AiM Infotech

Sim Racing
# iRacing setup

Release 1.02

1 – iRacing

In this guide we'll see in a few steps how to generate telemetry data from iRacing 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 iRacing 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.
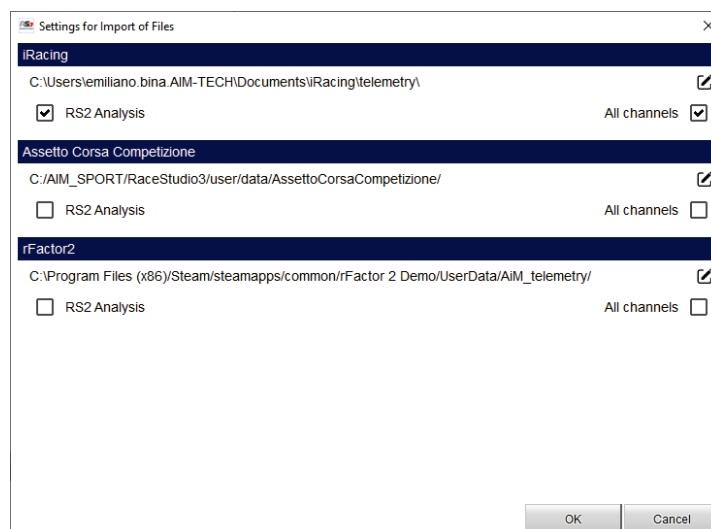
- Inside RaceStudio 3 you'll find a small application, the AiM Simulator Manager (ASM). ASM needs to be running while you are using the simulator and will allow you to record the telemetry data.

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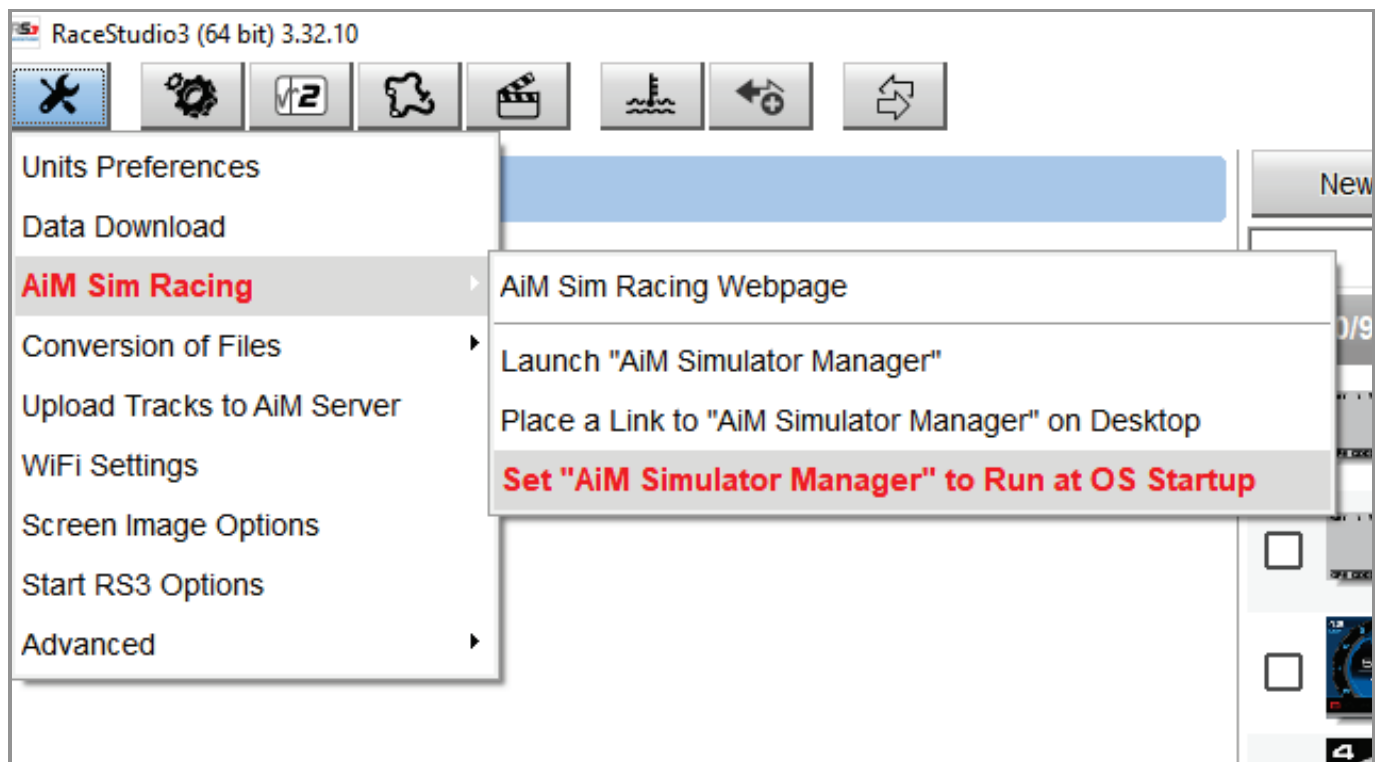
The first time that you'll use the ASM, you'll simply have to choose what simulator you are going to use, clicking the start button and choosing it from the options.
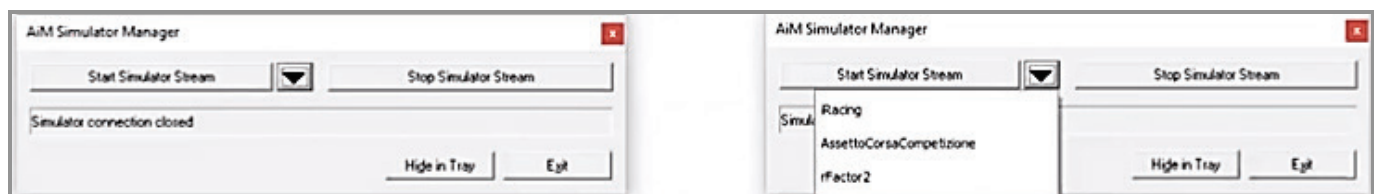

From the second time, ASM remembers your choice and based on the launch option chosen, it will start recording data during the race and will stop at the end of the session (so you don't have to press the stop button of the ASM).

Another way to generate Telemetry data in iRacing is, during a race, to press the alt-l (lowercase L , that stands for logging) buttons (or manage the dedicated buttons in the options menu). At the end of the session data logging will be stopped. ASM is the recommended option because everything is automatically managed.

3 – Drive and get data

Once everything is properly set, there are few steps left
- Run iRacing and enjoy!
- At the end of the session the data will be stored in the default folder: documents/iRacing/telemetry, in ibt format.
- Now you have to import the data and convert them in DRK format. 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!
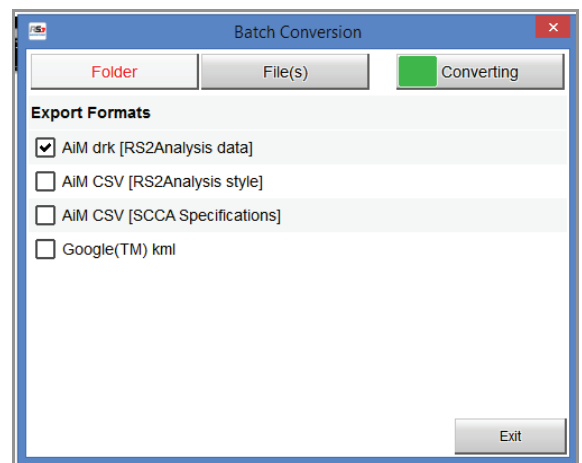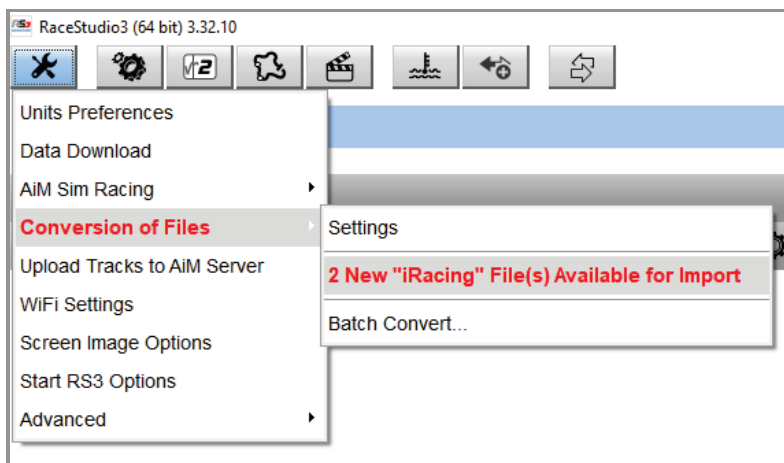
4 – Appendix

Default channels available for iRacing are (some channels like the GPS ones are generated by RaceStudio, not by iRacing):

CHANNEL NAME	FUNCTION	CHANNEL NAME	FUNCTION
AirTemp	Air Temperature	OilPress	Oil Pressure
FuelLevel	Fuel Level	OilTemp	Oil Temperature
FuelLevelPct	Fuel Level Percentage	PitchRate	Pitch rate
GPS_Altitude	GPS altitude	RFspeed	Front right wheel speed
GPS_Gyro	GPS gyroscope	RPM	Engine RPM
GPS_heading	GPS heading	RRspeed	Rear right wheel speed
GPS_LatAcc	GPS lateral acceleration	RollRate	Roll rate
GPS_LonAcc	GPS longitudinal accel.	Speed	Speed
GPS_Nsat	GPS satellites number	VelocityX	X velocity
GPS_PosAccuracy	GPS position accuracy	VelocityY	Y velocity
GPS_Slope	GPS slope	VelocityZ	Z velocity
GPS_SpdAccuracy	GPS speed accuracy	VertAccel	Vertical acceleration
GPS_Speed	GPS speed	Voltage	Voltage
IsOnTrackCar	Car on track	WaterLevel	Water Level
LFspeed	Front left wheel speed	WaterTemp	Water Temperature
LRspeed	Rear left wheel speed	YawNorth	Yaw orientation relative to N.
Lap	Lap number	YawRate	Yaw rate
LapDist	Lap Distance	Brake	Brake
LapDistPct	Lap Distance Percentage	Clutch	Clutch
LatAccel	Lateral acceleration	CpuUsageBG	Pct of available tim bg thread took with a 1 sec avg
LongAccel	Longitudinal accel.	DriverMarker	Driver marker
ManifoldPress	Manifold air pressure	Gear	Active gear
OilLevel	Oil Level	IsOnTrack	1=Car on track physics running
OnPitRoad	Is the player car on pit road between the cones	PlayerCarClassPosit	Car position

| PlayerCarPosition | Player Car Position | SessionNum | Session Number |
| SteeringWheelAngle | Steering position | Throttle | Throttle position |

Advanced channels available for iRacing are (if you flag the "all channel" option you have the default+advance channel):

CHANNEL NAME	FUNCTION	CHANNEL NAME	FUNCTION
AirDensity	Air Density	LFrideHeight	LF ride height
AirPressure	Air Pressure	LFshockDefl	LF shock deflection
FastRepairAvaible	Fast repair available	LFshockVel	LF shock velocity
FastRepairUsed	Fast repair used	LRcoldPressure	Rear left wheel cold pressure
FogLevel	Fog Level	LRpressure	Left Rear wheel Pressure
PitOptrepairLeft	Time left for optional repairs if repairs are active	LRrideHeight	Rear left wheel ride height
PitRepairLeft	Time left for mandatory pit repairs if repairs are active	LRshockDefl	LR shock deflection
PitsOpen	Open pit	LRshockVel	LR shock velocity
PitstopActive	Active pit stop	LRtempCL	LR tire left carcass temp
RelativeHumidity	Relative humidity	LRtempCM	LR tire middle carcass temp
Skies	Skies	LRtempCR	LR tire right carcass temp
WeatherType	Weather Type	LRtempL	Lr tire left surface temp
WindDir	Wind Direction	LRtempM	LR tire middle surface temp
WindVel	Wind Velocity	LRtempR	LR tire right surface temp
PitSvFlags	Bitfield of pit service checkboxes	LRwearL	LR tire left pct tread left
PitSvFuel	Pit service fuel add amount	LRwearM	LR tire middle pct tread left
PitSvLFP	Pit serv left front tire press	LRwearR	LR tire right pct tread left
PitSvLRP	Pit service left rear tire press	dcBrakeBias	In car brake bias adjustment
PitSvRFP	Pit serv right front tire press	dcDashPage	
PitSvRRP	Pit serv right rear tire press	dcHeadlightFlash	
SteeringWheelTorque	Steering Wheel Torque	dcLaunchRpm	
TireLF_RumblePitch		dcPitSpeedLimiterTo	

TireLR_RumblePitch		dcStarter	
TireRF_RumblePitch		dcToggleWindshieldW	
TireRR_RumblePitch		dcTriggerWindshield	
FuelPress	Fuel Pressure	dpFastRepair	
FuelUsePerHour	Fuel Used Per Hour	dpFuelAddKg	
BrakeRaw	Brake pressure	dpFuelFill	
EngineWarnings	Engine Warnings	dpLFTireChange	
HandbrakeRaw	Handbrake Raw	dpLFTireColdPress	
ShiftGrindRPM	RPM of shifter grinding noise	dpLRTireChange	
ShiftIndicatorPct	Shift Indicator Percentage	dpLRTireColdPress	
ShiftPowerPct	Shift Power Percentage	dpRFTireChange	
SteeringWheelAngleM	Steering wheel max angle	dpRFTireColdPress	
SteeringWheelPctDam	Steering wheel damper pct	dpRRTireChange	
SteeringWheelPctTor	Steering wheel torque pct	dpRRTireColdPress	
ThrottleRaw	Throttle Raw	dpWindshieldTearoff	
LFcoldPressure	Front left wheel cold press	RFbrakeLinePress	Front right brake line press
LFpressure	Left Front wheel press	LFbrakeLinePress	Front left brake line pressure
LFtempCL	LF tire left carcass temp	RFcoldPressure	Front right wheel cold press
LFtempCM	LF tire middle carcass temp	RFpressure	Right Front wheel press
LFtempCR	LF tire right carcass temp	RFtempCL	RF tire left carcass temp
LFtempR	LF tire right surface temp	RFtempCM	RF tire middle carcass temp
LFwearL	LF tire left pct tread left	RFtempCR	RF tire right carcass temp
LFwearM	LF tire middle pct tread left	RFtempL	RF tire left surface temp
LFwearR	LF tire right pct tread left	RFtempM	RF tire middle surface temp
RRbrakeLinePress	R brake line pressure	RFTempR	RF tire right surface temp
CFSRrideHeight	CFSR ride height	RFwearL	RF tire left pct tread left
RFrideHeight	RF ride height	RFwearM	RF tire middle pct tread left
RFshockDefl	RF shock deflection	RFwearR	RF tire right pct tread left
RFshockVel	RF shock velocity	LRbrakeLinePress	LR brake line pressure
RRrideHeight	RR ride height	RRcoldPressure	Rear right cold pressure
RRshockDefl	RR shock deflection	RRpressure	Rear right wheel pressure
RRshockVel	RR shock velocity	RRtempCL	RR tire left carcass temp

LapCompleted	Cpmpleted lap	RRtempCM	RR tire middle carcass temp
LapBestLap	Best lap	RRtempCR	RR tire right carcass temp
LapBestLapTime	Best lap time	RRtempL	RR tire left surface temp
LapBestNLapLap	Best lap number	RRtempM	RR tire middle surface temp
LapCurrentLapTime	Current lap time	RRtempR	RR tire right surface temp
LapDeltaToBestLap	Difference with best lap	RRwearL	RR tire left pct tread left
LapDeltaToBestLap_DD	Rate of change of delta time for best lap	RRwearM	RR tire middle pct tread left
LapDeltaToBestLap_OK	Delta time for best lap is valid	RRwearR	RR tire right pct tread left
LapDeltaToOptimalLap_OK	Delta time for optimal lap is valid	Yaw	Yaw rate
LapDeltaToSessionBestlap	Delta time for sess best lap	Alt	Altitude
LapDeltaToSessionLastLap	Delta time for sess last lap	EnterExitReset	Indicate action the reset key will take 0 enter 1 exit 2 reset
LapDeltaToSessionOptimalLap	Delta time for session optimal lap	Lat	Lateral accelerometer
LapLasNLapSeq	Player num consecutive clean laps completed for N average	Lon	Longitudinal accelerometer
LapLastLapTime	Players last lap time	Pitch	Pitch rate
LapLastNLapTime	Player last N avg lap time	SessionTimeOfDay	Session day time
dcABS	In car abs adjustment	Roll	Roll rate
TrackTemp	Track Temperature	FrameRate	Frame Rate
ManualBoost	Manual Boost	ManualNoBoost	No Manual Boost
PushToPass	Push to pass	TrackTempCrew	Temp of track meas. by crew
PaceMode	Pace Mode	PlayerCarDriverInci	
PlayerCarIdx		PlayerCarInPitStall	
PlayerCarMyIncident		PlayerCarPitSvStatu	
PlayerCarPowerAdjus	Car power adjustment	PlayerCarTeamIncide	
PlayerCarTowTime		PlayerCarWeightPena	
PlayerTrackSurface		PlayerTrackSurfaceM	
SessionFlags	Session flags	SessionTimeRemain	Session remaining time
SessionLapRemain	Session remaining laps	SessionUniqueID	Session ID
SessionLapsRemainEx		SessionTick	
SessionState	Session state	SessionTime	Session Time

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