



Advanced protocol management for SMC3

Question:

How can I show on my videos a channel that is not present in the default function table of SmartyCam 3?

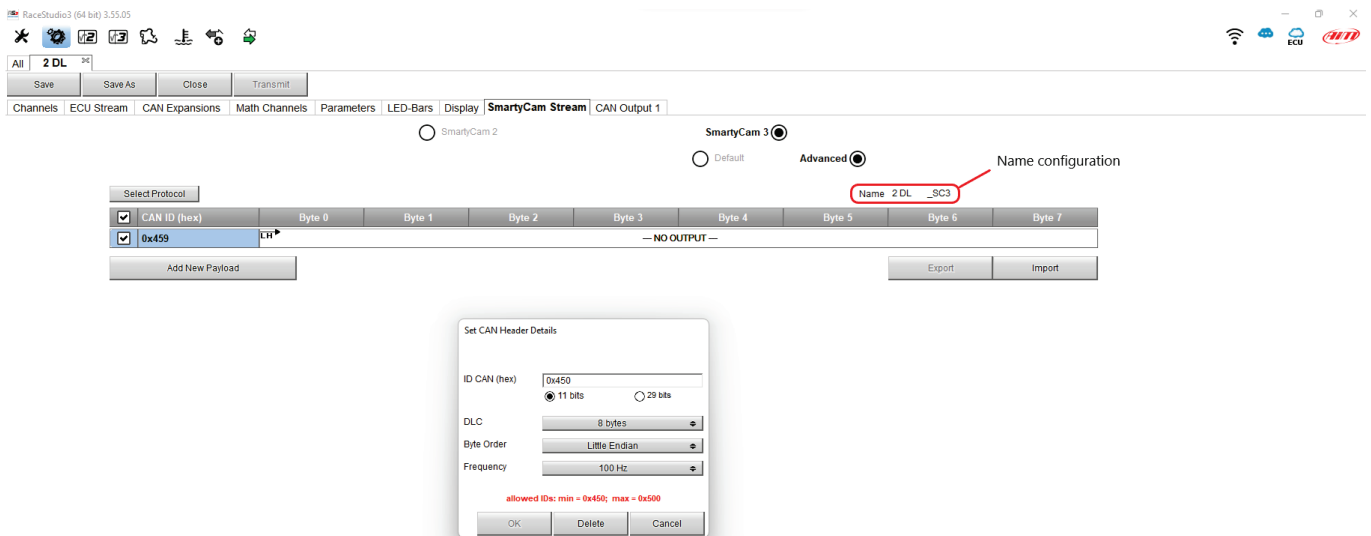
Answer:

The configuration of the **Advanced** protocol, introduced with the SmartyCam 3, has been designed to allow you to configure and transmit channels that have different functions from those available in the default configuration table of the SmartyCam 3 Stream.

Below are detailed all the steps to configure an Advanced protocol for SmartyCam 3

The Advanced mode can be used and set when the SMC3 is connected to a AiM master device. In the example below, we will create an Advanced protocol that will transmit channels with the wheel speed function.

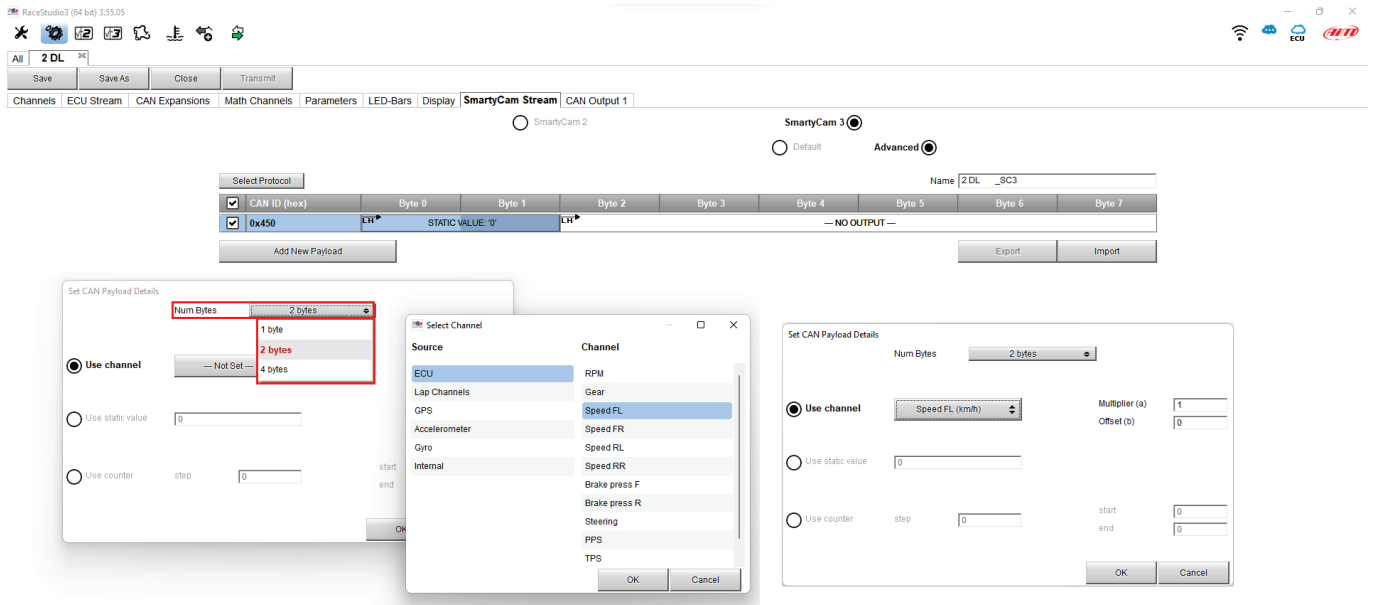
In the AiM master configuration - in the SmartyCam Stream tab - SmartyCam 3, select the **Advanced** option and start creating the protocol by pressing Add New Payload.



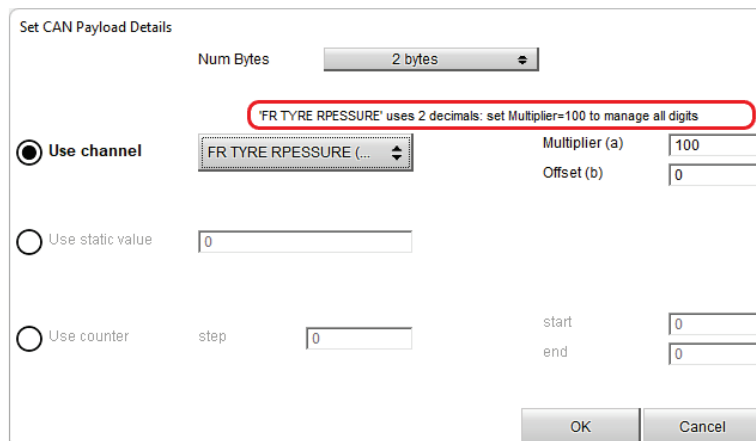
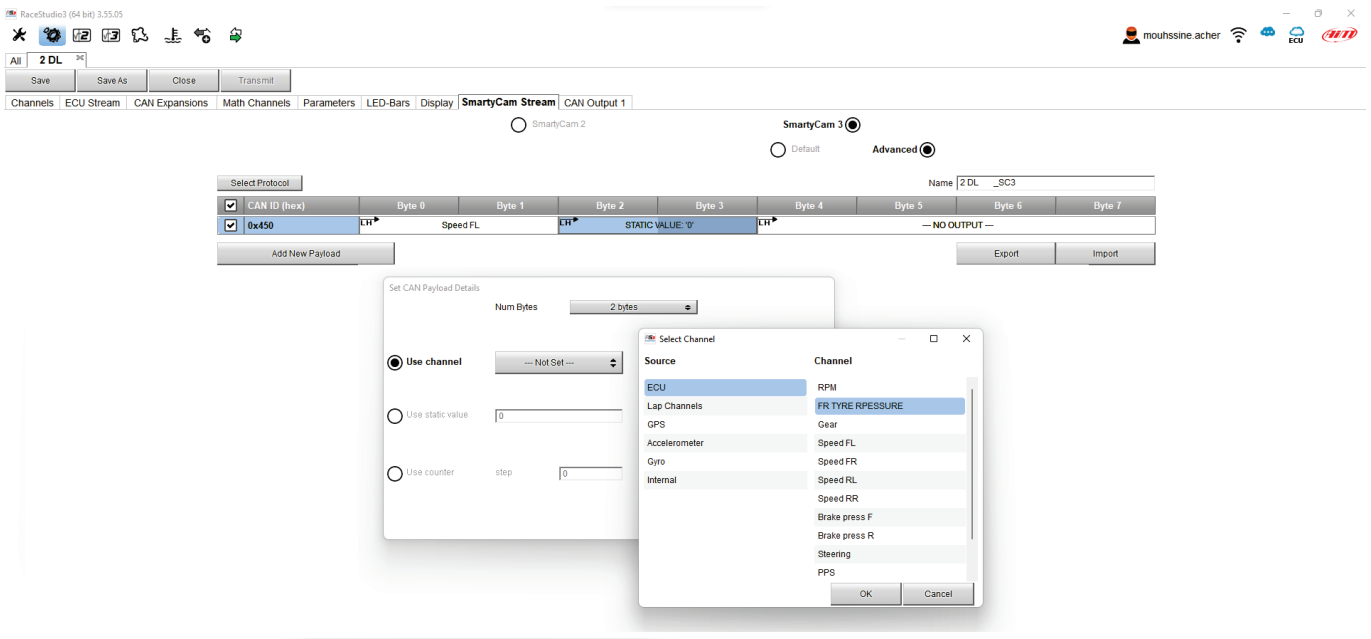
Be careful when entering the CAN ID (hex), this can have a value between 0x450 and 0x500. Other ranges are not allowed.

Complete the remaining DLC fields (Frame length from 1 to 8 bytes), Byte Order (Intel format management - Little endian or Motorola - Big endian) and Frequency (frame sending frequency).

Once you have defined the Data Transmission Id, the first frame will be generated, set the channels to be transmitted by pressing on the byte in which you want to place each measure. Then define the byte size (Num Bytes) and select the channel to be transmitted with the "Use channel" function.



For some channels it will be necessary to modify the multiplier, this depends only on the visualization of the decimals set in the configuration of the device as in the example shown below:



As indicated in the message highlighted above the channel "FR TYRE PRESSURE" uses 2 decimal numbers: set the multiplier=100 to manage all decimal digits.

Do the same for all measurements that you want to transfer from the master AiM to the SmartyCam 3. Once the advanced protocol configuration is complete, save the configuration to Race Studio 3 and transmit to the device.

The next step concerns the configuration of the SmartyCam 3, creating a new configuration on Race Studio 3 as indicated in the following steps:

- New configuration SmartyCam 3 Sport/Dual
- CAN protocol – Set Protocol, Race Studio 3 immediately recognizes the configuration with the Advanced protocol present in the configuration database.
- Select the corresponding configuration (e.g.: "2DL" configuration and protocol name "2DL SC3").
- Configure the SmartyCam 3 overlays by selecting the channels set in the Advanced protocol.
- Save and transmit the configuration

The screenshot shows the RaceStudio3 interface with the following elements:

- Top bar: "RaceStudio3 (64 bit) 3.55.05" and system icons.
- Navigation: "All | 2 DL | SmartyCam 3 Sport 03" tabs.
- Buttons: "Save", "Close", "Transmit".
- Status: "stand alone" / "connected to master".
- Protocol Selection: "Select Protocol" dropdown menu (labeled 2).
- Enabled Channels Table (Max. 80, 19 / 19):

ID	Name	Function	Unit
CC01	Engine RPM	Engine RPM	rpm
CC02	Speed	Vehicle Spd	km/h 0.1
- Configuration Dialog: "Select AiM SmartyCam3 Stream Protocol" window (labeled 3).

Protocol name	Configuration
2 DL_SC3 (labeled 3)	2 DL (labeled 2) [85% 42% 125% 09%]
- Confirmation: "OK" button (labeled 4).
- Channels Table (CC12-CC19):

CC12	Clutch Pos	Percent	% 0.01
CC13	Steering Pos	Steering Pos	deg 0.1
CC14	Lambda	Lambda	lambda 0.01
CC15	Lateral Acc	Lateral Accel	g 0.01
CC16	Inline Acc	Inline Accel	g
CC17	Fuel Level	Pct Fuel Level	%
CC18	Battery Voltage	Battery Voltage	mV
CC19	Vertical Acc	Vertical Accel	g 0.01