AiM Infotech

MoTec
VCS Transmit Compound
Full + Transmit Compound
Full 500k ECU

Release 1.01

ECU

1 Supported models

This tutorial explains how to connect MoTec Dash loggers to AiM SmartyCam and ECU Bridge using MoTec VCS (Video Capture System). Supported models are:

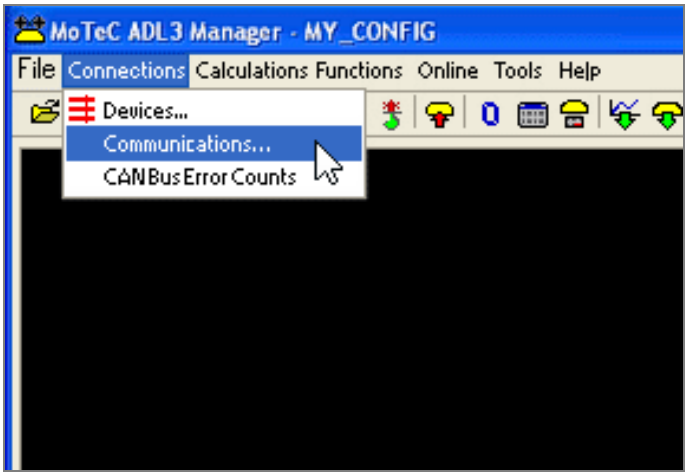
- Motec ADL2
- MoTec ADL3
- MoTec SDL3

Please note: refer to MoTec website to check compatibility between your MoTec Dash and VCS.

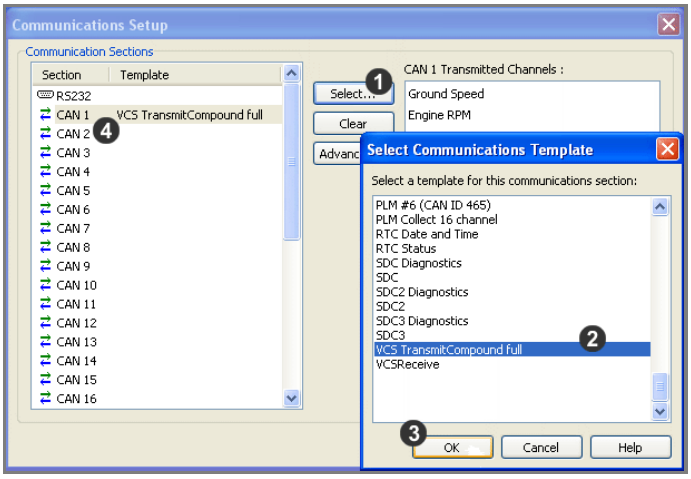
1 MoTec dash configuration

MoTec dash loggers can communicate with AiM device, mainly SmartyCam and ECU Bridge, only through a MoTec software setup. In the following images is an example of MoTec ADL3 Manager.

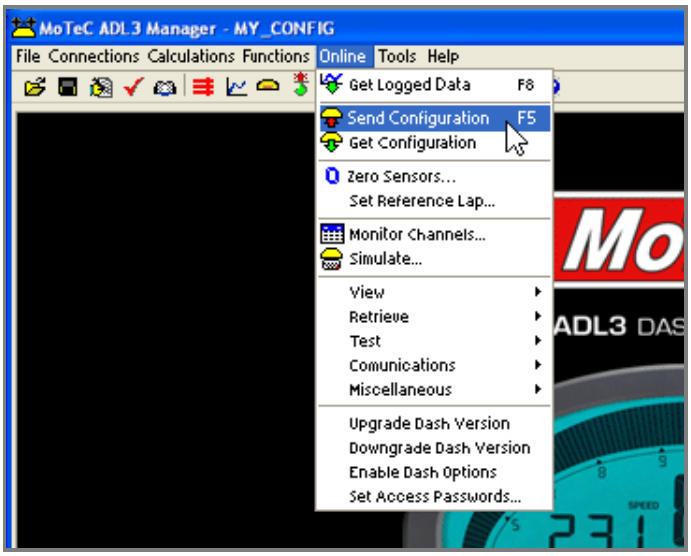
- Run MoTec software
- follow the path
  Connections –> Communications



- "Communications Setup" panel shows up
- Select a free CAN (in the example we are using CAN1) and push select (**1**)
- "Select Communication Template" panel shows up: select "VCS Transmit Compound full" (**2**)
- press "OK" (**3**)
- "VCS Transmit Compound full" protocol is set on CAN1 (**4**)

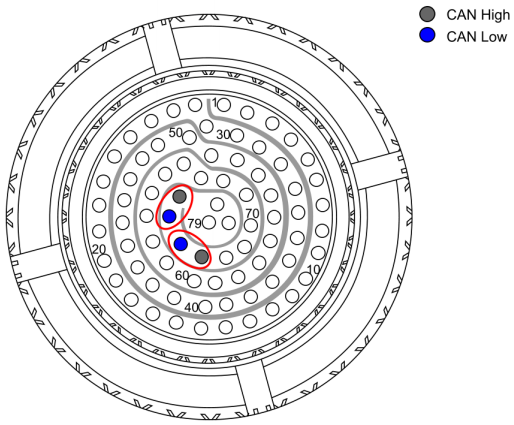


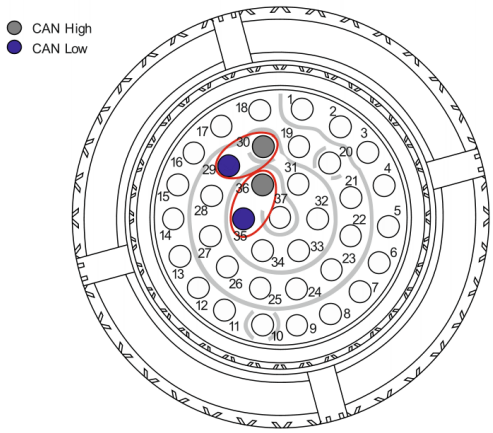
- Send the configuration to the Dash logger pressing: Online –> Send Configuration



2
Wiring connection

MoTec ADL2/ADL3/SDL3 Dash loggers feature a bus communication protocol based on CAN on the rear Autosport connectors. MoTec ADL2/ADL3 are equipped with a 79 pins Autosport male connectors while MoTec SDL3 features a 39 pins Autosport male connectors. Both of them are shown here below (contact insertion view). Bottom is connection table.





ADL2 – 79 pins connector pin	**Pin function**	**AiM cable**
74	CAN A High	CAN+
73	CAN A Low	CAN-
76	CAN B High	CAN+
75	CAN B Low	CAN-
ADL3 – 79 pins connector pin	**Pin function**	**AiM cable**
74	CAN 0 High	CAN+
73	CAN 0 Low	CAN-
76	CAN1 High	CAN+
75	CAN1 Low	CAN-
SDL3 – 37 pins connector pin	**Pin function**	**AiM cable**
36	CAN 0 High	CAN+
35	CAN 0 Low	CAN-
30	CAN1 High	CAN+
29	CAN1 Low	CAN-

3 AiM device configuration

Before connecting the ECU to AiM device set this up using AiM Race Studio software. The parameters to select in the device configuration are:

- ECU manufacturer “MoTec”
- ECU Model,according to the bit rate you are using:
    - "VCS_TransCompound_Full" or
    - "VCS_TransCompound_Full_500k"

4 Available channels

Channels received by AiM loggers connected to MoTec " VCS_TransCompound_Full" and "VCS_TransCompound_Full_500k" are the same.

ID	CHANNEL NAME	FUNCTION
ECU_1	VCS_RPM	RPM
ECU_2	VCS_GRND_SPEED	Ground speed
ECU_3	VCS_GEAR	Engaged gear
ECU_4	VCS_TPS	Throttle position sensor
ECU_5	VCS_BRAKE_PR	Brake pressure
ECU_6	VCS_STEER_ANG	Steering angle
ECU_7	VCS_G_LONG	Longitudinal acceleration
ECU_8	VCS_G_LAT	Lateral acceleration

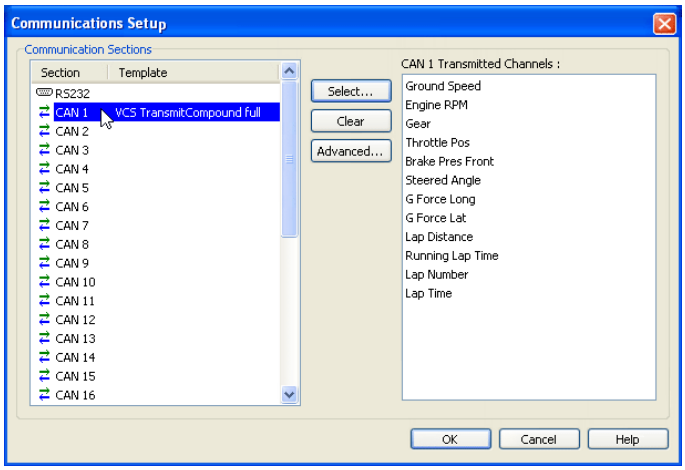
5
Troubleshooting

Once the connection is over all should work properly. In case something is wrong try these tips and tricks.

5.1
Check default "VCS Transmit Compound Full"

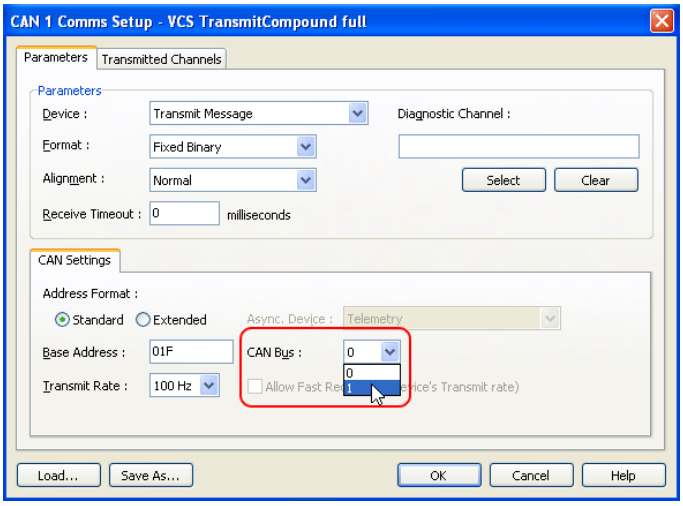
In "Communication Setup" panel shown here below:

- select "VCS TransmitCompound full"
- press "Select..."
- check the list of transmitted ECU channels (right part of the panel)



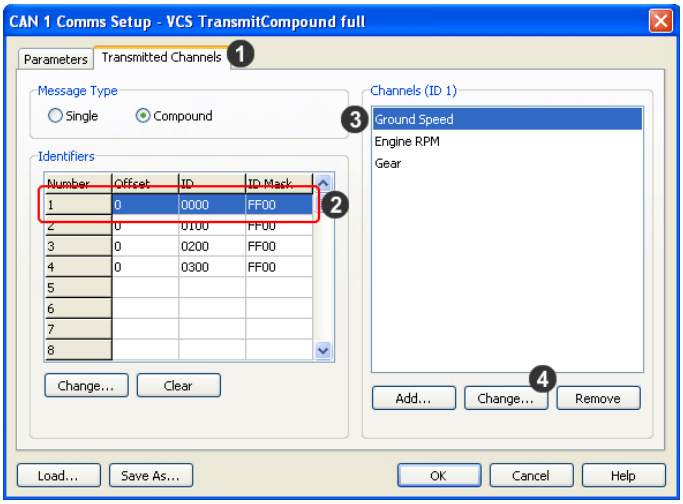
CAN Communication setup panel shows up:

- check all parameters
- select the CAN line you are using
- press "OK"



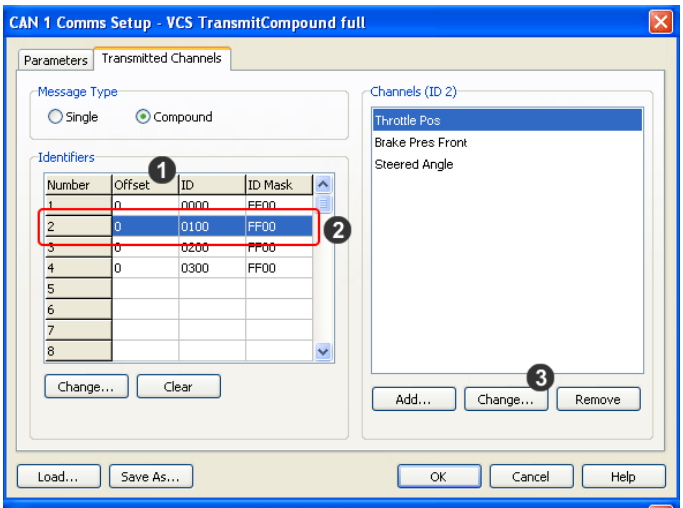
You come back to the previous panel:

- activate "Transmitted channels" layer (**1**)
- select an identifier in "Identifiers panel" – identifier 1 in the example on the right (**2**)
- the channels corresponding to that identifier are shown in "Channels (ID1)" box on the right; select a channel – Ground speed in the example (**3**)
- click "Change" (**4**)
- the setting panel of that channel appears
- check its settings following the parameters reported in the following pages and press "OK"

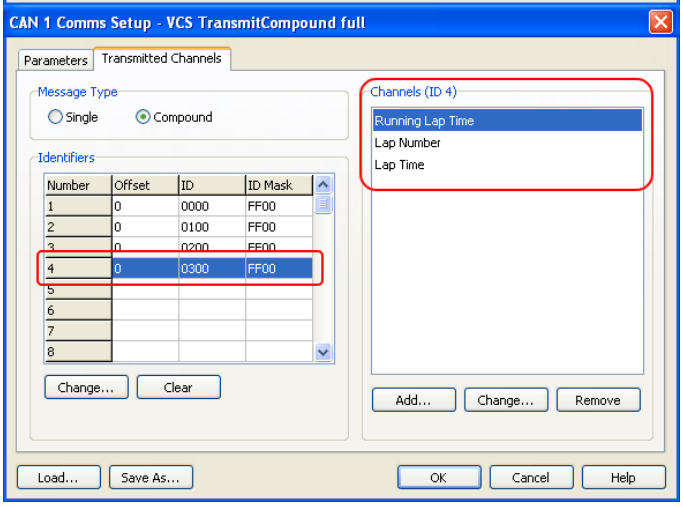


To set other channels:

- press "Offset" (**1**)
- the identifier scrolls (**2**) to the following identifier showing the related channels on the right of the panel
- select the desired channel and press "Change" (**3**)
- the setting panel of that channel appears
- set it following the parameters reported in the following pages and press "OK"

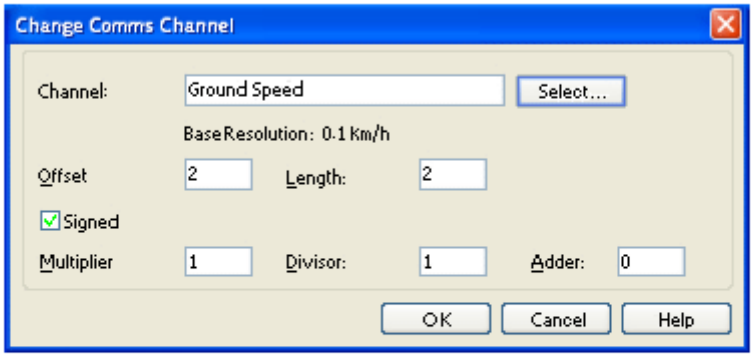


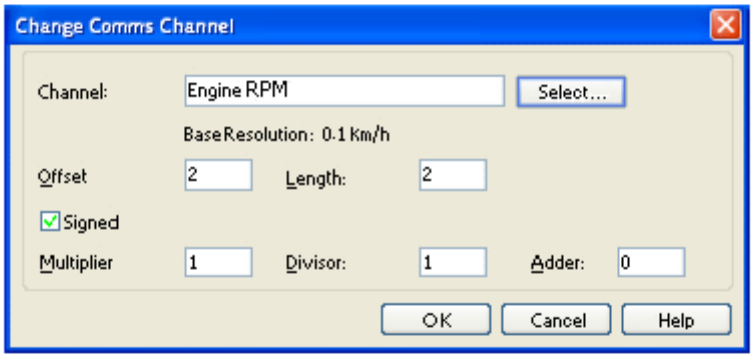
- repeat the procedure until all channels are verified/set

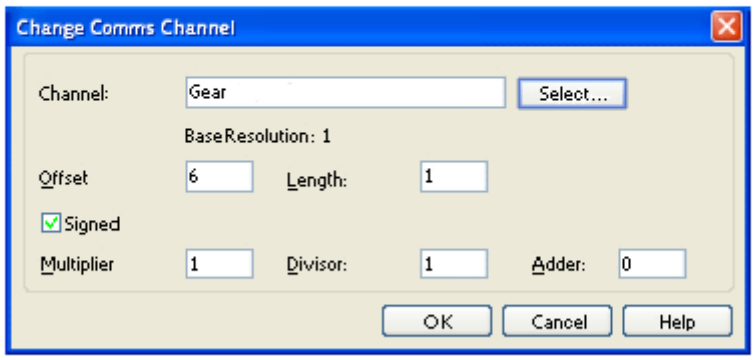


Here follows the correct settings of all channels:

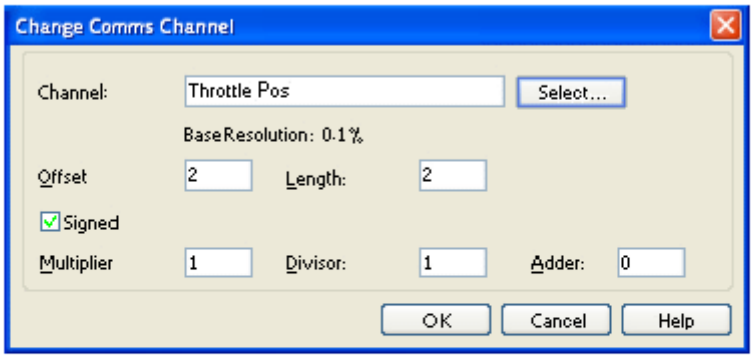
- **Identifier 1**

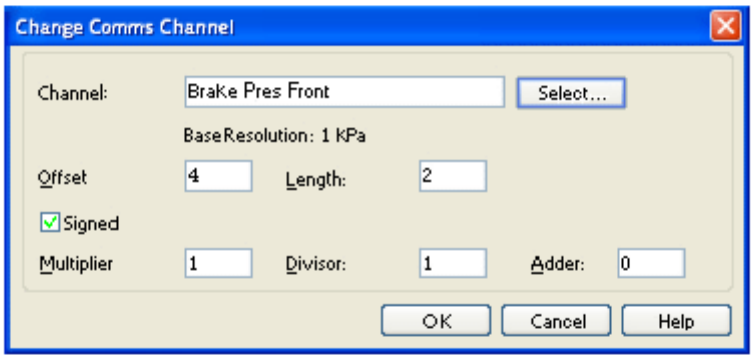


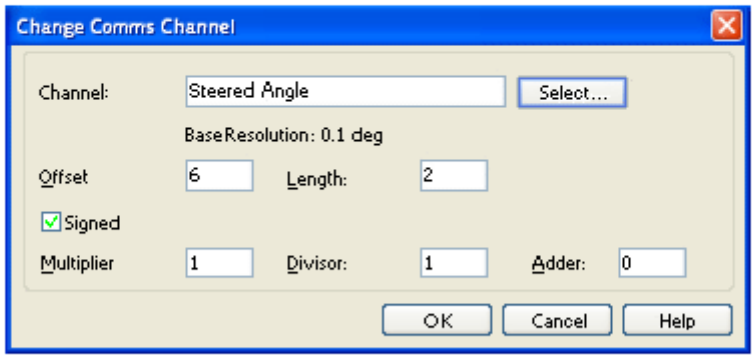




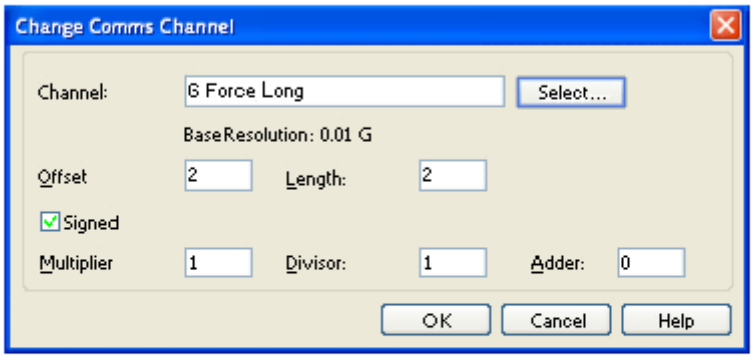
- **Identifier 2**

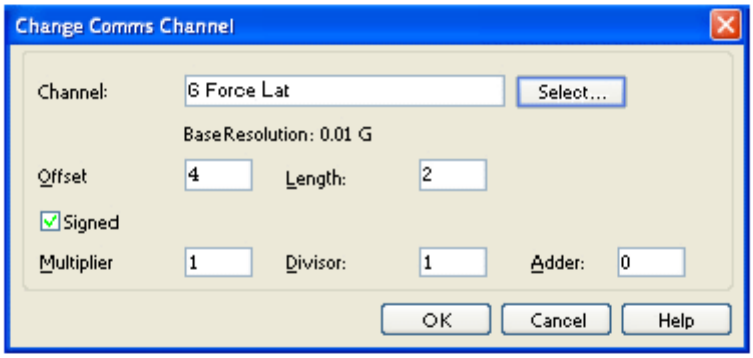


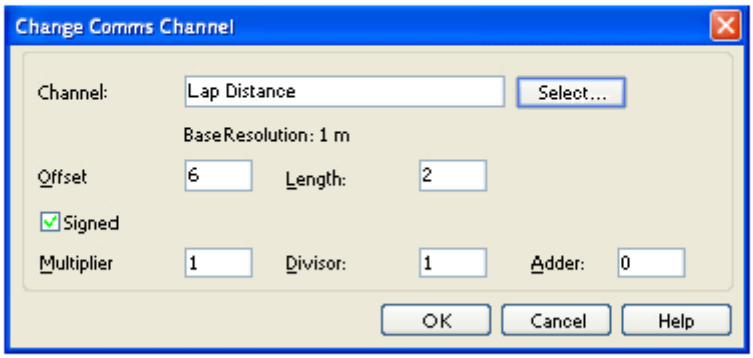




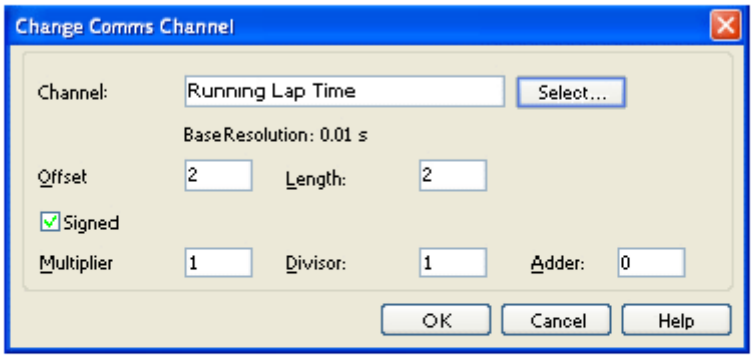
- **Identifier 3**

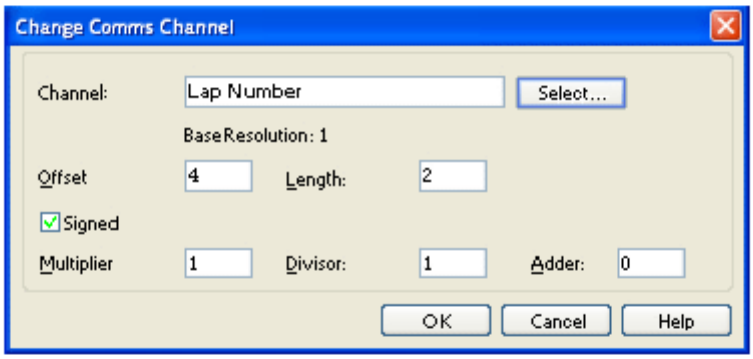


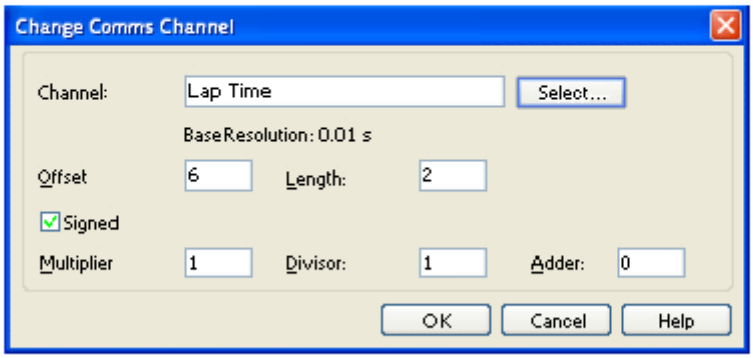




- **Identifier 4**







5.2
Remove unsupported ECU channels

It can occur that MoTec Dash does not support one or more ECU channels included in default "VCS TransmitCompound Full" template. If – for example – there is not a steering sensor, the corresponding channel is not supported and it seems thereby impossible to send the configuration to the dash.
In this case that ECU channel is to be removed:

- select the channel to remove (**1**)
- click "Remove" (**2**)
- click "Save As..." and save the configuration with a new name (**3**).