

**Race Studio 3**

## Fuel Used Channel

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**Question:**

How can I obtain the information referred to the used fuel during each session?

**Answer:**


The Fuel Used channel, which informs about the used fuel quantity, can be activated configuring your device properly. Once the session is finished, the value is represented in the Counters tab of the connected device menu (through Race Studio 3) and in the device menu Counter page as well (from the device itself).

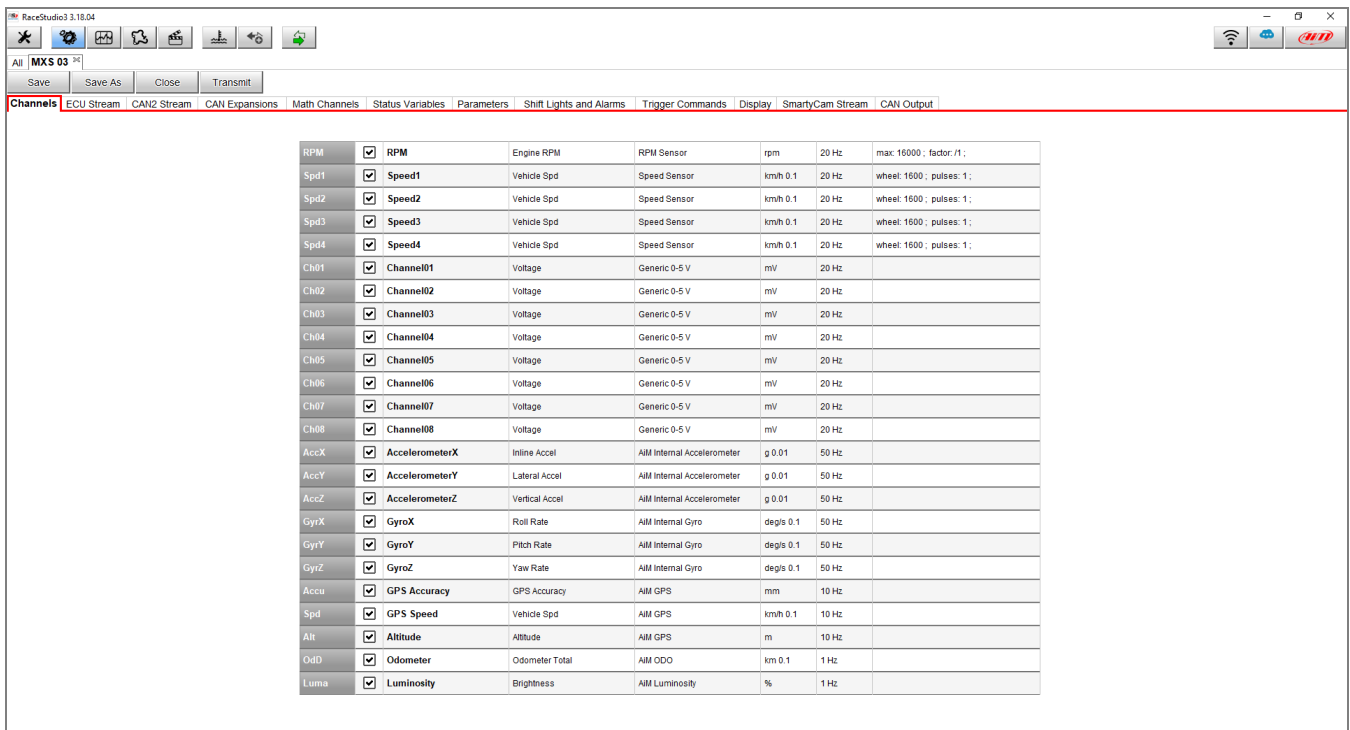
**N.B.:** the Fuel Used channel can be activated **only** in the MXx and EVOx devices configurations, starting from the Race Studio 3 release n. **3.16.20**;

**N.B.:** this parameter can be calculated by the AiM systems **only if** in the device configuration an ECU communication protocol is selected, which includes the channel with Fuel Flow function (consumed fuel over time).

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The Fuel Used can be included in the available channels list (Channels tab) in the following way:

- Enter in the Configurations section of Race Studio 3 () , choose for an existing configuration or create a new one clicking "New". After the device type has been selected and its name and eventually a comment have been added, click "OK": by default, the Channels tab is shown, which reports the available channels list (in the list, the Fuel Used channel is not present; see following image).



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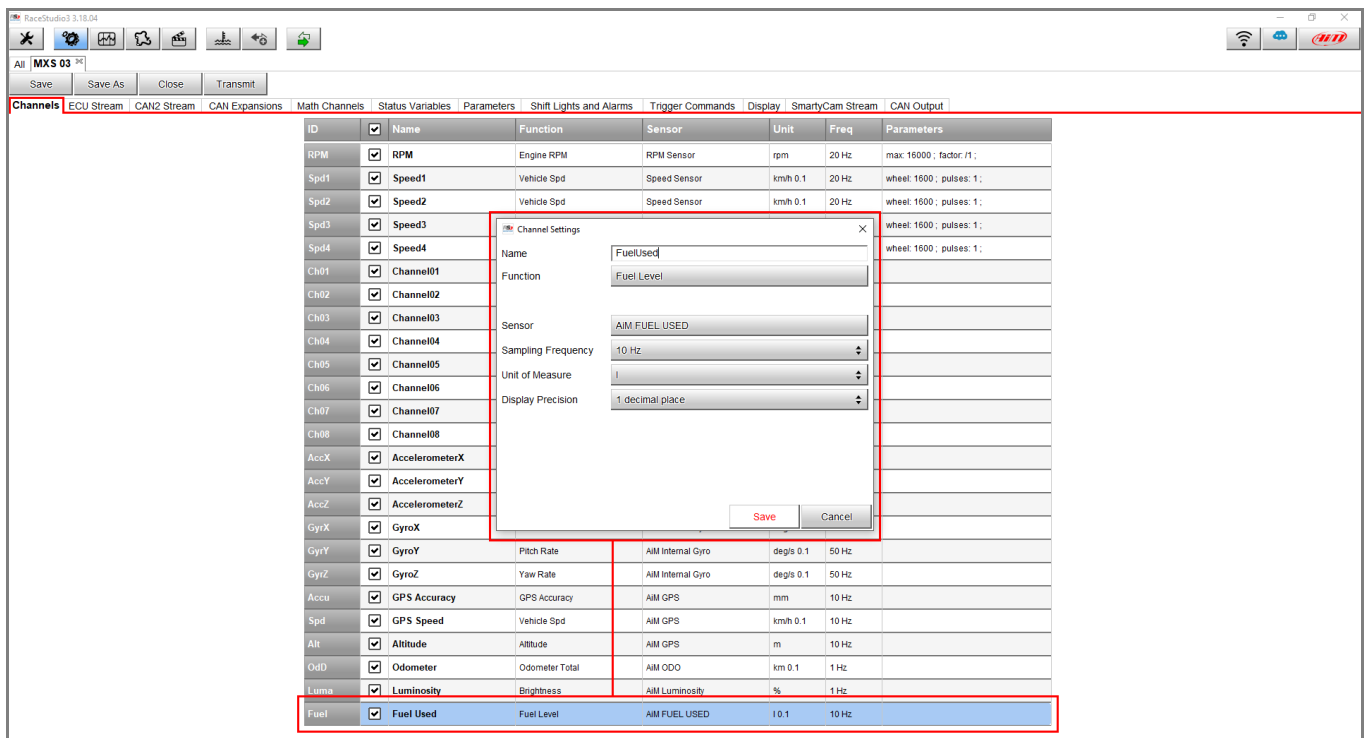
- Entering the ECU Stream tab, it is possible to choose the ECU communication protocol available for your vehicle: **only if it features one channel with the Fuel Flow function**, a popup window appears which communicates that the Fuel Used channel has been activated and it can be configured from the Channels tab.

The screenshot shows the RaceStudio3 3.18.04 interface. The 'Channels' tab is active, displaying a list of enabled channels for the 'POLARIS - RZR' ECU. A popup window is overlaid on the 'FuelUsed' channel, with the following text: 'By selecting this CAN protocol you have activated the Fuel Used channel configurable in 'Channels' tab'. The popup has an 'OK' button.

ID	Name	Function	Unit	Freq
CC02	RPM	Engine RPM	rpm	10 Hz
CC19	VehicleSpeed	Vehicle Spd	km/h 0.1	10 Hz
CC22	ThrottlePosition	Pid Throttle Load	% 0.01	10 Hz
CC18	WaterTemperature	Water Temp	C 0.1	10 Hz
CC40	IntakeAirTemp	Air Temp	C 0.1	10 Hz
CC33	ChargeAirTemp	Temperature	C 0.1	10 Hz
CC28	EPSTemperature	Temperature	C 0.1	10 Hz
CC41	ManifoldAirPressure	bar	bar 0.01	10 Hz
CC42	BarometricPressure	bar	bar 0.01	10 Hz
CC05	BoostPressure	bar	bar 0.01	10 Hz
CC20	BraidedBrakePressure	#	#	10 Hz
CC04	GearedBrakePressure	#	#	10 Hz
CC01	EngineLoad	Number	#	10 Hz
CC27	FuelLevel	Percent	% 0.01	10 Hz
CC23	FuelRate	Fuel Flow	l/s	10 Hz
CC24	FuelEconomy	Volume Flow	l/s	10 Hz
CC25	AverageFuelEco	Rate	%/s 0.1	10 Hz
CC29	EPSSteeringRate	Rate	%/s 0.1	10 Hz
CC30	EPSInputForce	Torque	Nm 0.1	10 Hz
CC31	EPSOutputForce	Torque	Nm 0.1	10 Hz
CC12	EPSCurrent	Current	A 0.001	10 Hz
CC09	EPS_Alarm	Number	#	10 Hz
CC47	FrontDriveActive	Wheel Drive	#	10 Hz

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- Going back to the Channels tab, it is now possible to find the Fuel Used channel (by default, placed at the bottom of the list): clicking it, the settings window appears (lower image), from whom it is possible to modify the channels name, its sampling frequency, its measurement unit and its displayed decimal places.

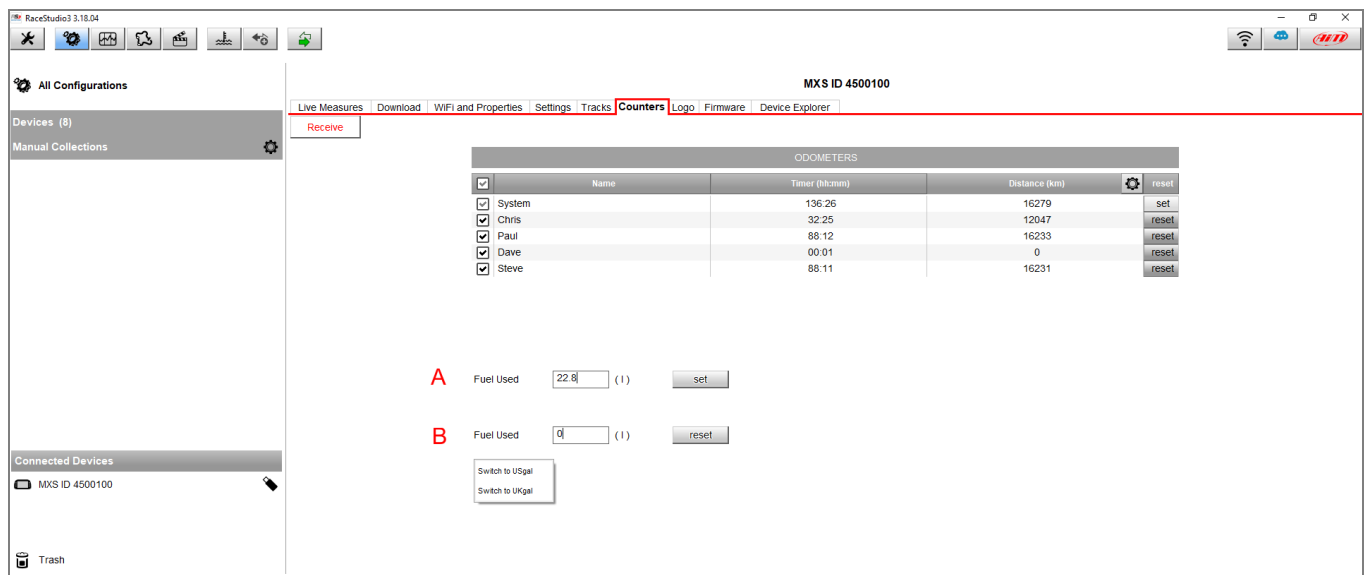


Once these first settings are done, click Save and they will be stored by the software, so that the Fuel Used channel can be utilised in the other device configuration section tabs.

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- Once the session is over, with connected device to the PC, it is possible to obtain the counters updated values: from the Counters tab, click Receive (upper page zone; see following image) to refresh the odometers and the Fuel Used values.  
 Additionally, it is possible to transmit a Fuel Used value to the device, digiting it in the field and clicking the "set" button (A). The Fuel Used value can be reset too, digiting "0" in the field and clicking "reset" to transmit the value to the device (B).

Clicking the Fuel Used label or the current measurement unit symbol, it is possible to modify the measurement unit itself (the choice is among liters, UKgal or USgal).



The used fuel quantity value can be reset from the devices too:

- MXx Series: MENU/<< -> Counters -> move to the Fuel Used row -> CHANGE -> OK (the Reset option is automatically selected);
- EVOx Series: MENU -> Counters -> move to the Fuel Used row -> RESET (if an AiM visor is plugged into the net).