AiM Infotech

Sim Racing
rFactor2 setup

Release 1.01

1 – rFactor 2

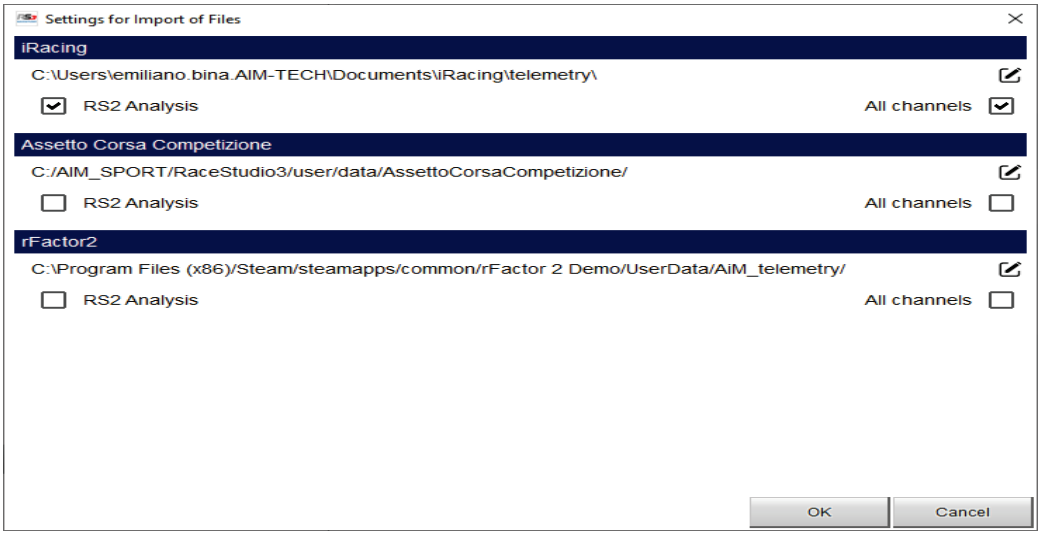
In this guide we'll see in a few steps how to generate telemetry data from rFactor 2 with our software RaceStudio 3 and how to start analyzing them.

2 – Preliminary settings

Download RaceStudio 3 from the website www.aim-sportline.com/en/sw-fw-download.htm and install it. After the process is completed you'll also find that RaceStudio 2 has been installed in your PC, this is the software that you'll use to analyze your telemetry data.

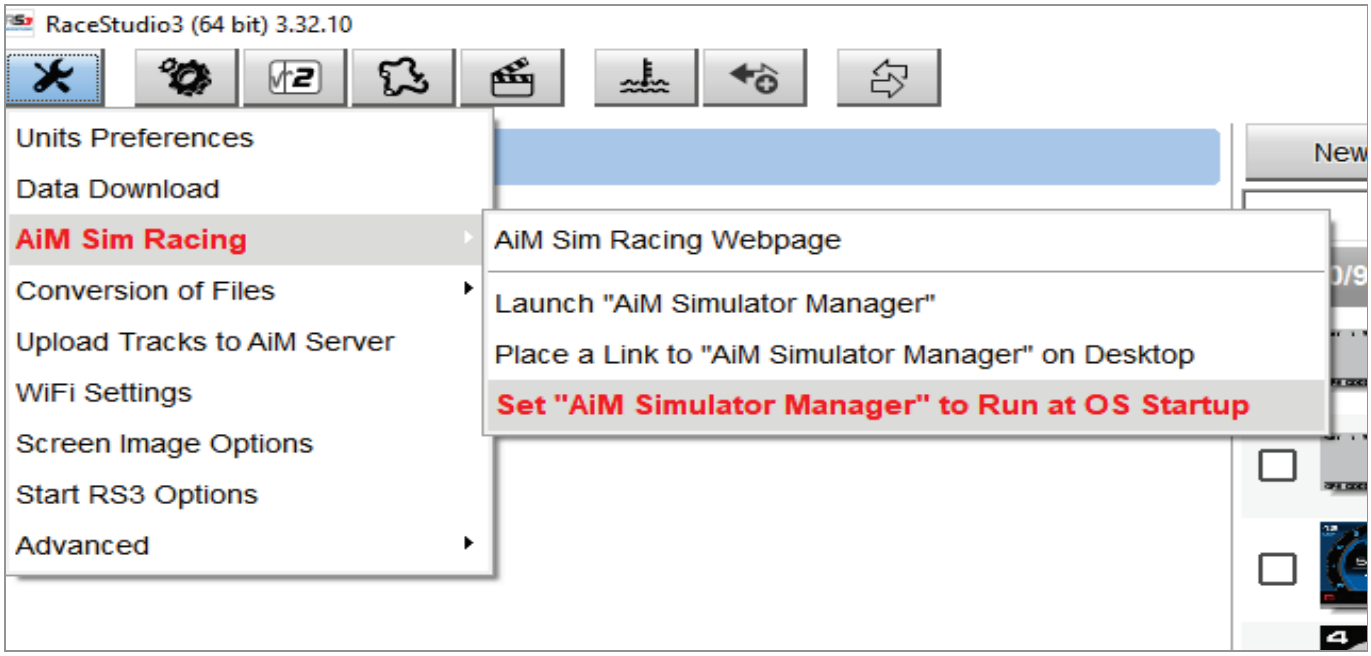
- Now run RaceStudio 3 and in the *Preferences* menu go to *Conversion* and *Settings*. In this section there are the following fields and options:
    - The path to the folder where data to be analyzed are stored. This path can be customized using the icon at the end of the line
    - A checkbox for the Race Studio Analysis converter selection.
    - A checkbox you can choose in rFactor 2 if you want all the available channels to be logged instead of the default list (the complete lists are in the appendix).

It's recommended to flag the RS2 checkboxes; doing so you will make RaceStudio 3 to monitor the folder in which the simulator saves the telemetry files. If you prefer to check it manually you can however use the batch conversion option available in the *Preferences – Conversion* menu.



Inside RaceStudio 3 you'll find a small application, the AiM Simulator Manager (ASM). ASM needs to be running while you are using the simulator and will allow you to record the telemetry data.

To select how this application should be launched, enter the RaceStudio 3 *Preferences* menu, then go in *AiM Sim Racing* section and make your choice if this should run automatically or manually (setting ASM to run at OS Startup is recommended).



The first time that you'll use the ASM, you'll simply have to choose what simulator you are going to use, clicking the start button and choosing it from the options.

From the second time, ASM remembers your choice and based on the launch option chosen, it will start recording data during the race and will stop when the session will be over (so you don't have to press the stop button of the ASM).

- ASM to generate telemetry data from rFactor 2 copies automatcally a little plugin (rF2AiMPlugin.dll) in the rFactor 2 folder. In order to make this plugin work , only the first time that you use ASM you need to launch it **before** rFactor 2. There is no problem if you forget it , ASM will remind you by an on-screen warning.

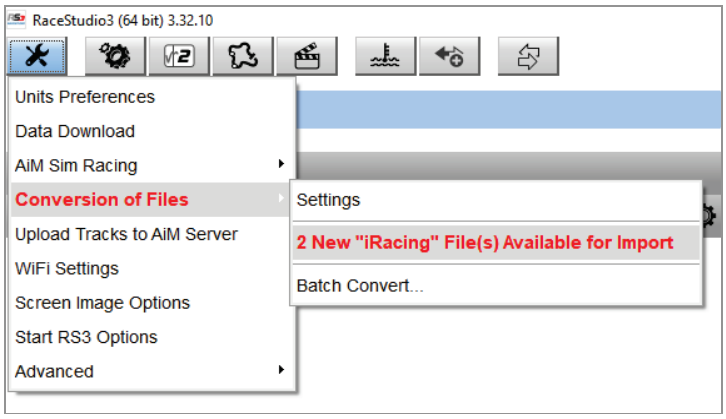
3 – Drive and get data

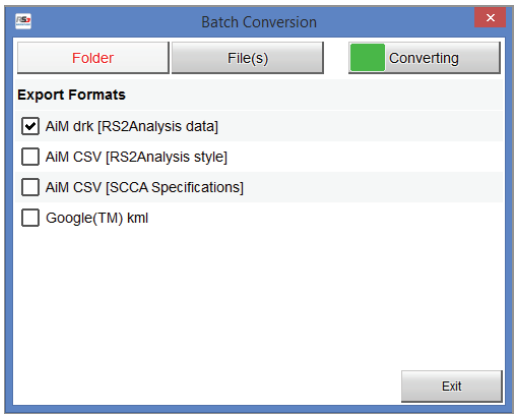
Once everything is properly set, there are few steps left

- Run rFactor 2 and enjoy!

- At the end of the session the data will be stored in the default folder: rFactor2\userData\AiM_telemetry.

- Now you have to import the data and convert them in DRK format. To do this go to the *Preferences* menu , then *Conversion of Files* and select the files that you need. In few seconds RaceStudio2 Analysis will automatically open the last session files and you'll be able to start analyzing the data and checking every single detail of your performance!





4 – Appendix

Default channel

CHANNEL NAME	FUNCTION	CHANNEL NAME	FUNCTION
LapDist	Lap distance	PitchRate	Pitch rate
ClutchRPM	Pitch rate	OilT	Oil temperature
RPM	Engine RPM	WaterT	Water temperature
RollRate	Roll rate	Acc_lat	Lateral accelerometer
Acc_lon	Longitudinal accelerometer	Acc_up	Vertical accelerometer
Speed	Vehicle speed	LapDist_scoring	Lap distance scoring
Sector	Sector number	TotalLaps	Total laps number
TurboBoost	Turbo boost	YawRate	Yaw rate
Brake	Brake pressure	BrakeBiasRear	Rear brake bias
EngineTorque	Engine torque	Fuel	Fuel level
MaxRPM	Maximum RPM value	Steer	Steering
Clutch	Clutch position	East	Vehicle pos (east coordinate)
North	Vehicle pos (north coordinate)	Session	Session number
Speed_lat	Lateral speed	Speed_lon	Longitudinal speed
Speed_up	Vertical speed	Up	Vehicle pos (vertical coord)
Gear	Selected gear	Throttle	Throttle position
Counter	Counter	LapNumber	Lap number
TimeInLap	Total lap time	GPS_Gyro	
GPS_Altitude		GPS_Heading	
GPS_LatAcc		GPS_LonAcc	
GPS_PosAccuracy		GPS_Nsat	
GPS_SpdAccuracy		GPS_Speed	
GPS_Slope			

All channel

CHANNEL NAME	FUNCTION	CHANNEL NAME	FUNCTION
LapDist	Lap distance	NumRedLights	Red lights number
NumVeichles	Number of vehicles	Raining	Rain (weather)
StartLight	Start light	YellowFlagState	Yellow flag state
PitchRate	Pitch rate	ClutchRpm	Clutch RPM
OilT	Oil temperature	RPM	Engine RPM
WaterT	Water temperature	RollRate	Roll rate
Acc_lat	Lateral accelerometer	Acc_lon	Longitudinal accelerometer
Acc_up	Vertical accelerometer	Speed	Vehicle speed
EstimatedLapTime	Estimated lap time	HeadLights	Head lights
InPits		IndividualPhase	Individual phase
LFBrakePressure	Left front brake pressure	LFBrakeTemp	Left front brake temp.
LFGroundVel	Front left wheel ground speed	LFLatGroundVel	Front left wheel lat ground speed
LFLatPatchVel	Front left patch speed	LFLonGroundVel	Front left wheel long ground speed
LFLonPatchVel	Front left longitudinal patch speed	LFPatchVel	Front left wheel patch speed
LFRideHeight	Front left ride height	LFRotation	Left front rotation
LFSuspForce	Front left suspension force	LapDist_Scoring	Lap distance scoring
LapStartTime	Time from lap start	LapsBehindLeader	Laps behind race leader
LapsBehindNext	Laps behind preceding driver	MaxWetness	Maximum wetness
NumPenalties	Number of penalties	NumPitStops	Number of pit stops
PathLateral		PitState	Pit state
Place		PosX_scoring	Position scoring (x axis)
PosY_scoring	Position scoring (y axis)	PosZ_scoring	Position scoring (z axis)
Qualification	Qualification	Sector	Sector number
TimeBehindLeader	Time difference from race leader	TimeBehindNext	Time difference from next driver
TimeIntoLap	Lap time	TotalLaps	Total laps number
TrackEdge	Track edge	TrackTemp	Track temperature
TurboBoost	Turbo boost	WindSpeed	Wind speed
YawRate	Yaw rate	Brake	Brake pressure
BrakeBiasRear	Rear brake bias	EngineTorque	Engine torque

Fuel	Fuel level	Max RPM	Maximum RPM value
Steer	Steering	BrakeFilt	Brake filter
Clutch	Clutch position	ClutchFilt	Clutch filter
CountLapFlag	Lap flag counter	East	Vehicle position (east coordinate)
Flag	Flag	InGarageStrall	
LFCamber	Left front camber	LFCarcassTemp	Front left wheel carcass temperature
LFDetached	Front left wheel detached	LFFlat	Front left wheel flat
LFGripFact	Front left wheel grip factor	LFInnerTireTempCent	Front left wheel inner temp Central
LFInnerTireTempIn	Front left wheel inner temp In	LFInnerTireTempOut	Front left wheel inner temp out
LFLatForce	Left front latitudinal force	LFLonForce	Left Front Longitudinal Force
LFPressure	Left front wheel press	LFSurfTempCenter	Front left wheel central temp.
LFSurfTempIn	Left front surface temperature in	LFSurfTempOut	Left front surface temperature out
LFSurfType	Left front surface type	LFTireLoad	Left front tire load
LFToe	Left front toe	LFVertTireDeflectio	Front left wheel vertical deflection
LFWear	Left front wear	LFWheelYLocation	Front left wheel location (y axis)
LRBrakePressure	Left rear brake pressure	LRBrakeTemp	Left rear brake temperature
LRCamber	Left rear tire camber	LRCarcassTemp	Rear left wheel carcass temperature
LRdetached	Rear left wheel detached	LRFlat	Rear left wheel flat
LRGripFat	Rear left wheel fat grip	LRGroundVel	Rear left wheel ground speed
LRInnerTireTempCent	Rear left wheel central temp.	LRInnerTireTempIn	Rear left wheel inner temp. input
LRInnerTireTempOut	Rear left wheel inner temp output	LRLatForce	Left rear latitudinal force
LRLatGroundVel	Rear left wheel lateral speed	LRLatPatchVel	Rear left wheel lateral patch speed
LRLonForce	Left rear longitudinal Force	LRLonGroundVel	Rear left wheel ground speed
LRLonPatchVel	Rear left wheel lon patch speed	LRPatchVel	Rear left wheel patch speed
LRPressure	Left rear wheel pressure	LRRideHeight	Left rear ride height
LRRotation	Left rear rotation	LRSurfTempCenter	Rear left wheel surface temp center
LRSurfTempIn	Rear left wheel surface temp In	LRSurfTempOut	Left rear surface temperature out
LRSurfType	Left rear surface type	LRSuspDeflection	Rear left suspension deflection
LRSuspForce	Rear left suspension force	LRTireLoad	Left rear tire load
LRToe	Rear left wheel toe	LRVertTireDeflectio	Rear left vertical tyre deflection
LRWear	Left rear wheel wear	LRWheelYlocation	Rear left wheel location (y axis)

North	Vehicle pos (north coordinate)	RFBrakePressure	Right front brake pressure
RFBrakeTemp	Right front brake temperature	RFCamber	Right front tire camber
RFCarcassTemp	Front right wheel carcass temp	RFDetached	Front right wheel detached
RFFlat	Front right wheel flat	RFGripFact	Front right grip factor
RFGroundVel	Front right wheel ground speed	RFInnerTireTempCent	Front right tire inner temp cent
RFInnerTireTempIn	Front right tire inner int temp	RFInnerTireTempOut	Front right tire inner temp out
RFLatForce	Right front lateral force	RFLatGroundVel	Front right wheel lat ground speed
RFLatPatchVel	Front right wheel lat patch speed	RFLonForce	Right front longitudinal force
RFLOnGroundVel	Front right wheel ground speed	RFLonPatchVel	Front right wheel lon patch speed
RFPatchVel	Front right wheel patch speed	RFPressure	Right front wheel press
RFRideHeight	Front right wheel ride height	RFRotation	Right front rotation
RFSurfTempCenter	Front right	RFSurfTempIn	Front right surface temperature In
RFSurfTempOut	Front right surface temp out	RFsurfType	Front right surface type
RFSuspDeflection	Front right suspension deflection	RFSuspForce	Front right suspension force
RFTireLoad	Right front tire load	RFToe	Front right wheel toe
RFVertTireDeflectio	Front right tire vertical deflection	RFWear	Front right wheel wear
RFWheelYLocation	Front right wheel location (y axis)	RRBrakePressure	Right rear brake pressure
RRBrakeTemp	Rear right brake temperature	RRCamber	Right rear tire camber
RRCarcassTemp	Rear right wheel carcass temp	RRDetached	Rear right wheel detached
RRFlat	Rear right wheel flat	RRGripFact	Rear right wheel grip factor
RRGroundVel	Rear right wheel ground speed	RRInnerTireTempCent	Rear right tire inner central temp
RRInnerTireTempIn	Rear right tire inner temp In	RRInnerTireTempOut	Rear right tire inner temperature Out
RRLatForce	Right rear latitudinal Force	RRLatGroundVel	Rear right wheel lat ground speed
RRLatPatchVel	Rear right	RRLonForce	Right rear longitudinal force
RRLOnGroundVel	Rear right wheel ground speed	RRLonPatchVel	Rear right wheel long. patch speed
RRPatchVel	Rear right wheel patch speed	RRPressure	Right rear wheel press
RRRideHeight	Right rear ride height	RRRotation	Right rear rotation
RRSurfTempCenter	Rear right wheel surf central temp	RRSurfTempIn	Right rear surface temperature in
RRSurfTempOut	Right rear surface temp out	RRSurfType	Right rear surface type
RRSuspDeflection	Rear right suspension deflection	RRSuspForce	Rear right suspension force
RRTireLoad	Rear left tire load	RRToe	Rear right wheel toe

RRVertTireDeflectio	Rear right vertical tire deflection	RRWear	Rear right wheel wear
RRWheelYLocation	Rear right wheel position (y axis)	Session	Session number
Speed_lat	Lateral speed	Speed_lon	Longitudinal speed
Speed_up	Vertical speed	SteerFilt	Steering filter
ThrottleFilt	Throttle filter	UnderYellow	
Up	Vehicle pos. (vertical coordinate)	Gear	Selected Gear
Throttle	Throttle position	Counter	Counter
LapNumber	Lap number	TimeInLap	Total lap time
AmbientTemp	Ambient temperature	DarkCloud	Dark cloud
GamePhase	Game phase	LFSuspDeflection	Front left suspension deflection
MinWetness	Minimumm wetness	GPS_Gyro	
GPS_Altitude		GPS_Heading	
GPS_LatAcc		GPS_LonAcc	
GPS_PosAccuracy		GPS_Nsat	
GPS_SpdAccuracy		GPS_Speed	
GPS_Slope			

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