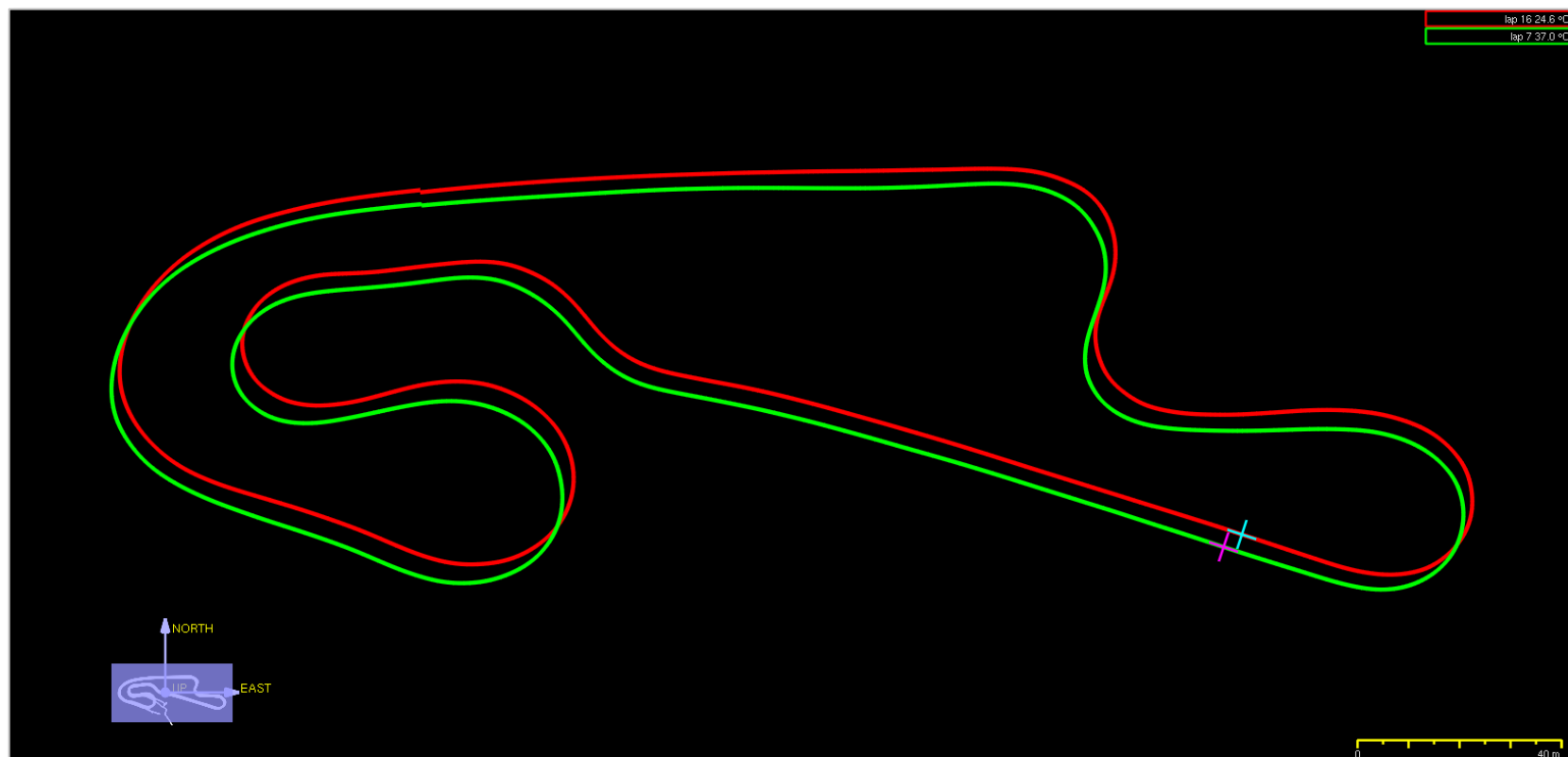


Time Compare

The two engines imply some differences in the Time Compare.

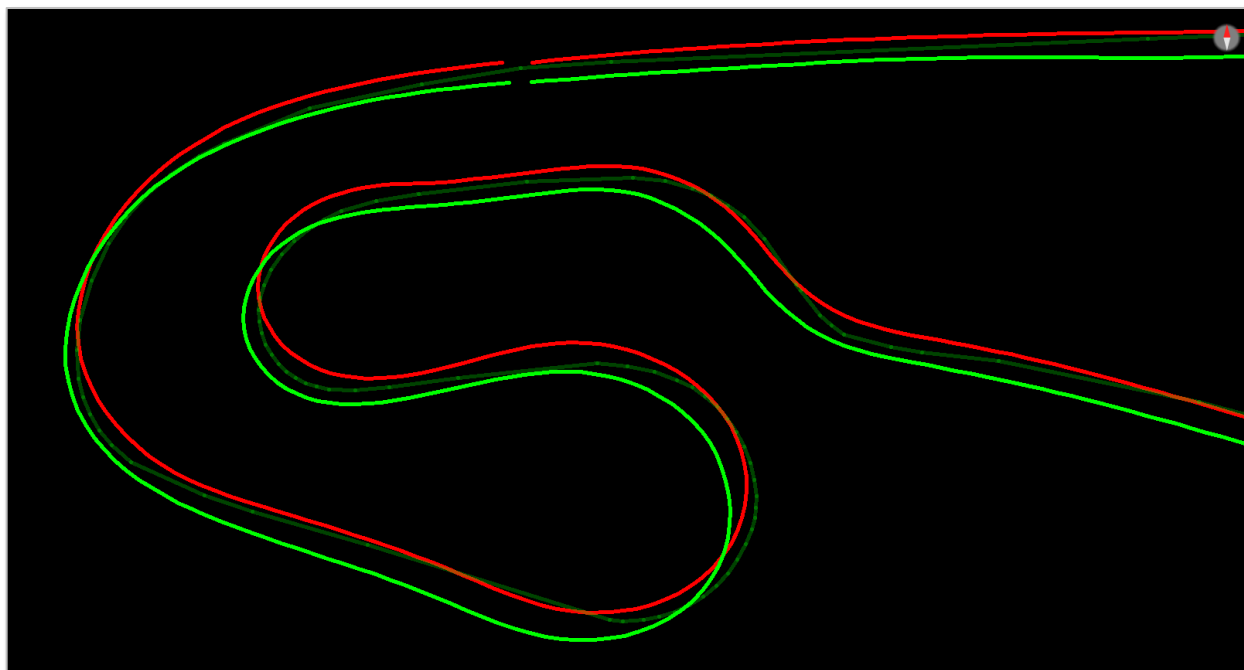
Both approaches are affected by errors: different errors.

99% of the times RS3A is better, sometimes RS3 (now) has effects on misaligned data.



Time Compare

Driven lines in the engine are different...



Solutions: **GPS-09 normally performs better on misalignment**, wait for an improvement in RS3 (though we're reluctant in modifying data) to move a session onto a better match with the track in the database.

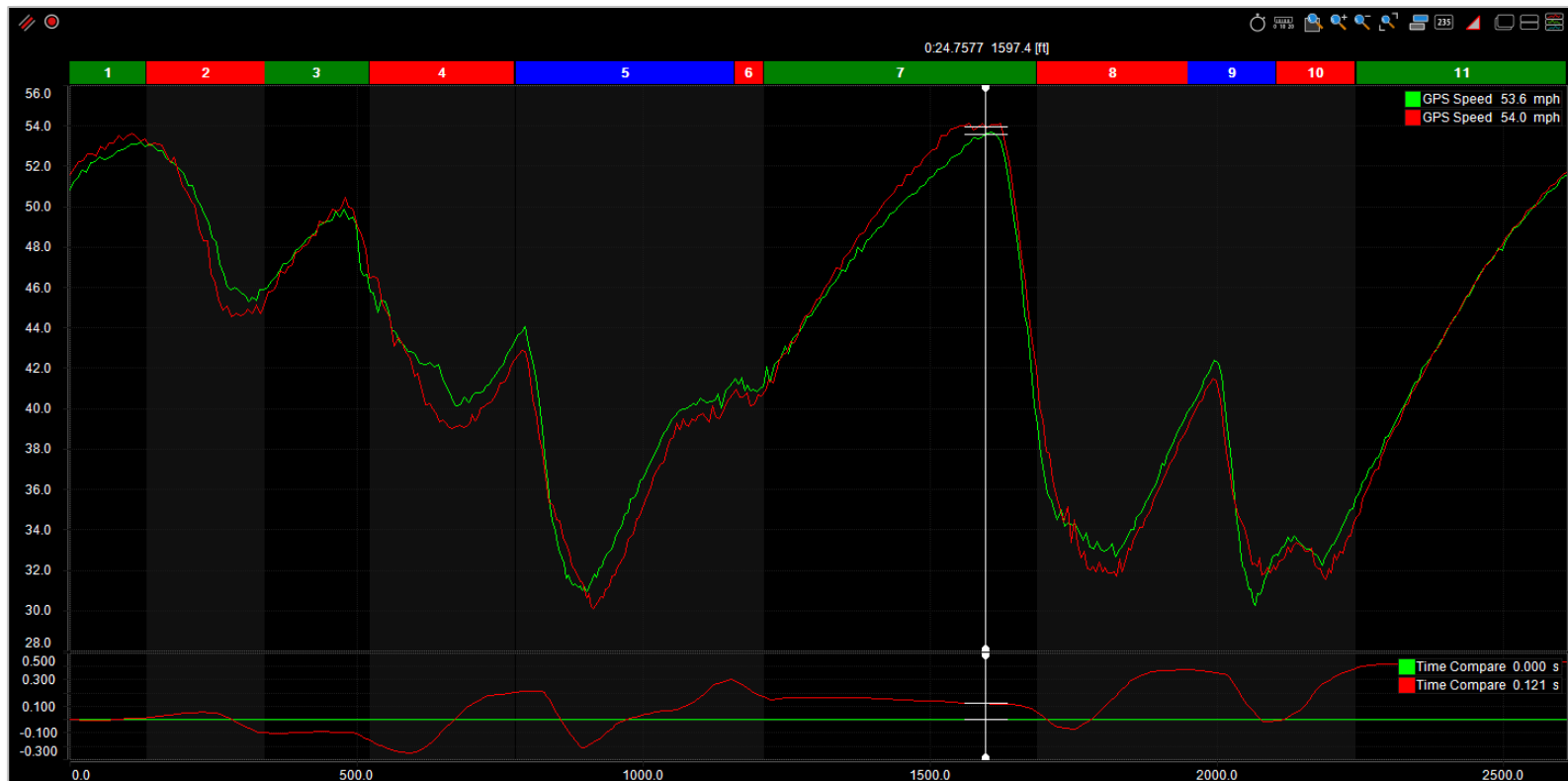
Time Compare

Time Compare behavior look different, because it reflects the two different computation methods.



Time Compare

Time Compare behavior look different, because it reflects the two different computation methods.



Race Studio 3 Track Maps

Time Compare

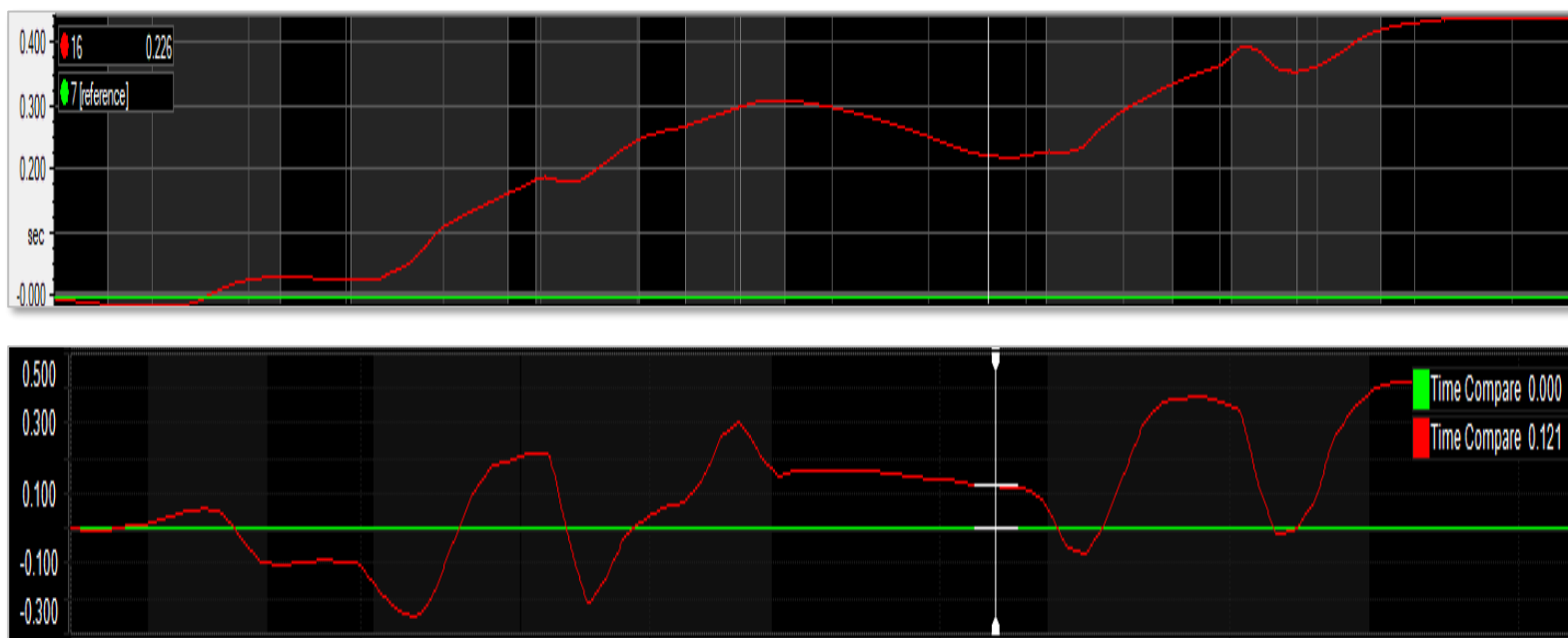
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Time Compare

Time Compare behavior look different, because it reflects the two different computation methods.



LearnFast™ E-Training Videos



Currently **183** Videos and Growing

YouTube www.youtube.com/aimdata

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Understanding How They Work For You

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Race Studio 3 Analysis
AIM Software - Update #2

Host:
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Co-Host:
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AIM-Sportline - Software

aimsports.com Tuesday October 10th, 2021 LearnFast™

Webinar Series
Bringing Data Support and Training to You

Data Download Options
In Race Studio 3

March 31st, 2020

www.aimsports.com 1.800.718.9090

- All New 2020 - 21 Webinar Videos
 - Software Updates with Race Studio 3
 - Pre-Calculated Gear Position Function
 - Configuring WiFi Communication
 - Customizing AiM Device Logos
 - Race Studio 3 Basic Configuration - Part 1
 - Race Studio 3 Basic Configuration - Part 2
 - **I Have Downloaded my Data, Now What - Part 1*
 - **I Have Downloaded my Data, Now What - Part 2*
 - GPS Lap Insert
 - Data Views
 - Measure Units
 - Sort Channels
 - Test Properties
 - Per Lap Color
 - Export Tests
 - Channel Reports
 - Setting Time
 - Track Mapping
 - Selection Criteria
 - Sensor Calibration
 - Conditional Alarms
 - Gear Position
 - Firmware Update
 - Solo Configuration
 - Transmit Tracks
 - Gps Manager Overview
 - New GPS Track
 - Webinars
- * Most Popular and Recommended*

Additional Materials

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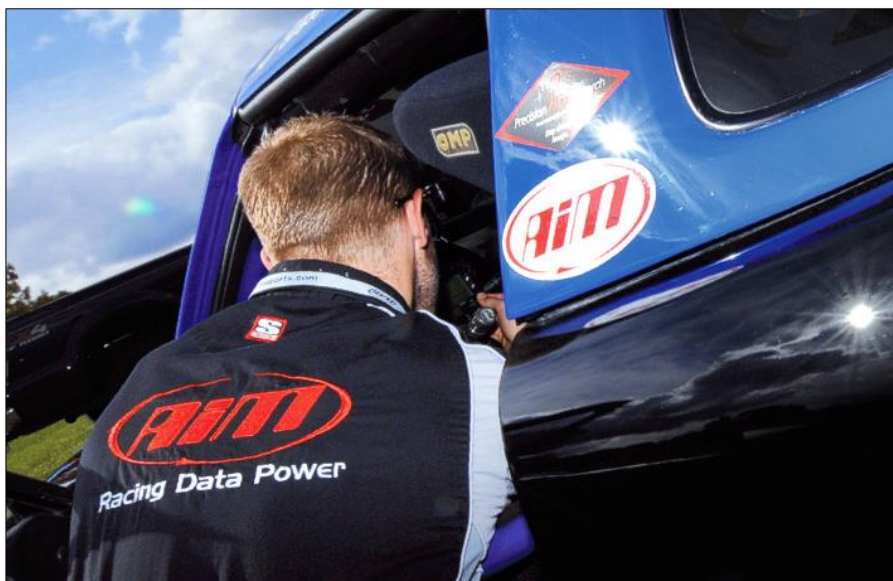
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Customer Support



AiM Sports Technical Support Staff Regularly
Attend Races and Other Events

Look For Us At An Event Near You
Or Call Us At **800.718.9090**



Customer Support

At An Event Near You!

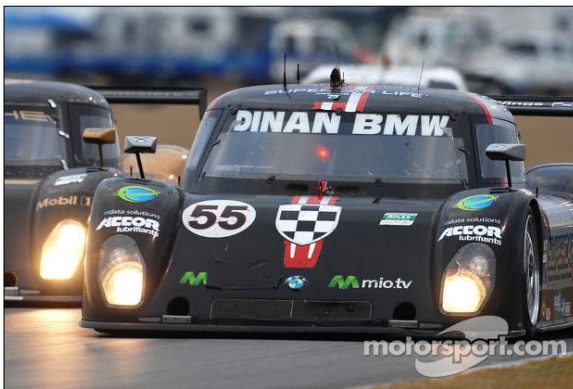
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Professional Racing Coach

Ed Zabinski



Host:

Roger Caddell

AiM Sports - National Training Manager

Guest:

Ed Zabinski

Racing Coach

Next Webinar: Tuesday November 9th, 2021 - 10:00am Pac/1:00pm East

Next Webinar Topic

Professional Racing Coach – Ed Zabinski

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Contact Information



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