Race Studio Configuration

User manual







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Chapter 1 – Race Studio 2 software

Race Studio 2 is the application properly designed and developed by AIM to configure its loggers and analyze their data using a PC. It is made up of two software: **Race studio Configuration** and **Race Studio Analysis**.

This user manual refers to the Race Studio Configuration (from 2.30.05).

Race Studio 2 developed following the evolution of AIM loggers and ever improving its potentialities. Thanks to the configuration, the user can better customize its logger to take the most out of it.

With **Race Studio 2** it is possible to integrate in a flexible and dynamic system all the external expansion modules and the innovative devices that AIM Research and Development Dept. creates as well as all the custom sensors that any user can connect to his logger.

Configuring a logger with **Race Studio 2** means adapting it to one's needs, taking the most out of it.

1.1 – Compatibility between Race Studio 2 and operative systems

Race Studio 2 has been developed to guarantee the maximum working reliability and its correct working has been tested with the following operative systems: Microsoft Windows XP and Microsoft Windows Vista 32 bit.

All operative systems (Linux, Unix, Macintosh®) not indicated in this tutorial are to be considered not supported by this application.

Note: at present it is not possible to install AIM USB driver under Microsoft Window Vista 64 bit.

For any problem it is suggested to check <u>www.aim-sportline.com</u> website to verify if any recent news has been issued and, if not, to contact the technical support at <u>www.aim-sportline.com/pages/tech_support/section_tech_support.php</u>.



Chapter 2 – Installing Race Studio 2 and the USB Driver

To configure most of AIM loggers it is necessary to install **Race Studio 2** and the AIM USB driver.

2.1 – Preliminary operation.

Before starting software installation disconnect any AIM logger from the PC USB port and close all running applications.

A suggested preliminary operation is to check WindowsTM "Driver signing" setting.

- Follow this path: Start → setting → Control Panel → System and select "Hardware" layer (figure below on the left).
- Click on "Driver signing" and select "Warn Prompt me each time to choose an action" (figure below in the right).
- Confirm pressing OK button and close all windows.

System Properties		? 🔀
System Restore A General Computer Name	itomatic Updates Remol Hardware Advan	-
🛛 🖾 compatible with Window	Device Manager nake sure that installed drivers are rs. Windows Update lets you set up to Windows Update for drivers.]
Hardware Profiles Hardware profiles provid different hardware confi		
	Hardware Profiles OK Cancel A	



2.2 – Installing Race Studio 2 under Microsoft Windows XP

Before installing the software close all applications and insert **Race Studio 2** CD. If "auto play" option is enabled the installation starts automatically, otherwise click twice on "SETUP" icon.

In case of very first **Race Studio 2** installation the window on the right appears. It allows to select the window where to install the software.

Press "Browse" button to select **Race Studio 2** installation folder.

Press "Next" to install the software in the default folder X/program files/AIM, where "X" is the hard disk where the operative system is installed.



In case of new release of **Race Studio 2** the window on the right appears: enable "New Release of Race Studio 2" checkbox and click on "Next>"

From here onward the installation is the same. The window on the right appears and **Race Studio 2** is installed.

When the installation is over, in case of new release of **Race Studio 2**, the window on the right appears. Click on "Finish". Installation is completed.









In case of very first installation, on the contrary, the software starts AIM USB driver installation and the window on the right appears.

Disconnect any AIM USB cable from the PC USB port and click on "Start" button.

Close all applications and click on "Start".

Click on "Continue Anyway".

Click on "Continue".

AIM-USB Automatic Installation Jan 8, 2008	
THIS IS THE FIRST INSTALLATION for the AMA USB driver. Before running flace Studio, you must install the software for AMA USB driver. DO NOT CONNECT any logger to USB until AMA USB driver is installed. WE RECCOMAND YOU TO FOLLOW THOROUGH THIS PROCEDURE. CONNECT the logger to USB, only after the installation is COMPLETED.	
DISCONNECT ANY AMAUSB CABLE. Click cSTATD to begin AIM-USB driver installation.	
START	EL
All-USB Automatic Installation Jan 8, 2008	_
<u>an</u>	
Install AIM-USB driver 10.01/11CC for: Windows XP	
Close all other applications then click $\left< \text{START} \right>$ to begin	
LEAVE ANY LOGGER DISCONNECTED FROM USB	
START CANCEL	
AIM-USB Automatic Installation Jan 8, 2008	
Install AIM-USB driver 10.01/11CC for: Windows XP	
Installation completed succesfully	
Software Installation	
Installation Installation AIM_USE AIM_USE The software you are installing has not passed Windows Logo techniq to verify its compatibility with Windows XP. (Left me who installation)	
AIM-USB D Continuing your installation of this software may impair or detablick the correct pervalion of your system wither immediately or in the future. Kicosoft strongly recommends that you sub-this installation new and you can you can detablick the software window for software that has passed Windows Logo terring.	
You can contact the software vendor for software that has passed Windows Logo testing.	
Continue Argung STOP Instalation ULL	1
Continue	
Continue	
····· AIM-USB Automatic Installation Jan 8, 2008 ·····	
Install AIM-USB driver 10.01/11CC for: Windows XP	
Installation completed succesfully.	
Installation of AIM-USB Driver vers. 10.01/11CC	
Installing files: AIM_USBdrv_2008.inf	
AIM-USB Driver vers. 10.01/11CC - Installation completed successfully	
You can continue with the next step.	
CONGRATULATIONS : INSTALLATION COMPLETED SUCCESSI	ШY
CONGRATULATIONS : INSTALLATION COMPLETED SUCCESSU	шү
CONGRATULATIONS : INSTALLATION COMPLETED SUCCESSU	шү



Three panels will assist in the following steps.

Connect the USB cable to the PC USB port and switch the logger on. Wait some seconds and the following panel appears.

Found New Hardware Wis	ard 📃	
	Completing the Found New Hardware Wizard The waad har finished instilling the software for AM USB Driver (x1800)100-1100	New you can plug the USB cable in. <- Two or three Panels like there will appear. Panel 1 (3) Panel 2 (3)
	Click Finish to close the wizard.	Panel 3 (3)
	K Back Finish Carlos	ОК

This pop up informs the user that the logger is correctly connected to the PC.

Note: when the procedure is over, connecting the logger to another PC USB port, the system could ask for USB driver installation on the new port too.



nstallazione guidata nuovo hardware			
	Welcome to the Found New Hardware Wizard		
	This wizard helps you install software for:		
201	AIM USB Driver (v.10.01) VID=11CC		
	Connect to Windows Update to search the software for the driver ?		
	O Yes, only now		
	Yes, now and every time a device is connected No, not now		
	Select Next to continue.		
	K Back Next> Cancel		

Enable "No, not now" checkbox and click on "Next>".

Enable "Install the software automatically (recommended)" checkbox and click on "Next >".

Found New Hardware Wizard		
	Welcome to the Found New Hardware Wizard	
2	This wipard helps you install software for:	
	AIM USB Driver (v.10.01) VID=11CC	
- in	If your hardware came with an installation CD or floppy disk, insert it now.	
	What do you want the wipard to do?	
	Instal five software autonatically (Recommended) Instal from a list or specific location (Advanced)	
Click Next to continue.		
	Carcel	



Click on "Finish".



ound New Hardware W	izard	
E Contraction of the contraction	Completing the Found New Hardware Wizard	
	AM USE Driver (x-10.01) VID+11CC	Now you can plug the USB cable in.
		<- Two or three Panels like these will appear.
		Panel 1 (3)
		Panel 2 (3)
	Click Finish to close the wizard.	Panel 3 (3)
	K Back. Finish Carlosi.	OK



After the first installation two new icons, shown on the right, appear on the PC desktop: Race Studio 2 (Configuration)

icon and Race Studio Analysis one. For

this last one refer to the proper user

Race Studio 2

Race Studio Configuration icon Race Studio Analysis icon

Race Studio

Analysis

When the first **Race Studio 2** installation is over, all new release installations will jump driver installation (please remember to periodically check <u>www.aim-sportline.com</u> download/software area).

Click on "OK".

Click on "Finish".

manual.



2.3 – Troubleshooting

In case driver installation ends incorrectly for any reason, starts maintenance procedure running AIM_USB_Inst_2008.exe. Follow this path: C:\Program files \ AIM \ AIM_USB_DRIVER_2008.



Run AIM_USB_Inst_2008.exe file.

- AIM-USB Automatic Installation Jan 8, 2008		
	3	
This is a Maintenance Procedure to be used only in case of TROUBLES.		
It seams that the AIM-USB driver is NOT COMPLETL Did you try to connect the USB cable ?	Y installed.	
You can click <exit> if AIM-USB driver works con</exit>	rectly,	
or click <reinstall driver=""> if you have troubles</reinstall>		

This panel appears. Click on "Reinstall driver" and a procedure similar to the first installation starts.



2.4 – Installing Race Studio 2 under Microsoft Windows Vista

Microsoft Vista[™] operative system introduced more rigid safety procedures.

Note: AIM has not yet obtained Microsoft "signature". This procedure is ongoing and, once finished, will make the installation completely automatic.

Installing "unsigned" driver needs to run the program "As administrator" that means starting Microsoft Vista[™] using an "administrator" account. PC are normally sold with this account.

Race Studio 2 installation creates a new icon on the PC desktop, that allows the user to start USB driver installation as "Administrator".



Before starting the installation, ensure that the logger is NOT connected to the PC USB port. In case it is, disconnect it.

Insert **Race Studio 2** CD in the CD Rom: if "auto play" option is enabled the installation starts automatically, otherwise click twice on "SETUP" icon.

In case of **Race Studio 2** very first installation the window on the right appears. It allows the user to select the software installation folder. Click on "Browse" to select **Race Studio 2** destination folder or on "Next" to install the software in X/program files/AIM folder, where "X" is the hard disk where the operative system is installed on.

In case of new release of **Race Studio 2**, the window on the right appears: enable the checkbox "New Release of Race Studio 2" and click on "Next>".







The window on the right appears.

After the installation – in case of new release of **Race Studio 2** – the window on the right appears. Click on Finish. The installation

procedure is completed.





In case of very first installation the window on the right appears.

Click on "OK" button, to continue the installation.

Click on the question mark to know the <Run as Administrator> procedure. The following window appears.



It shows how to execute <Run as Administrator> procedure; click on "OK" to continue.





Click on "Finish".



2.5 – Installing the USB driver with "Run as Administrator" procedure

As explained in the image on the right, right click on AIM_USB_2008 icon on the PC desktop and select "Run as Administrator" option.

AIM-USB Automatic Installation	for VISTA Jan 8. 2008	
Ø		< Run as administrator > procedure:
Internet Explorer		Select with the mouse the Icon on Desktop: "AIM_USB_2008"
Race Studio Analysis Open @@ Run a @ Send t	s administrator <	- RIGHT click. - Select «Run As Administrator». - then LEFT click.
Race Studio 2	connection	
AIM_USE_2008		ОК



Click "YES" to continue.



Disconnect any USB cable and click on "START".





Windows Security
 Windows can't verify the publisher of this driver software
 Don't install this driver software
 You should check your manufacturer's website for updated driver software for your device.
 Install this driver software anyway
 Ohy install driver software obtained from your manufacturer's website or disc. Unsigned software obtained from your manufacturer's website or disc. Unsigned software form other sources may harm your computer or steal information.
 See details
 Our USB driver is well tested and don't damage your PC.
 Every time this Panel appears please select confidently:

 (Install this driver software anyway)
 (Install this driver software anyway)

Click on "START". AIM USB driver installation starts.

Click on "OK".



	😵 Windows Security
Click on "Install this driver software anyway".	 Windows can't verify the publisher of this driver software Don't install this driver software You should check your manufacturer's website for updated driver software for your device.
	 Install this driver software anyway Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information. See details
	AlM-USB Automatic Installation Jan 8, 2008 Install AIM-USB driver 10.01/11CC for: Windows VISTA Installation completed succesfully. Installation of AIM-USB Driver vers. 10.01/11CC
Click on "Continue".	Installing files: AIM_USBdrv_2008.inf AIM-USB Driver vers. 10.01/11CC - Installation completed successfully You can continue with the next step.
	Continue Con
	Now you can plug the USB cable in.
Connect the USB cable to the PC USB port.	Device driver installation
	AIM USB Driver (v.10.01) VID=11CC × Device driver installation completed.

During **Race Studio 2** and AIM USB driver installation, three new icons appear on the desktop PC:



As far as Race Studio Analysis icon is concerned, refer to the proper user manual.



2.6 – Troubleshooting

In case USB driver installation ended incorrectly for any reason it is possible to start the maintenance procedure repeating the "Run as Administrator" procedure.

As shown in the figure on the right, right click on AIM_USB_2008 icon on the PC desktop and select "Run as administrator" option.



The panel on the right appears: click on "Reinstall driver".

The first step completely erases the first installation.

AIM-USB Automatic Installation Jan 8, 2008
This is a Maintenance Procedure to be used only in case of TROUBLES.
It seams that the AIM-USB driver is NOT COMPLETLY installed. Did you try to connect the USB cable ? You can click <exit> if AIM-USB driver works correctly, or click <reinstall driver=""> if you have troubles.</reinstall></exit>
REINSTALL DRIVER

The system asks for confirmation.

Click on "Yes" to complete the new installation.

Click on "No" to quit and restart installation procedure later.





2.7 – Race Studio 2 visualization problems

Running **Race Studio 2** the display may show a misrepresented image like the one here below.

and Syste	m manager								
	Transmit	2			? 0	N-Net info	(Alse	acquisition s	vstom time
AIM Sportline		600						Accel concerning	
Current o	orfiguration				1	1.1	10 ⁻¹⁰		10
Go to Analysis			Vehicle name	Available time	Time with GPS	Total trequency		Expensions trea	
Go to Analysis	MOL PISTA SU	ZUKI - OSXR-	DEFAILT	8.44.55 (h.m.s)	3.57.17 (h.m.s)	132 (Hz)	91 (Hz)	43 (Hz)	2
Select of	orliguration Channels Sy	rstem config	utation CANExp	ansions configu	rator				
Download data				Shift Li	hu -s	peed		-	
Al	M sensor Multiply facto	<i>y</i>	/2 💌	11950		annel Velocità	_1	•	
	MAX value	140	• 00	11800	- 6 -				
	rev log		-	. 11000			ap oscuring time		
		ecrestres	hold IV	0 11400	0 1		ec.)	- (5
AIM system	ensor	ulated	1	11300		La	p segments	1.	1.00
	(ALL)		1 1		1.11				
Online		with neutral Channel B	1 4 4 4	11000			Show lap time Show odomet		
	Highest or	ear number		100			Show running		
AIM system	ECU 6			111	5				
calibration			Cunten D P	071 1.10					
	Channel for alarm	Threshold	JEST LE				Channel for a		threshold
Custom sensors			JUJ U			- E	Fuel_Level	-	
manager	LPress 💌				1000	H	None	-	4
	tlery 💌	13.3			11	H	None	•	4
Select Language		/	()	•		11			
0	Link alarm to measure fiel	ids 14							
Ended	Measure Si L - always displayed	hortname			1	Fink	Measure 12 - always displa		tname
LC_L		LAM		Enable st	atic string	MOD		- Mi	P
	- page 1						14 - page 1		
LC_AF		AFR	Welcome tex	1		Nore		-	
- Could			Text 1			- Freed	14 - page 2	- Training	
		DEAG	1	12		Dane		-1	
aim-sportline.com	·/·	1000				Para		- Line -	

In this case it is necessary to change monitor settings.

Warning: close all running applications, Race Studio 2 included. This operation requires PC rebooting.

Here below the explanation of the procedure to modify monitor settings:

Follow this path: "Start/Setting/ Control Panel /Display". The window "Display Properties", shown here on the right, appears. Select "Settings" layer. Press "Advanced".

Display Properties	?×
Themes Desktop Screen Saver Appearance Settings	
Drag the monitor icons to match the physical arrangement of your mo	nitors.
2 1	
Display: 1. Plug and Play Monitor on 256MB ATI Radeon X1300PR0	~
Screen resolution Color quality	
Less More Highest (32 bit)	~
1280 by 1024 pixels	
Use this device as the primary monitor.	
Extend my Windows desktop onto this monitor.	
Identify Troubleshoot Advan	
OK Cancel	Apply



Enable "Ask me before applying the new display settings" option. Set DPI setting on "Normal (96 DPI)"

	jement	ATT CATALYST	(R) Control Center
General	Adapter	Monitor	Troubleshoot
		tems too small to view	
ont sizes only, clic	an increase the DPI t k Cancel and go to th	o compensate. To char ne Appearance tab.	nge
) PI setting: Normal size (96 D			
Normal size (96 D Normal size (96 D			
.arge size (120 D Custom setting			
ompatibility			
	ight not operate prope anging display settings	rly unless you restart the	•
fter I change disp Restart the cor		g the new display setting	s
	display settings without		
Ask me before	applying the new disp	olay settings	
~	other programs must b	e run in 256-color mode	
iome games and	running programs in 2		
iome games and			
iome games and			
ome games and			
ome games and			
ome games and			

The window here below appears.

Change	DPI Setting
•	Any font changes resulting from a new DPI setting will take effect after the fonts are installed and Windows is restarted.
	ОК

Press "OK".

Press "Apply".

General Adapter Monitor Troubleshood Display If your screen resolution makes screen items too small to view comfortably, you can increase the DPI to compensate. To change font sizes only, click Cancel and go to the Appealance tab. DPI setting: DPI setting: Image:	Color Manag	ement	📶 CATALYST	(R) Control Center
If your screen resolution makes screen items too small to view comfortably, you can increase the DPI to compensate. To change font sizes only, click Cancel and go to the Appearance tab. DPI setting: Normal size (96 DPI) Compatibility Some programs might not operate properly unless you restart the computer after changing display settings: After I change display settings: Restart the computer before applying the new display settings Apply the new display settings without restarting Ask me before applying the new display settings Some games and other programs must be run in 256-color mode.	General	Adapter	Monitor	Troubleshoo
If your screen resolution makes screen items too small to view confortably, you can increase the DPI to compensate. To change font sizes only, click Cancel and go to the Appearance tab. DPI setting: Normal size (96 DPI) Compatibility Some programs might not operate properly unless you restart the computer after changing display settings. After I change display settings: After I change display settings: After I change display settings: Apply the new display settings Apply the new display settings Ask me before applying the new display settings Some games and other programs must be run in 256-color mode.	- Display			
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Normal size (36 DPI) Compatibility Some programs might not operate properly unless you restart the computer after changing display settings. After I change display settings: Prestart the computer before applying the new display settings Apply the new display settings without restarting Ask me before applying the new display settings Some games and other programs must be run in 256-color mode.				nge
Normal size (96 DPI) Compatibility Some programs might not operate properly unless you restart the computer after changing display settings. After I change display settings: Prestart the computer before applying the new display settings Apply the new display settings without restarting Ask me before applying the new display settings Some games and other programs must be run in 256-color mode.	DPI settina:			
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 Apply the new display settings without restarting Ask me before applying the new display settings Some games and other programs must be run in 256-color mode. 				
Ask me before applying the new display settings Some games and other programs must be run in 256-color mode.	Restart the com	nputer before applying	the new display setting	as -
Some games and other programs must be run in 256-color mode.			-	
	 Ask me before a 	applying the new displ	ay settings	
				a.



The window here below appears:

General	
į)	The required files are already installed on your hard disk. Setup can use these existing files, or Setup can recopy them from your original Windows CD-ROM or from a network share.
	alternate location where the needed files may be found.) Yes No

Press "Yes".

	Display Properties 🔹 🤶 🔀
Press "OK".	Themes Desktop Screen Saver Appearance Settings Dag the monitor icons to match the physical arrangement of your monitor. 2 1 Display: 1 1. Plug and Play Monitor on 256MB ATI Radeon X1300PR0 Image: Color quality Isso by 1024 pixels Image: Color quality Image: Color quality Image: Color quality <t< td=""></t<>
Press "Yes". The system reboots.	You must restart your computer before the new settings will take effect. Do you want to restart your computer now? Yes No

After rebooting run "Race Studio 2" and all works correctly.



Chapter 3 – System identification

All AIM systems are univocally identified by **Race Studio 2** software. This allows to preliminarily check the communication between PC, software and the logger as to understand if the logger is supported by the software.

It is suggested to make a logger identification before starting any configuration. The procedure is:

- run Race Studio 2
- connect the USB cable to the PC and to the logger USB port
- switch the logger on
- press the button system identification. It is on Race Studio 2 menu bar, in the left vertical keyboard and in system manager window (the button is labelled "System Identification" for all MyChron3 loggers and "CAN-net Info" for the other systems).



If all works correctly, "System identification/CAN-NET info" window, shown below, appears.



N	Category of Logger	Type of Logger	Expansion Name	Logger ID	ID Date	Firmware	Firmware D
1	MASTER	MXL PISTA	Master	12345	16/01/2008	14.86.23	19/12/2007

MyChron3 logger identification window

CAN-net info window (other systems)



3.1 – System identification of MyChron3

Logger identification
MYCHRON 3 Logger channels
1 Memory:
64 KByte
Logger unique ID:
date ID:
10/04/2006
Driver vers VID 10.01 11CC
BOOTER: data: 17/01/2005 vers: 00.01.41
FIRMWARE data: 23/07/2005 vers: 2.34

The window shows:

- Logger channels: number of channels of the logger
- **Memory**: memory size of the logger (no matter how much of it has already been used)
- Logger unique ID: logger serial number
- Date ID: logger production date
- Driver vers. and VID: information concerning the USB driver
- Booter (date and vers.): logger booter date and version
- Firmware (date and vers.): logger firmware date and version. It is suggested to check on <u>www.aim-sportline.com</u> that the logger firmware version is the latest available; if not, pls. download the latest one, install it and follow instructions that appear on the PC monitor.



3.2 – System identification of other loggers.

CAN	- net info						
N	Category of Logger	Type of Logger	Expansion Name	Logger ID	ID Date	Firmware	Firmware D
1	MASTER	MXL PISTA	Master	12345	16/01/2008	14.86.23	19/12/2007
2	CAN EXPANSION	DaVid		47111881	18/01/2008	22.03	09/11/2007
3	CAN EXPANSION	LCU-ONE	LC	111111	13/12/2007	25.09	19/11/2007
4	CAN EXPANSION	GPS		902499	14/01/2008	35.13	17/12/2007
5	CAN EXPANSION	MEMORY KEY		7613105	17/12/2007	37.05	18/12/2007
			a	ncel			

The window shows:

- N: index of the item in the list. This window recognizes all loggers in their order starting always from the Master one (in the figure above an MXL Pista);
- **Category of logger**: role of the logger in the CAN net (master or CAN expansion)
- **Type of logger**: type of device connected
- **Expansion Name**: role of the logger in the CAN network
- Logger ID: logger univocal serial number
- ID Date: logger production date
- **Firmware Version**: firmware version installed on the logger. It is suggested to check on <u>www.aim-sportline.com</u> website that the firmware version is the latest available; if not, pls. download the latest one, install it and follow the instructions that appear on the PC monitor.
- Firmware Date: firmware date.



Chapter 4 – How to configure MyChron3 kart Plus/Gold/Extreme

To correctly configure, **MyChron3 Kart** (**Plus/Gold/Extreme**) use a PC and **Race Studio 2** software.

MyChron3 Kart can be configured both via keyboard and via software but some parameters can be set only via software. To measure lateral acceleration (to create track maps), for instance, it is necessary to calibrate the internal accelerometer via software.

Before starting the configuration install **Race Studio 2** and the USB driver as explained in Chapter 2.

Run the software clicking on Race Studio 2 icon and the window below appears.



In the title bar - white on a blue background in the figure above – you can see the version of **Race Studio 2** installed on the PC.

Immediately under there is the menu bar, that is shown in a more immediate way on the left thanks to the graphic buttons: Go to Analysis (this button runs Race Studio Analysis software), Download data, AIM system manager, AIM system Identification, Online, AIM system calibration, Custom sensors manager, Select language.

From this window it is possible to perform all operations necessary to manage all AIM systems.



To enter configuration menu click on "AIM system manager". A panel showing all systems managed through **Race Studio 2** appears: double click on **MyChron3 Kart Plus/Gold/Extreme** button or click on it and then press "✓Go to" button.



Race Studio 2 "System manager" window appears.



rste	m manager									
	General	Configuration	Chan	nels					Custon	nize sensor
		Logger identification	Trans	mit	Receive		Online	,	Ca	librate
	Logger		Vehicle name		Obsc t	Split time	Speed	Temp	Created	
	MYCHRON 3 - KAI	RT - PLUS	DEFAULT		8	0	mph	°F	February	04, 2008
	MYCHRON 3 - KA	RT - GOLD	DEFAULT		8	0	mph	°F	February	04, 2008
	MYCHRON 3 - KA	RT - EXTREME	DEFAULT		8	0	km/h	°F	February	04, 2008
				Ŷ		Ŷ				
	New	Delete	Cle		Import	l	Export			Exit
	New	Delete Logger typ		ne Vehicle name		Availa	Export		Total freq	

This window has two keyboards.

- **General**: shows "System manager" window. In the central part, with grey background, all configurations currently included in the software database are listed. In case of first configuration, the system shows automatically new configuration window.
- **Configuration**: allows to set or modify an existing configuration.
- Channels: allows to set all logger channels.
- System Identification: allows to identify the logger connected to the PC.
- **Transmit**: transmits a configuration. Needs the logger to be switched on and connected to the PC.
- **Receive**: reads and saves the configuration of the logger connected to the PC.
- **Online**: allows to verify that the configuration is correct and has been correctly transmitted to the logger and that all works properly.
- **Calibrate**: allows to calibrate/auto-calibrate the sensors that need it.
- **New**: creates a new configuration
- **Delete**: deletes a configuration
- **Clone**: clones a configuration.
- **Import**: imports a configuration from a file.
- **Export**: exports a configuration to a file.
- Exit: quits "System manager" window.

To work on a configuration click on any cell of that configuration row and the entire row is selected (highlighted in yellow).



4.1 – Creating a new configuration



Pressing "New" button in system manager window, this window appears:

Some parameters need to be set:

- Data logger type: select the logger to be configured.
- Vehicle name: insert the vehicle name.
- Speeds unit of measure: choose between km/h and Mph;
- Temperatures unit of measure: choose between °C and °F;

Press "OK" to save ("Cancel" to quit without saving). The system comes back to system manager window.



The next step is channels setting. Press "Channels" button.



4.2 – Channels

Gene	eral	Configuration		Channels				Customi	ze sensor
		Logger identification		Transmit	eceive		Online	Cali	brate
Channel i	Enabled/d	Channel name	Samplin	Sensor type	Mea	Low scale	High scale	Param. 1	Param. 2
RPM	Enabled	Engine	10 Hz	Engine revolution speed	rpm	0	20000	1.000	20000
SPD_1	Enabled	Speed_1	10 Hz	Speed	km/	0.0	250.0	830.0	1.0
CH_1	Enabled	Channel_1	10 Hz	Temperature sensor	°C	0	150		
CH_2	Enabled	Channel_2	10 Hz	Temperature sensor	°C	0	150		
CH_3	Enabled	Channel_3	10 Hz	Thermocouple	°C	0	150		
CH_4	Enabled	Channel_4	10 Hz	Thermocouple	°C	0	150		
CH_5	Enabled	Gear	10 Hz	Calculated Gear	#	0	6		
ACC_1	Enabled	Acc_1	10 Hz	Lateral accelerometer	g .01	-3.00	3.00		
LOG_TMP	Enabled	Datalogger_Temp	10 Hz	Cold joint	°C	0	50		
BATT	Enabled	Battery	1 Hz	Battery	V.1	5.0	15.0		
			hne	Vakida para		Augulable 1		Total Fee	Еніт
		Logger	type	Vehicle name		Available ti	me	Total frequ	

Pressing Channels button the window here below appears.

It shows all loggers channels with the related characteristics:

- Channel identifier: shows the channel label.
- Enabled/Disabled: shows the channel status (enabled/disabled). It can be modified double clicking on the cell except for RPM and SPD that can be modified only through system configuration window.
- Channel name: allows to name the channel.
- **Sampling Frequency**: allows to set each channel sampling frequency. This last one influences the total available time highlighted by a blue box in the figure above that diminishes increasing the sampling frequency because the memory fills up faster.
- Sensor type: allows to select the sensor installed on that channel from the drop down menu that appears clicking on that cell. Channels CH_1 and CH_2 are temperature channels: the logger can distinguish automatically a thermocouple from a thermo resistor and no configuration is needed. Channels CH_3 and CH_4 can be temperature or pressure channels: it is thereby necessary to configure them. CH_5 is the gear sensor installed in the gearbox that allows MyChron3 to measure the engaged gear; MyChron3 Gold/Extreme has got an internal accelerometer to measure lateral g. It allows to create track maps.
- **Measure unit**: show the selected unit of measure for each channel. It is possible to change it double clicking on the cell.
- **High/Low scale**: shows the range of values shown by the graph that will be created in Race Studio Analysis after data download.
- **Param.1/Param2**: values of RPM and speed set in system configuration window.

When all parameters have been set, it is necessary to transmit the configuration to the logger.



4.3 – System configuration

MyChron3 Kart Plus/Gold/Extreme has got 14 fully configurable coloured led; the 2 on the left and on the right of the display represent the 4 max and min alarm of the analog channels (temperatures and pressures), while the other 10 led on top of the display are the Shift lights that inform the pilot to shift gear.

Configuration MYCHRON 3 - KA	ART - EXTREME	X
Speed Wheel circumference (mm) 830	Display language Italiano	Rpm Multiply factor
Pulses per wheel revolution		Max value
Channel 1 Alarm LED Value HIGH 1 Value Channel 2 Alarm LED Value HIGH 2 Value UED Value UED Value HIGH 2 Value Val	1 2 3 4 5 5 4 3 2 1 1 0 0 0 5 0 0 0 0 1 0 16805 0 3 2 0 16805 0 4 0 0 0 0 0 0 0 0 0 16805 0 4 4	Channel 3 Alarm LED Value HIGH 3 0 Common 4 Alarm LED Value HIGH 4 0 LOW 4 0 LOW 4 0
Speed unit km/h v Temperature unit ©C v	Gear sensor None Calculated Highest gear number	Obscuring time (sec.) 8 Number of split times 0

To set alarms, high/low threshold values and configuration parameters it is necessary to complete the window shown here above.

First of all select the display language from the drop down menu red circled above.

4.3.1 – Speed box

Speed	
Wheel circumferen	се
(mm)	
830	
Pulses per wheel revo	lution
1	

- Wheel circumference: fill in the kart wheel circumference (in mm or in inches); this value is fundamental to correlate the wheel revolution speed to the kart one.
- **Pulses per wheel revolution**: fill in the number of magnets installed on the wheel. When the magnet passes in face of the sensor it generates an electric pulse.



4.3.2 – Shift Lights box



Sets the 5 RPM values, each one corresponding to two of the coloured led placed on top of MyChron3.

Led colors: the first two on the left and on the right are green, the central two are orange and the last four are red. To set the RPM threshold values fill in the cases. The led switches progressively on and when the engine reaches RPM value set in the fifth case all led start blinking, warning the pilot to shift gear. If a value is set on 0 the corresponding led is disabled.

4.3.3 – RPM box

-Rpm			
	Multiply f	actor	
	/ 1	•	
	Max va	lue	
	20000	-	

- **Multiply factor**: it is possible to choose among different values: for a one cylinder two strokes kart the proper value is /1.
- **Max value**: set the RPM high scale.

4.3.4 – Channels alarm boxes

Channel 1 Alarm						
	LED	Value				
HIGH	1	•	0			
LOW	1	•	0			

These boxes (2 for **MyChron3 Plus/Gold**, 4 for **MyChron3 Extreme**) allow to set the channels threshold values linking them to the four lateral led of the system.

For **MyChron3 Plus** and **Gold** it is possible to connect the min and max threshold values to different Led while for **MyChron3 Extreme** max and min threshold values have to be connected to the same led. Insert max and min value corresponding to the sensors installed on the kart.



4.3.5 – Lap box

Lap	
Obscuring time	
(sec.) 8	
Number of split times	
10	

- **Obscuring time**: is a time period during which the lap receiver installed on the kart, after having sampled a lap signal, is "blind" (it does not record signals). This function is useful for split times management on tracks with more magnetic strips/optical transmitters: set obscuring time on a minimum value to sample split times; not to record split times, set obscuring time on a value lower than best lap time and higher then the time elapsed between last split and start/finish line.
- **Number of split times**: is the number of splits the track is divided in and corresponds to the number of magnetic strips/optical transmitters installed there.

4.3.6 – Gear sensor box

iear sensor		
None		
Calculated	Highest gear number	6

- None: not to see the engaged gear number.
- **Calculated**: to calculate the engaged gear number (see the related procedure paragraph 5.7). In this last case, "Highest gear number" case is enabled: fill in the kart number of gears.

4.3.7 – Unit of measure box

-Measure Units	
Speed	d unit
km/h	•
Temperal	ture unit
°⊂	•

- **Speed Unit**: choose between km/h and mph
- Temperature unit: choose between °C and °F

When all configuration parameters have been set, click on "OK" button to save ("Cancel" to quit without saving). It is now necessary to transmit the configuration to the logger.



4.4 – Transmitting the configuration

To transmit the configuration the logger has to be switched on and connected to the PC USB port through the proper cable. Press "Transmit" button in system manager window and the system automatically will transmit the configuration to the logger.

Warning: when the configuration has been transmitted to the logger it is not saved in the software configurations database. This means that - to have a copy of it in the database - users need to read and save it. To do so press "Receive" button in "System manager" window: the configuration appears as last row in the central part of the window and is highlighted in yellow.

When the configuration has been transmitted it is necessary to perform calibration procedure, to say auto-calibrate the accelerometer and calibrate the gear sensor installed on the kart.

Warning: if the gear potentiometer and the accelerometer have not been correctly calibrated, it is not possible to sample the engaged gear number, nor create the track map. It is strongly recommended to pay particular attention to sensors calibration/ auto-calibration procedures.

4.4.1 – Possible problems that may occur while transmitting the configuration

While transmitting the configuration various error messages can appear:

Check that the USB cable is correctly plugged in the PC and in the logger USB port, that the logger is switched on and try again transmitting the configuration.

The system informs the user that the configuration he is trying to transmit has a different gear setting. Press "Yes" only if you wish to change gear setting.

The system informs the user that the logger has data stored in its memory and they will be deleted if the configuration is transmitted. Press "Yes" only if you wish to delete the logger memory.





🔲 Race	StudioConf	X
<u>.</u>		are data stored in datalogger! guration will erase them! inue?
	Sì	No



4.5 – Auto calibration of the accelerometer (Gold/Extreme only)

This procedure is analog to the one used for MyChron3 Car/Bike Plus/Gold/Extreme. See paragraph 5.6.2 for further information.

4.6 – Gear Calculation

The procedure is the same used to calculate gears on MyChron3 Car/Bike Plus/Gold/Extreme. See paragraph 5.7 for further information.

4.7 – Online

When the calibration procedure is over and the calibration has been transmitted to the logger, it is suggested to enter "Online" mode pressing the corresponding button in the menu bar, in system manager window or in the left vertical keyboard, to check that all works properly.

Ensure that the logger is switched on and correctly connected to the PC. The window here below appears. See paragraph 5.8 for further information.

🔚 On	ine						
Logger	type:		Firmware version:	Total fre	quency:	229	
MXL PISTA			14.86.0	296 (Ha	z)		UIIUI Show ADC counts
N	Channel i	Channel name	Sensor type	Meas	Measure	~	Show mV
1	RPM	Engine	Engine revolution speed	rpm	0		
2	SPD_1	Speed_1	Speed	km/h .1	0.0	E	Battery
3	CH_1	Channel_1	Generic linear 0-5 V	V.1	0.2		13.705
4	CH_2	Channel_2	Generic linear 0-5 V	V.1	2.6		13.705
5	CH_3	Channel_3	Generic linear 0-5 V	V.1	0.0		
6	CH_4	Channel_4	Generic linear 0-5 V	V.1	-0.0	ľ	Memory
7	CH_5	Channel_5	Generic linear 0-5 V	V.1	0.0		1%
8	CH_6	Channel_6	Generic linear 0-5 V	V.1	0.0		Logger is storing data
9	CH_7	Channel_7	Generic linear 0-5 V	V.1	0.0		
10	CH_8	Channel_8	Generic linear 0-5 V	V.1	0.0	L	Lap marker
11	CALC_GEAR	Calculated_Gea	Calculated Gear	#	0		0.00.000
12	ACC_1	LatAcc	Lateral accelerometer	g .01	-0.75		Waiting Last lap nr.0
13	LOG_TMP	Datalogger_Tem	Cold joint	°C	27		
14	BATT	Battery	Battery	V.1	13.7	L	Logger-PC link
15	ECU_1	BOSCH_RPM	Engine speed sensor	rpm	4096		Communication line: OK
16	ECU_2	BOSCH_SPEED1	Bosch speed sensor	km/h .1	64.0		
17	ECU_3	BOSCH_SPEED2	Speed sensor	km/h	ERR.		
18	ECU_4	BOSCH_OIL_PRES	Pressure sensor	bar .1	ERR.	(Configuration status
19	ECU_5	BOSCH_FUEL_PRE	Pressure sensor	bar .1	ERR.		Configuration is OK
20	ECU_6	BOSCH_ATM_PRES	Pressure sensor	mbar	ERR.		
21	ECU_7	BOSCH_FUEL_TEM	Temperature sensor	°C	ERR.		
22	ECU_8	BOSCH_OIL_TEMP	Temperature sensor	°C	ERR.		
23	ECU_9	BOSCH_ENGINE_T	Temperature sensor	°C	ERR.		
24	ECU 10	BOSCH ATR TEMP	Temperature sensor	<u>ەر</u>	FRR	~	LXIC



Chapter 5 – How to configure MyChron3 Car/Bike Plus/Gold/Extreme

To correctly configure **MyChron3 Car/Bike Plus/Gold/Extreme** use a PC and **Race Studio 2** software.

MyChron3 Car/Bike can be configured both via keyboard and via software but some channels, like these with temperature or pressure sensors, accelerometer or gyroscope, cannot be set via keyboard.

Before starting the configuration install **Race Studio 2** and the USB driver as explained in Chapter 2.

Run the software clicking on **Race Studio 2** icon and the window below appears:



In the title bar – white on a blue background in the figure – you can see the version of **Race Studio 2** installed on the PC.

Immediately under there is the menu bar, that is shown in a more immediate way on the left thanks to graphic buttons: Go to Analysis (this buttons runs the analysis software Race Studio Analysis), Data download, AIM system manager, AIM system identification, Online, AIM System Calibration, Custom sensors management, Select language.

Through this window it is possible to perform all operations necessary to manage all AIM systems.



To enter configuration menu click on "AIM System manager". A panel showing all systems managed through **Race Studio 2** appears: double click on **MyChron3 Car/Bike Plus/Gold/Extreme** button or select it and click on "✓Go to" button.



Race Studio 2 System manager window appears.


General	Configuration	Char	nnels					Customize sensor
	Logger identification	Tran	smit	Receive		Online	,	Calibrate
Logger		Vehicle name	(***)D	Obsc t	Split time	Speed	Temp	Created
MYCHRON 3 - C/	AR / BIKE - PLUS	DEFAULT		8	0	km/h	°C	December 14, 2007
MYCHRON 3 - C/	AR - XG	DEFAULT		8	0	km/h	°C	March 06, 2008
MYCHRON 3 - C	AR - GOLD	DEFAULT		8	0	km/h	°C	March 06, 2008
MYCHRON 3 - B	IKE - GOLD	DEFAULT		8	0	km/h	°C	March 06, 2008
MYCHRON 3 - SM	1 - GOLD	DEFAULT		8	0	km/h	°C	March 06, 2008
MYCHRON 3 - B	IKE - GOLD	READ		8	0	km/h	°C	March 12, 2008
New	Delete	-	one	Import		Export		Exit
New	Delete Logger ty	-	one Vehicle name		Availat	Export		Exit Total frequency

This window has two keyboards.

- **General**: shows "System manager window". In the central part, with grey background, all configurations currently included in the software database are listed. In case of first configuration the software shows directly "New configuration" window.
- **Configuration**: allows to set or modify a configuration.
- Channels: allows to set all loggers channels.
- System Identification: allows to identify the logger connected to the PC.
- **Transmit**: transmits a configuration to the logger. It needs the logger to be switched on and connected to the PC.
- **Receive**: reads and saves the configuration of the logger connected to the PC.
- **Online**: allows to check that the configuration is correct and has been correctly transmitted to the logger and that all works properly.
- **Calibrate**: allows to calibrate/auto-calibrate the sensors that need it.
- New: creates a new configuration.
- **Delete**: deletes a configuration.
- **Clone**: clones a configuration.
- **Import**: imports a configuration from a database or from a file.
- **Export**: exports a configuration in a file.
- **Quit**: quits "System Manager" window.

To work on a configuration click on any cell of that configuration row and the entire row is selected (highlighted in yellow).



5.1 – Creating a new configuration

Pressing "New" button in "System Manager" window, this window appears.



Some parameters need to be set:

- Data Logger type: select the logger to be configured.
- Vehicle Name: insert the vehicle name.
- Speeds unit of measure: choose between km/h and Mph.
- Temperatures unit of measure: choose between °C and °F.
- Pressures unit of measure: choose between Bar and PSI.

Press "OK" to save ("Cancel" to quit without saving). The system comes back to system manager window.

	General	Configuration	Cł	hannels					Customize senso
		Logger identification	T	ransmit	Receive		Online		Calibrate
1	Logger		Vehicle nam	e	Obsc t	Split time	Speed	Temp	Created
	MYCHRON 3 - I	CAR / BIKE - PLUS	DEFAULT		8	0	km/h	°C	December 14, 2007
	MYCHRON 3 -	CAR - XG	DEFAULT		8	0	km/h	°C	March 06, 2008
	MYCHRON 3 -	CAR - GOLD	DEFAULT		8	0	km/h	°C	March 06, 2008
	MYCHRON 3 -	BIKE - GOLD	DEFAULT		8	0	km/h	°C	March 06, 2008
	MYCHRON 3 - :	5M - GOLD	DEFAULT		8	0	km/h	°C	March 06, 2008
5	MYCHRON 3 -	BIKE - GOLD	READ		8	0	km/h	°C	March 12, 2008
	New	Delete	-0	Clone	Import	Ň	Export		e nit
	New	Delete Logger ty	-0	Clone Vehicle	4	Availat	Export		Total frequency

The next step is channels setting. Press "Channels".



5.1.1 – MyChron3 Plus/Gold Bike Plug&Play configurations

MyChron3 Plus/Gold Plug&Play kits for Bike installations include, beside the logger, all what is needed for an easy installation on the bike (wiring, bracket, screws, washers, etc.). At present, the most important models/brands have got their kits available. Refer to AIM corporate website <u>www.aim-sportline.com</u> for further information.

С



If the bike is completely corresponding to the stock one sold by the manufacturer, selecting the related configuration is enough to transmit it to the logger. In case, on the contrary, additional sensors have been installed, they need to be configured following the procedures here described.

Warning: all parameters set in Plug&Play configurations have been tested to work correctly. Refer to each kit user manual for any information concerning the configuration and to modify it.



5.1.2 – MyChron3 Gold Snow Mobile configuration

AIM produces a particular version of **MyChron3 Gold** for **Snowmobile** installations. This particular MyChron3 application is supported by the configuration labelled "MyChron3 – SM – Gold". When the logger has been correctly installed and the eventual additional sensors connected (refer to the related documentation for further information), it is necessary to configure the logger. Select the logger between these available in "New configuration" window.



Pressing "OK" the system comes back to System manager window. The next step is channels setting; press "Channels".



5.2 – Channels

Gene	eral	Configuration		Channels				Customi	ize sensor
		Logger identification		Transmit	leceive		Online	Cali	brate
Channel i	Enabled/d	Channel name	Samplin	Sensor type	Mea	Low scale	High scale	Param, 1	Param, 2
RPM	Enabled	Engine	10 Hz	Engine revolution speed	rpm	0	20000	1.000	20000
5PD_1	Enabled	Speed_1	10 Hz	Speed	km/	0.0	250.0	1666.0	1.0
CH_1	Enabled	Channel_1	10 Hz	Thermocouple	°C	0	150		
TH_2	Enabled	Channel_2	10 Hz	Thermocouple	°C	0	150		
сн_з	Enabled	Channel_3	10 Hz	Pressure VDO 0-5 bar	bar	0.00	5.00		
CH_4	Enabled	Channel_4	10 Hz	Pressure VDO 0-5 bar	bar	0.00	5.00		
СН_5	Disabled	Gear	10 Hz	Calculated Gear	#	0	6		
ACC_1	Enabled	Acc_1	10 Hz	Lateral accelerometer	g .01	-3.00	3.00		
OC THE	Enabled	Datalogger_Temp	10 Hz	Cold joint	°C	0	50		
LOG_TMP	Enabled								
	Enabled	Battery	1 Hz	Battery	۷.1	5.0	15.0	2	5
LOG_TMP BATT			1 Hz	Battery	V .1	5.0	15.0		
				Battery Vehicle name	V .1	5.0 Available ti		Total freq.	Exit

Pressing Channels button this window appears.

It shows all channels set on the logger with the related characteristics:

- Channel Identifier: shows channel label.
- Enabled/Disabled: shows channel status (enabled/disabled). It is modifiable with a double click on the cell except for RPM, Speed and Gear that can be modified only through System configuration window.
- Channel name: allows to name the channel.
- **Sampling Frequency**: allows to set each channel sampling frequency. This last one influences the total available sampling time highlighted by a blue box in the figure above that diminishes increasing the sampling frequency because the memory fills up faster.
- Sensor type: allows to select the sensor installed on that channel from the drop down menu that appears clicking on that cell. Channels CH_1-CH_4 support temperature or pressure sensors (MyChron3 Plus), potentiometers and Lambda probe (MyChron3 Gold/Gold XG). User can set the desired sensor selecting it from the drop down menu. Channel CH_5 is gear channel. MyChron3 Gold Bike allows to install an external gyroscope on channel CH_7 to create the track map while MyChron3 Gold/Gold XG (Car) has a lateral internal accelerometer (labelled ACC_1) for the same purpose.
- Measure unit: allows to select the sensor unit of measure.
- **High/Low scale**: shows the range of values visualized by the graph that will be created by Race Studio Analysis after data download.
- **Param.1/Param2**: the values of RPM and speed parameters set in system configuration window.

When all parameters have been set it is necessary to transmit the configuration to the logger.



5.3 – Creating a custom sensor

This function allows to configure a "custom" sensor setting the proper curve: it is very useful when the used sensor (pressure, temperature or other) is not included in the available sensors list.

Please note: "Custom sensors" option is intended for expert users only.

Press "Custom sensors manager" button in channels window or in the menu bar or in the left vertical toolbar.

AlM Sportline										
orid Leader in Data Acquisition										
Go to Analysis	System m	sanager				1.00				
		reral	Configuration		Channels				Customize sensor	
Download data		diami -	Logger identification	n) a	Transmit	Receive		Online	Calbrote	- tex - fig
trownload data	Channel I		Channel name	Sarpin	Sensor type	Mea	Low scale	High scale	Param. 1 Param.	2
	RPM	Disabled	Engine	10 Hz	Engine revolution speed	rpm	0	20000	1,000 20000	
	SP0_1	Disabled	Speed_1	10 Hz	Speed	krt/	0.0	250.0	1666.0 1.0	
AIM system manager	0(1	Enabled Enabled	Channel_1	10 Hz	Thermoresistance PTL00		0	150		
and the second division of the second divisio	01,2	Enabled	Channel_2 Channel_3	10 Hz	Thermoresistance PT100 sub_H20	*0	0	5		
	01.4	Enabled	Channel 4	10 Hz	Pressure VDO 0-5 bar		0.00	5.00		
IM system identification	01.5	Disabled	Gear	10 Hz	Calculated Gear		0	6	10.00	Management of the second second
in system menuncation	CH_7	Enabled	Acc_Evit_Gyro	10 Hz	Gyro	deg/s	-90	90		
	LOG_TMP	Enabled	Datalogger_Temp	10 Hz	Cold joint	*C	0	50		a former state of the
	BATT	Enabled	Battory	1 Hz	Battery	V.1	5.0	15.0		Section 2 and a
AIM system calibration										100
Select Language		_	Logger	type	Vehicle name		Available	time 🗍	Total frequency	- WWW
			MICHRON 3 -	BIKE - GOLD	DEFAULT		4.36.251	h.m.s)	61 (Hz)	

This window appears:

Cu	stor	nize sen:	sor			
٦	Гуре	of measur × [mV]	e Temperature y ℃ ▼		Compute Curve	Select sensor
~	1	0		0.000		
5		0	0	0.000	0.000-	,
Г		0	0	0.0		
Г	4	0	Ó	0.0	0.000_	
Г	5	0	0	0.0		
Г	6	0	0	0.0	0.000	
Г	7	0	0	0.0		
Г	8	0	0	0.0	0.000_	J Sensor name
Г	9	0	0	0.0		Sensor name
Г	10	0	0	0.0	0.000	
Γ	11	0	0	0.0		Save sensor
Г	12	0	0	0.0	0.000	Delete sensor
Г		0	0	0.0	0.00000	
Г		0	0	0.0	$y = a0 + a1 * x + a2 * x^2 + a3 * x^3 + a4 * x^4$	Import sensors
Ξ		0	0	0.0	a0 0.0	
		0	0	0.0	a1 0.0	Export selected sensor
		0	0	0.0	a2 0.0	Export all sensor
		0	0	0.0	a3 0.0	
See. 2	20	0	0	0.0	a4 0.0	

It allows to create/delete a custom sensor and import/export a sensor (or all sensors).



Temperature Temperature Pressure Electrical Tension

Speed Angular Velocity Acceleration

Torque

Volume Electrical Current Volume Flow

Time Number

Custom

Acceleration Angle Mechanical Power Lambda n

0

0

Π

n

Customize sensor

×[mV] y

0 Electrical Te Length 0 Percentage Frequency

▼1 0

⊽ 2 **□** 3

□ 4

□ 5

□ 6

Γ7

□ 8

□9 □10

4

5

To create a custom sensor:

Click on the drop down menu corresponding to "Measure type" case and select the category the sensor belongs to.

☐ 11 ☐ 12	0		0.		0
Custor	nize sen	ISOT			
Туре	of measur	re	Length		
	×[mV]	у	km	-	Curve Error
▼ 1	0	0	km m		0.000
V 2	0	0	mm		0.000
	0	0	lin ft		0.0

mi

cm in

Select the unit of measure corresponding to the sensor to be created.

Enable the left cases corresponding to the number of experimental values to be used (up to 20 allowed).

Fill in the values corresponding to the sensor to be created in the two left columns.

- x[mV]: sensor output voltage in mV (X axle of the calibration curve);
- y: values of the selected measure concerning the output voltage – the values are interpolated using a polynomial (Y axle);

Curve error: this column is useful to verify that the curve computed by the software is consistent with the experimental values.

Custor	Customize sensor							
Туре	Type of measure Temperature							
	(×[mV])	🕜 km 🖃	Curve Error					
▼ 1	0	118	-0.812					
▼ 2	123	109	0.889					
🔽 З	562	88	0.243					
▼ 4	1398	61	-0.624					
🔽 5	2709	31	0.617					
🔽 6	3603	14	-0.405					
7	4484	-3	0.092					
□8	0	0	0.0					



Туре	of measu ×[mV]	re Length y km 💌	Curve Error	Compute Curve	Select sensor
▼ 1	0	118	-0.812		Sub H2O
▼ 2	123	109	0.889	118-0	Custom_001
⊽ 3	562	88	0.243		Custom_002
			i	94	
▼ 4	1398	61	-0.624	34	
▼ 5	2709	31	0.617		
▼ 6	3603	14	-0.405	70	
7	4484	-3	0.092		
8	0	0	0.0	45	5
□ 9	0	0	0.0		Sensor name
10	0	0	0.0	21	Sub_H2O
□ 11	0	Ö	0.0		Save sensor
12	0	0	0.0		
13	0	0	0.0	-3 0 897 1794 2690 35874484	Delete sensor
14	0	0	0.0	$y = a0 + a1^*x + a2^*x^2 + a3^*x^3 + a4^*x^4$	Import sensors
15	0	0	0.0		Import sensors
16	0	0	0.0		Export selected sensor
17	0	0	0.0	a1 -6.184270e-002	
18	0	0	0.0	a2 0.000021	Export all sensor
19	0	0	0.0	a3 -4.599420e-009	
20	0	0	0.0	a4 3.770901e-013	📲 Exit

After inserting the experimental values:

- click on "Compute curve";
- fill in "Sensor name" box;
- click on "Save sensor";
- click on "Exit";
- set the new sensor on the desired channel in channels window.



5.4 – System configuration

MyChron3 Car/Bike Plus/Gold/Extreme has 14 fully configurable alarm led; the 2 on the left and on the right of the display are the 4 high/low alarm led of the analog channels (temperatures and pressures), while the other 10 on top of the display are the Shift lights that warn the pilot to shift gear.

Configuration MYCHRON 3 - BIKE	- GOLD	X
Speed	Display language Italiano 💌	Rpm
Wheel circumference (mm) 1666	Shift Light	Multiply factor / 1 💌
Pulses per wheel revolution		Max value 20000 💌
Channel 1 Alarm <u>LED Value</u> HIGH 1 0 O O O Channel 2 Alarm LED Value HIGH 2 0 O LOW 2 0	Shift light 1 2 3 4 5 5 4 3 2 1 1 4 5 5 6 5 5 6 5 6 6 6 6 6 6 6 6 6 6 6 6	Channel 3 Alarm LED Value HIGH 3 0 LOW 3 0 Channel 4 Alarm HIGH 4 0 LOW 4 0
Measure Units	Gear sensor Calculated with neutral signal	Lap Obscuring time (sec.) 8
Temperature unit	Potentiometer Highest gear number 6	Number of split times

To set alarms, high/low threshold values and configuration parameters it is necessary to fill in the above reported window.

First of all select the display **language** red circled in the figure above.

Note: in case of a Plug&Play kit this window is already configured.

This window is to be completed like that of MyChron3 Kart (see paragraph 4.2.) except for Gear sensor box, shown here below. Available options are:

- "None": not to see the engaged gear on the display.
- "Potentiometer": a gear potentiometer¹ is available.
- "Calculated": to calculate the engaged gear²; specify whether a neutral sensor is available or not if required.

Gear sensor	
None	Calculated 🔽 with neutral signal
Potentiometer	Highest gear number 6

¹ Gear sensor calibration procedure is described at paragraph 5.6.3.

² Gear calculation procedure is described at paragraph 5.7.



5.4.1 – System configuration of MyChron3 Gold Snow Mobile

In case of a **MyChron3 Gold Snowmobile**, configuration window is slightly different, as shown below. It has an additional box labelled "Shaft rotation speed".

Configuration MYCHRON 3 - SM -	SOLD	
Speed	Display language Italiano	Rpm
Wheel circumference (mm) 1666	Shift Light	Multiply factor
Pulses per wheel revolution 1	Led 1 Led 2 Led 3 Led 4 Led 5 0 0 0 0 0 0	Max value 20000 💌
- Shaft rotation speed Pulses per revolution 1	Shift light 1 2 3 4 5 5 4 3 2 1	
Channel 1 Alarm LED Value HIGH 1 0 LOW 1 0		Channel 3 Alarm LED Value HIGH 3 0 LOW 3 0
Channel 2 Alarm		Channel 4 Alarm
		HIGH 4 • 0 LOW 4 • 0
Measure Units	Gear sensor Calculated	Lap
Speed unit km/h 💌	Potentiometer Highest gear number 0	Obscuring time (sec.) 8
Temperature unit C 💌		Number of split times

The window is to be completed like the other MyChron3 of this group (see paragraphs 4.2 and 5.2) except for Shaft rotation speed box, reported here below.

Fill in the pulses for shaft revolution. This value corresponds to the number of magnets installed on the snowmobile transmission shaft.

-Shaft rotation speed	
Pulses per revolution	1



5.5 – Transmitting the configuration

To transmit the configuration the logger has to be switched on and connected to the PC USB port through the proper cable. Press "Transmit" button in system manager window and the system automatically transmits the configuration to the logger. For further information refer to paragraph 4.4.

5.6 – Sensors calibration and auto-calibration

When the configuration has been transmitted it is necessary to perform calibration procedure, to say auto-calibrate accelerometer, gyroscope and distance potentiometer and calibrate the gear sensor, the mid zero potentiometer and the zero based potentiometer installed on the vehicle.

Warning: if potentiometers, gyroscope and accelerometers have not been correctly calibrated it is not possible to sample correct data, nor the engaged gear nor create the track map. It is recommended to pay particular attention to sensors calibration/auto-calibration procedures.

To enter calibration/auto calibration window press "AIM system calibration" button on the left keyboard or on **Race Studio 2** menu bar.

Sensor calibration			
Configuration name	[System type EV03 PISTA	
- Sensors to autocalibrate			here to autocalibrate all sensors in the list
Chan Channel name ACC_2 Acc_2 ACC_1 Acc_1	Sensor type Longitudinal accelerometer Lateral accelerometer	Status Default value Default value	Click here to calibrate Calibrate Calibrate
Sensors to calibrate			
Chan Channel name CH_8 Channel_8	Sensor type Gear potentiometer	Status To calibrate	Click here to calibrate Calibrate
V	Transmit calibration	<u>C</u>ancel	

Warning: to correctly perform the described procedures keep the vehicle as horizontal as possible (in case of a Bike leave it on the prop stand).



5.6.1 – Sensors calibration procedure (except gear sensor)

Press "calibrate" button corresponding to the channel to be calibrated and follow the instructions that appear on the PC monitor. The figures here below show, on the left a mid zero potentiometer and on the right a zero based potentiometer calibration panel.

Sensor calibration			Sensor calibration		
Channel Name Channel_2	Sensor type Mid zero potentiometer	Measure unit mm	Channel Name Channel_1	Sensor type Zero based potentiometer	Measure unit mm
Current	Raw data	Measure -100.0		Raw data Current values	Measure 0.2
HIGH POSITION Get Raw Value	3688	100	HIGH POSITION Get Re	aw Value 3688	100
ZERO POSITION Get Raw Value	1344	0	ZERO POSITION Get Re	aw Value 0	0
LOW POSITION Get Raw Value		-100			
How to calibrate your sensor 1. Maintain your sensor in high (or right) referbutton. 2. Maintain your sensor in zero (or rest) referbutton. 3. Maintain your sensor in low (or left) referebutton. 4. Insert measure values correspondent to a Click <0K> button.	rence position and click on <get ence position and click on <get r<br="">nce position and click on <get ra<="" td=""><td>aw value> proper w value> proper</td><td>button. 2 Maintain your sensor in zero (or i button.</td><td>right) reference position and click on <get rest) reference position and click on <get ndent to above indicated reference positio</get </get </td><td>raw value> proper</td></get></get></get 	aw value> proper w value> proper	button. 2 Maintain your sensor in zero (or i button.	right) reference position and click on <get rest) reference position and click on <get ndent to above indicated reference positio</get </get 	raw value> proper

When the sensors have been calibrated their status in "Sensor calibration" window turns into "Calibrated" in red and " \checkmark Transmit calibration" button is enabled. Press it to transmit the calibration.

Configuration na	me	System ty	ne
LOGGER CON		EV03 PIS	
	ν J	Evostis	IA
Sensors to autocalibrate		<u></u>	
		Cli	ck here to autocalibrate all sensors in the list
Chan Channel name	Sensor type	Status	Click here to calibrate
ACC_2 Acc_2 ACC_1 Acc_1	Longitudinal accelerometer Lateral accelerometer	Default value Default value	Calibrate Calibrate
	Carsor line	Chakus	Click here to calibrate
Chan Channel name CH_2 Channel_2	Sensor type Zero based potentiometer	Status Calibrated	Click here to calibrate
Chan Channel name CH_2 Channel_2 CH_3 Channel_3	Zero based potentiometer Mid zero potentiometer	Calibrated Calibrated	Calibrate Calibrate
Chan Channel name CH_2 Channel_2 CH_3 Channel_3	Zero based potentiometer	Calibrated	Calibrate
Chan Channel name CH_2 Channel_2 CH_3 Channel_3	Zero based potentiometer Mid zero potentiometer	Calibrated Calibrated	Calibrate Calibrate
Chan Channel name CH_2 Channel_2 CH_3 Channel_3	Zero based potentiometer Mid zero potentiometer	Calibrated Calibrated	Calibrate Calibrate
Chan Channel name CH_2 Channel_2 CH_3 Channel_3	Zero based potentiometer Mid zero potentiometer	Calibrated Calibrated	Calibrate Calibrate
CH_2 Channel_2 CH_3 Channel_3	Zero based potentiometer Mid zero potentiometer	Calibrated Calibrated	Calibrate Calibrate

This procedure is fundamental to sample correct data.



5.6.2 – Sensors auto calibration procedure

Press "Click here to auto-calibrate all sensors in the list" to auto-calibrate accelerometer, gyroscope or distance potentiometer.

or calibration			
Configuration (name	System type	
LOGGER_CO	DNF	EV03 PISTA	en e
ensors to autocalibrate		Click	nere to autocalibrate all sensors in the list
Chan Channel name	Sensor type		Click here to calibrate
CC_2 Acc_2 CC_1 Acc_1	Longitudinal accelerometer Lateral accelerometer	Default value Default value	Calibrate Calibrate
Chan Channel name	Sensor type		Click here to calibrate
Chan Channel name	Sensor type Gear potentiometer	Status To calibrate	Click, here to calibrate Calibrate
Chan Channel name			

Sensors calibration status in "Sensor calibration" window turns into "Calibrated", in red and " \checkmark Transmit calibration" button, bottom left, is enabled: press it to transmit the calibration.

This procedure is fundamental to sample correct data.

5.6.3 – Gear sensor calibration procedure

To calibrate the gear sensor it is necessary that the related panel in "System configuration" window is set on "Potentiometer" as shown here below.



In case during the transmission of the configuration the panel here below appears click on "Yes".

🔲 Rac	eStudioConf	\times
?	Gear configuration of datalogger is different from that of RaceStu	
	Do you want to update datalogg	er?
	Sì No	



then press "AIM system calibration" button in the menu bar or in the left vertical keyboard: this window appears:

Configuration nar LOGGER_CON		System ty EV03 PIS	
Sensors to autocalibrate	·J		ck here to autocalibrate all sensors in the list
Chan Channel name ACC_2 Acc_2 ACC_1 Acc_1	Sensor type Longitudinal accelerometer Lateral accelerometer	Status Default value Default value	Click here to calibrate Calibrate Calibrate
Gensors to calibrate Chan Channel name CH_8 Channel_8	Sensor type Gear potentiometer	Status To calibrate (Click here to calibrate Calibrate

Press "Calibrate" button corresponding to the gear potentiometer. The window here below appears:



Follow the instructions that appear on the right part of the window (enable the checkbox corresponding to the highest gear number; engage neutral gear, press "Continue"; engage the first gear, press "Continue" and repeat until the highest gear has been engaged).



When the procedure is over " < End calibration" button is enabled: press it.

Gear sensor	cali	bration	
Gear number		Raw value	
NEUTRAL	•	204	
#1	•	442	Click on END CALIBRATION
#2	•	574	
#3	•	805	
# 4	•	976	
#5	•	1133	
#6	•	1241	CONTINUE
#7	Г	0	Market Calibration
# 8	Г	0	RESTART CALIBRATION
#9	Г	0	A <u>C</u> ancel

The system comes back to sensor calibration window. Gear potentiometer status turns into "Calibrated" in red and "✓ Transmit Calibration" button is enabled: press it.

Sensor calibration			
Configuration name	е	System typ	e
LOGGER_CONF	·····	EV03 PIS1	A
 Sensors to autocalibrate 		Clic	k here to autocalibrate all sensors in the list
Chan Channel name ACC_2 Acc_2 ACC_1 Acc_1	Sensor type Longitudinal accelerometer Lateral accelerometer	Status Default value Default value	Click here to calibrate Calibrate Calibrate
Sensors to calibrate Chan Channel name	Sensor type	Status	Click here to calibrate
CH_8 Channel_8	Gear potentiometer	Calibrated	Calibrate
	Transmit calibration	Cancel	



5.7 – Gear calculation procedure

Gear calculation procedure is to be set via software:

- set "Calculated" option in system calibration window;
- specify if a neutral sensor is available;
- fill in highest gear number;
- transmit the configuration to the logger.



Note: **DaVid**, the Data Video Recorder, needs that "Restart gear calibration" checkbox in "Select Configuration" layer is enabled, as shown here below.

Selec	t configuration Channe	ls Display DaVid									
¢	New	Delete	<u> </u> Clone		port f	Ex	port	F	Restart (gear calibration	©
(sec	turing time 8	Measure Uni Speed u Temperatur	nit km/t	•							
N	Installation name	Logger	ECU Manufactu	ECU Model	Vehicle name	Ob	Lap	Speed	Temp	Display	Created
1	DEFAULT	DaVid Standalone	BOSCH	MS3	DEFAULT	8	1	km/h	°C	M3-Dash	February 26, 2008
2	DEFAULT	DaVid Standalone	DELPHI	MEFI-4B	DEFAULT	8	1	km/h	°C	None	February 26, 2008

When the gear sensor is set and the configuration has been transmitted, **calculation procedure** is to be performed through the logger keyboard and **is made up of three steps: start**, **learning lap** and **calculation**.

The correct procedure requires you to strictly follow these instructions.

Gear calibration proceeding is made using two inputs: RPM and speed. These two channels should be correctly configured and the related sensors installation should be faultless.

In case the logger has more than one speed input, gear calibration proceeding will take as reference speed the one shown on the display. It is suggested to take as reference the speed of the driving wheel. Gear calculation proceeding can be made also on not driving wheel, but in this case it is necessary to pay more attention not to have the wheels sliding or blocked during learning lap.



Start (via keyboard)

To start this function or to reset previous values and re-start gear calculation proceeding (except for DaVid that needs a restart via software):

- press [MENU/<<] button until the display shows: GEAR CALIBRATION;
- press [MEM/OK] button: the display shows: calculated gear:
- press [MEM/OK] button and fill in the highest gear number using [<<] and [>>] buttons;
- confirm pressing [MEM/OK] button;
- quit the menu pressing [QUIT/VIEW] button.

As a confirmation of the activation the display shows "running GEAR CAL": calibration procedure is correctly started.

Learning lap

After gear calibration proceeding activation, a track lap needs to be run. During this learning lap, follow carefully these instructions.

- Engage all gears.
- Keep each gear engaged for at least 5/6 seconds.
- Drive in a smooth way (avoiding sudden accelerations or wheels blocks during brakes); let the engine keep RPM gradually and keep brakes as long as possible too in line with track characteristics and traffic situation. If using a reference speed coming from a not driving wheel, pay particular attention to driving style, reducing sliding between driving wheels and not driving ones.
- Go to the pit lane alter the learning lap and switch the engine off.

Warning: totally avoid "revs" while the vehicle is moving; avoid running through the pit lane with friction engaged. If needed, it is possible to press the accelerator before switching the engine off but when the vehicle is completely stopped.

Gear Calculation

After engine switch off gear calculation proceeding starts automatically. During this period LED AL1 blinks. After a few seconds (duration of the calculation depends on learning lap length) LED AL1 switches off and the display does no more show: "running GEAR CAL".

All AIM systems allow gear calculation proceeding working also if engine switch off is needed. In this case just re-switch the system on and calculation proceeding re-starts automatically with recorded values. Calculation proceeding takes more time and blinking led will be LED AL2 and, after, LED AL1.

Warning: do not move the vehicle and do not switch the engine on during gear calculation. Moving the vehicle the logger could record values that would make it misdoing the calculation.



Final suggestions

Gear calculation proceeding is only possible thanks to the measurement of the angular speed of the driving shaft and of the driving wheel. When the friction is completely engaged between the two speeds there is a ratio mechanically defined by the engaged gear. If the friction slides this ratio is no more determinable. If reference speed comes from a not driving wheel the sliding between driving wheel and not driving one due to accelerations and brakes implies an error in the gear computation. This is why it is strongly recommend to drive as smoothly as possible during learning lap.



5.8 – Online

When the calibration is over and the configuration has been transmitted to the logger, it is suggested to enter "Online" pressing the corresponding button on the menu bar, in system manager window or on the left vertical keyboard to verify that all works properly.

Ensure that the logger is switched on and correctly connected to the PC. The window here below appears:

Logger	type:		Firmware version:	Total fre	quency:	lebeleti	
MXL P			14.86.0	296 (Hz			91191 Show ADC counts
N	Channel i	Channel name	Sensor type	Meas	Measure	~	Show mV
1	RPM	Engine	Engine revolution speed	rpm	0		
2	SPD_1	Speed_1	Speed	km/h .1	0.0		Battery
3	CH_1	Channel_1	Generic linear 0-5 V	V .1	0.2		
4	CH_2	Channel_2	Generic linear 0-5 V	V.1	2.6		13.705
5	CH_3	Channel_3	Generic linear 0-5 V	V .1	0.0		
6	CH_4	Channel_4	Generic linear 0-5 V	V .1	-0.0		Memory
7	CH_5	Channel_5	Generic linear 0-5 V	V .1	0.0		1%
8	CH_6	Channel_6	Generic linear 0-5 V	V.1	0.0		Logger is storing data
9	CH_7	Channel_7	Generic linear 0-5 V	V.1	0.0		
10	CH_8	Channel_8	Generic linear 0-5 V	V.1	0.0		Lap marker
11	CALC_GEAR	Calculated_Gea	Calculated Gear	#	0		0.00.000
12	ACC_1	LatAcc	Lateral accelerometer	g .01	-0.75		Waiting Last lap nr.0
13	LOG_TMP	Datalogger_Tem	Cold joint	°C	27		
14	BATT	Battery	Battery	V.1	13.7		Logger-PC link
15	ECU_1	BOSCH_RPM	Engine speed sensor	rpm	4096		Communication line: OK
16	ECU_2	BOSCH_SPEED1	Bosch speed sensor	km/h .1	64.0		
17	ECU_3	BOSCH_SPEED2	Speed sensor	km/h	ERR.		
18	ECU_4	BOSCH_OIL_PRES	Pressure sensor	bar .1	ERR.		Configuration status
19	ECU_5	BOSCH_FUEL_PRE	Pressure sensor	bar .1	ERR.		Configuration is OK
20	ECU_6	BOSCH_ATM_PRES	Pressure sensor	mbar	ERR.		
21	ECU_7	BOSCH_FUEL_TEM	Temperature sensor	°C	ERR.		
22	ECU_8	BOSCH_OIL_TEMP	Temperature sensor	°C	ERR.		
23	ECU_9	BOSCH_ENGINE_T	Temperature sensor	°C	ERR.		Exit
24	ECU 10	BOSCH ATR TEMP	Temperature sensor	۰ <i>۲</i>	FRR	~	EXIC

It shows:

On top:

- **logger type**: the type of logger connected to the PC.
- Firmware version: firmware version installed on that logger.
- Total frequency: sum of all channels sampling frequency.

Central: channels table

On the right:

- Show ADC counts and show mV: buttons mainly used by AIM staff.
- **Battery**: shows battery voltage; in some loggers beside this case there is another one labelled V Ref. that shows V Ref value.
- **Memory**: shows memory status (logger is storing data or logger isn't storing data).
- Lap marker: checks transmitter/receiver channels. Place the transmitter in front of the receiver to test this function.
- Logger-PC link: shows the status of the USB connection.
- **Configuration status**: shows the configuration status.
- **Exit**: quits online window.



Note: if this message appears check that the logger is switched on, the cable is correctly plugged in the PC and in the Logger USB port; then try again.

🔲 Race	StudioConf 🛛 🔀
⚠	Impossible to communicate with data logger!
	ок



Chapter 6 – How to configure MyChron3 Log/Visor/XGLog

To correctly configure **MyChron3 Log/Visor/XGLog**, use a PC and **Race Studio 2** software.

MyChron3 Log/Visor/XGLog can be configured both via keyboard and via software but some channels can only be set via software. Temperature or pressure sensors, as well as ECU signals cannot be set via keyboard, exactly like accelerometers, potentiometers, the gyroscope etc....

Before starting the configuration, install **Race Studio 2** and the USB driver as explained in chapter 2.

Run the software clicking on the related icon and the window here below appears.



In the title bar – white on a blue background in the figure – you can see the **Race Studio 2** version installed on the PC .

Immediately under there is menu bar, shown in a more intuitive way on the left thanks to the graphic buttons: Go to Analysis (this button runs Race Studio Analysis software), Data download, AIM system manager, AIM system identification, Online, AIM system calibration, Custom sensors management, Select language.

From this window it is possible to perform all operations necessary to manage all AIM systems.



To enter configuration menu click on "AIM system manager" button . A panel showing all systems managed through **Race Studio 2** software appears: double click on "**M3Log/Visor XGLog**" or select it and click on "✓Go to" button.



Race Studio 2 "System manager" window appears.



Sys	tem manager										
	General		Configuration	Channels							Eustomize sensor
		Log	ger identification	Transmit	Re	ceive		Online			Calibrate
N	Installation name	Logger		ECU Manufact	ECU Model	Vehicle name	0	Split time	Sp	T	Created
1	GokeySL	M3 XG LC	G	None	None	SnoLOG2	20	0	mph	°F	December 16,
2	DEFAULT	M3LOG -	Advanced	MOTEC	M4-M48-Data5	DEFAULT	8	0	km/h	°C	March 06, 2008
3	DEFAULT	M3 XG LC	G	AEM	EMS v1.19+	DEFAULT	8	0	km/h	°C	March 06, 2008
1	DEFAULT	M3 XG LC	G FR2000 J	MARELLI	FR2000_J	DEFAULT	8	0	km/h	°C	March 06, 2008
5	DEFAULT	M3LOG -	Advanced	PECTEL	T_2/T_6	DEFAULT	8	0	km/h	°C	March 11, 2008
6	DEFAULT	M3LOG -	Advanced	MOTEC	M8_DataSet1	DEFAULT	8	0	km/h	°C	March 11, 2008
	New		Delete	Clone		port		Export			
	New Installation nam	le	Delete Logger typ		Im Vehicle name		vailable				Exit

Top and bottom keyboards allows the user to perform all needed operations to manage an AIM system. For further information concerning each button refer to the related paragraph in the chapter concerning **MyChron3 Car/Bike Plus/Gold/Extreme** configuration.

Central is the database of the available configurations. To work on one of them click on any cell of that configuration and the entire row is selected (highlighted in yellow).



6.1 – Premise on MyChron3 Log/Visor/XGLog

Systems managed through this button are: **MyChron3 LOG Advanced**, **MyChron3 Visor**, **MyChron3 XG LOG FR2000J** (configuration properly created for Japanese Formula Renault 2000 championship), **MyChron3 XG LOG**, **MyChron3 LOG Bike** and they differ from these previously explained because they can be connected to the engine control unit (from here onward ECU) of the vehicle.

For any information regarding the ECUs currently supported by AIM loggers, the procedures for a proper communication and connection between ECUs and AIM loggers, pls. refer to the proper Pdf document downloadable from AIM website at this link:

http://www.aim-sportline.com/pages/download/section_documentation_ecus.htm

6.2 – Creating a new configuration

Pressing "New" button in system manager window this window appears.

New configuration		
Data logger type	M3LOG	•
ECU Manufacturer	AEM	•
ECU Model	EMS v1.19+	•
New configuration name	DEFAULT	
Vehicle name	DEFAULT	
C		
Speed measure unit	km/h	_
Temperature measure unit)*C	-
Pressure measure unit	bar	-
	S Cancel	

Some parameters need to be set:

- **Data logger type**: select the logger to be configured (please note: logger labelled M3 XG LOG FR2000J creates a configuration properly developed for Japanese Formula Renault 2000 championship);
- ECU Manufacturer: select the manufacturer of the ECU installed on the vehicle or none. This last option is only available for MyChron3 XG Log and MyChron3 Log Bike, the only loggers of this group that can work also without being connected to an ECU.
- **ECU Model**: select the ECU model or none.
- New configuration name: fill in the configuration name.
- Vehicle name: fill in the vehicle name.
- Speeds unit of measure: choose between km/h and Mph.
- Temperatures unit of measure: choose between °C and °F.
- **Pressure unit of measure**: choose between Bar and PSI.

Press "OK" to save ("Cancel" to quit without saving). The system comes back to system manager window.



Sy	stem manager											X
	General		Configuration	Channe	els							Customize sensor
		Log	gger identification	Transm	nit	Red	eive		Online			Calibrate
N	Installation name	Logger		ECU Manufac	t ECU M	1odel	Vehicle name	0	Split time	Sp	T	Created
1	GokeySL	M3 XG LC		None	None		ShoLOG2	20	0	mph	°F	December 16,
2	DEFAULT	M3LOG -	Advanced	MOTEC	M4-M	48-Data5	DEFAULT	8	0	km/h	°C	March 06, 2008
3	DEFAULT	M3 XG LC)G	AEM	EMS v	1.19+	DEFAULT	8	0	km/h	°C	March 06, 2008
4	DEFAULT	M3 XG LC	G FR2000 J	MARELLI	FR200	00_J	DEFAULT	8	0	km/h	°C	March 06, 2008
5	DEFAULT		Advanced	PECTEL	T_2/	T_6	DEFAULT	8	0	km/h	°C	March 11, 2008
6	DEFAULT	M3LOG -	Advanced	MOTEC	M8_D	ataSet1	DEFAULT	8	0	km/h	°C	March 11, 2008
	New][Delete	Clon	ie	Imp	ort		Export			Exit
	New Installation nam) () ie	Delete Logger type	Clon	e re Vehicle	ų		vailable			_	Exit

The next step Is channels setting. Press "Channels".

6.2.1 – MyChron3 XG Log FR2000J configuration

AIM produces a particular version of MyChron3 XG Log properly created for Japanese Formula Renault 2000 championship and labelled MyChron3 XG Log FR2000J. This particular application is supported by a configuration included in the available configurations database in MyChron3 Log/Visor XG Log menu. When the logger has been correctly installed and the sensors connected it is necessary to configure the logger. Select the logger between these available in "New Configuration" window.

New configuration		
Data logger type	M3LOG	
ECU Manufacturer	M3LOG M3LOG - Advanced M3 - VISUR	
ECU Model	M3 XG LOG FR2000 J	
New configuration name	M3LOG - BIKE	
Vehicle name	DEFAULT	
Speed measure unit	km/h	
Temperature measure unit	°C 🗸	
Pressure measure unit	bar 💌	

Pressing "OK" the system comes back to System manager window. The next step is channels setting, press "Channels".



6.3 – Channels

	Configuration	Channel	s			(Customize sense	or
	Logger identification	Transmi	Receive		Online		Calibrate	
nabled/di	Channel name	Sampli	Sensor type	Mea	Low scale	High scale	Param. 1	-
nabled	Speed_1	10 Hz	Speed	km/h	0.0	250.0	1666.0	
nabled	Channel_1	10 Hz	Thermocouple	°C	0	150		
nabled	Channel_2	10 Hz	Thermocouple	°C	0	150		
nabled	Channel_3	10 Hz	Thermocouple	°C	0	150		
nabled	Channel_4	10 Hz	Thermocouple	°C	0	1000		
nabled	Channel_5	10 Hz	Thermocouple	°C	0	50		
isabled	Channel_6	10 Hz	Calculated Gear	#	0	9		
nabled	Acc_1	10 Hz	Lateral accelerometer	g .01	-3.00	3.00		
nabled	Datalogger_Temp	10 Hz	Cold joint	°C	0	50		
nabled	Battery	1 Hz	Battery	V.1	5.0	15.0		
nabled	AEM_RPM	10 Hz	Engine speed sensor	rpm	0	20000		
nabled	AEM_LOAD	10 Hz	Pressure sensor	bar	0.00	150.00		
nabled	AEM_TPS	10 Hz	Percentage sensor	% .1	0.0	100.0		
nabled	AEM_AIR_TEMP	10 Hz	Temperature sensor	°C	-30	60		
nabled	AEM_WATER_TEMP	10 Hz	Temperature sensor	°C	-30	120		
nabled	AEM_ADCR11	10 Hz	Voltmeter	V.1	0.0	20.0		
nabled	AEM_ADCR13	10 Hz	Voltmeter	V.1	0.0	20.0		
nabled	AEM_ADCR14	10 Hz	Voltmeter	V.1	0.0	20.0		
nabled	AEM_ADCR17	10 Hz	Voltmeter	V.1	0.0	20.0		
nabled	AEM_ADCR18	10 Hz	Voltmeter	V.1	0.0	20.0		
nabled	AEM_ADCR15	10 Hz	Voltmeter	V.1	0.0	20.0		
nabled	AEM_ADCR16	10 Hz	Voltmeter	V.1	0.0	20.0		
nabled	AEM BATTERY	10 Hz	Voltmeter	V.1	0.0	20.0		
	abled (di abled (di abled	abled Speed_1 abled Channel_1 abled Channel_2 abled Channel_3 abled Channel_4 abled Channel_5 abled Channel_6 abled Channel_6 abled Channel_6 abled Channel_6 abled Datalogger_Temp abled Acc_1 abled Datalogger_Temp abled AEM_RPM abled AEM_PPM abled AEM_TPS abled AEM_MATR_TEMP abled AEM_ADCR13 abled AEM_ADCR13 abled AEM_ADCR13 abled AEM_ADCR14 abled AEM_ADCR18 abled AEM_ADCR18	Abled Channel name Sampli abled Speed_1 10 Hz abled Channel_1 10 Hz abled Channel_2 10 Hz abled Channel_3 10 Hz abled Channel_4 10 Hz abled Channel_4 10 Hz abled Channel_5 10 Hz abled Channel_6 10 Hz abled Channel_6 10 Hz abled Channel_6 10 Hz abled Acc_1 10 Hz abled Datalogger_Temp 10 Hz abled Battery 1 Hz abled AEM_CAD 10 Hz abled AEM_OAD 10 Hz abled AEM_APPS 10 Hz abled AEM_APRTN1 10 Hz abled AEM_ADCR13 10 Hz abled AEM_ADCR13 10 Hz abled AEM_ADCR13 10 Hz abled AEM_ADCR17 10 Hz	Abled Channel name Samplin. Sensor type abled Speed_1 10 Hz Speed Speed abled Channel_1 10 Hz Thermocouple abled Channel_2 10 Hz Thermocouple abled Channel_3 10 Hz Thermocouple abled Channel_4 10 Hz Thermocouple abled Channel_5 10 Hz Thermocouple abled Channel_6 10 Hz Calculated Gear abled Channel_6 10 Hz Calculated Gear abled Acc_1 10 Hz Calculated Gear abled Datalogger_Temp 10 Hz Calculated Gear abled Battery 1 Hz Battery abled AEM_RPM 10 Hz Engine speed sensor abled AEM_LOAD 10 Hz Persecure sensor abled AEM_MTFS 10 Hz Temperature sensor abled AEM_ADCR11 10 Hz Voltmeter abled AEM_ADCR13 </th <th>habled Channel name Sampli Sensor type Mea habled Speed_1 10 Hz Speed km/h habled Channel_1 10 Hz Thermocouple °C habled Channel_2 10 Hz Thermocouple °C habled Channel_3 10 Hz Thermocouple °C habled Channel_4 10 Hz Thermocouple °C habled Channel_4 10 Hz Thermocouple °C habled Channel_6 10 Hz Thermocouple °C habled Channel_6 10 Hz Calculated Gear # habled Acc_1 10 Hz Cold joint °C habled Datalogger_Temp 10 Hz Cold joint °C habled AEM_RPM 10 Hz Engine speed sensor rpm habled AEM_LOAD 10 Hz Percentage sensor bar habled AEM_LOAD 10 Hz Temperature sensor °C habled AEM_MATE_TEMP 10 Hz Temperature sensor °C habled AEM_ADCR11 10 Hz Voltmeter V habled AEM_ADCR13 10 Hz Voltmeter V <</th> <th>nabled/di Channel name Sampli Sensor type Mea Low scale nabled Speed_1 10 Hz Speed km/h 0.0 nabled Channel_1 10 Hz Thermocouple °C 0 nabled Channel_2 10 Hz Thermocouple °C 0 nabled Channel_3 10 Hz Thermocouple °C 0 nabled Channel_4 10 Hz Thermocouple °C 0 nabled Channel_5 10 Hz Thermocouple °C 0 nabled Channel_6 10 Hz Calculated Gear # 0 nabled Acc_1 10 Hz Calculated Gear # 0 nabled Acc_1 10 Hz Calculated Gear # 0 nabled Acc_1 10 Hz Cold joint °C 0 nabled Act_1 10 Hz Engine speed sensor rpm 1 5.0 nabled AEM_LOAD</th> <th>Tabled/di Channel name Sampli Sensor type Mea Low scale High scale habled Speed_1 10 Hz Speed km/h 0.0 250.0 habled Channel_1 10 Hz Thermocouple °C 0 150 habled Channel_2 10 Hz Thermocouple °C 0 150 habled Channel_3 10 Hz Thermocouple °C 0 150 habled Channel_4 10 Hz Thermocouple °C 0 150 habled Channel_5 10 Hz Thermocouple °C 0 100 habled Channel_6 10 Hz Calculated Gear # 0 9 habled Acc_1 10 Hz Calculated Gear # 0 9 habled Acc_1 10 Hz Calculated Gear # 0 9 habled Acc_1 10 Hz Engine speed sensor rpm 0 20000</th> <th>nabled/di Channel name Sampli Sensor type Mea Low scale High scale Param. 1 nabled Speed_1 10 Hz Speed km/h 0.0 250.0 1666.0 nabled Channel_1 10 Hz Thermocouple °C 0 150 nabled Channel_2 10 Hz Thermocouple °C 0 150 nabled Channel_3 10 Hz Thermocouple °C 0 1000 nabled Channel_4 10 Hz Thermocouple °C 0 1000 nabled Channel_5 10 Hz Thermocouple °C 0 1000 nabled Channel_6 10 Hz Calculated Gear # 0 9 nabled Acc_1 10 Hz Calculated Gear # 0 9 nabled Acc_1 10 Hz Calculated Gear # 0 9 nabled Acc_1 10 Hz Calculated Gear #</th>	habled Channel name Sampli Sensor type Mea habled Speed_1 10 Hz Speed km/h habled Channel_1 10 Hz Thermocouple °C habled Channel_2 10 Hz Thermocouple °C habled Channel_3 10 Hz Thermocouple °C habled Channel_4 10 Hz Thermocouple °C habled Channel_4 10 Hz Thermocouple °C habled Channel_6 10 Hz Thermocouple °C habled Channel_6 10 Hz Calculated Gear # habled Acc_1 10 Hz Cold joint °C habled Datalogger_Temp 10 Hz Cold joint °C habled AEM_RPM 10 Hz Engine speed sensor rpm habled AEM_LOAD 10 Hz Percentage sensor bar habled AEM_LOAD 10 Hz Temperature sensor °C habled AEM_MATE_TEMP 10 Hz Temperature sensor °C habled AEM_ADCR11 10 Hz Voltmeter V habled AEM_ADCR13 10 Hz Voltmeter V <	nabled/di Channel name Sampli Sensor type Mea Low scale nabled Speed_1 10 Hz Speed km/h 0.0 nabled Channel_1 10 Hz Thermocouple °C 0 nabled Channel_2 10 Hz Thermocouple °C 0 nabled Channel_3 10 Hz Thermocouple °C 0 nabled Channel_4 10 Hz Thermocouple °C 0 nabled Channel_5 10 Hz Thermocouple °C 0 nabled Channel_6 10 Hz Calculated Gear # 0 nabled Acc_1 10 Hz Calculated Gear # 0 nabled Acc_1 10 Hz Calculated Gear # 0 nabled Acc_1 10 Hz Cold joint °C 0 nabled Act_1 10 Hz Engine speed sensor rpm 1 5.0 nabled AEM_LOAD	Tabled/di Channel name Sampli Sensor type Mea Low scale High scale habled Speed_1 10 Hz Speed km/h 0.0 250.0 habled Channel_1 10 Hz Thermocouple °C 0 150 habled Channel_2 10 Hz Thermocouple °C 0 150 habled Channel_3 10 Hz Thermocouple °C 0 150 habled Channel_4 10 Hz Thermocouple °C 0 150 habled Channel_5 10 Hz Thermocouple °C 0 100 habled Channel_6 10 Hz Calculated Gear # 0 9 habled Acc_1 10 Hz Calculated Gear # 0 9 habled Acc_1 10 Hz Calculated Gear # 0 9 habled Acc_1 10 Hz Engine speed sensor rpm 0 20000	nabled/di Channel name Sampli Sensor type Mea Low scale High scale Param. 1 nabled Speed_1 10 Hz Speed km/h 0.0 250.0 1666.0 nabled Channel_1 10 Hz Thermocouple °C 0 150 nabled Channel_2 10 Hz Thermocouple °C 0 150 nabled Channel_3 10 Hz Thermocouple °C 0 1000 nabled Channel_4 10 Hz Thermocouple °C 0 1000 nabled Channel_5 10 Hz Thermocouple °C 0 1000 nabled Channel_6 10 Hz Calculated Gear # 0 9 nabled Acc_1 10 Hz Calculated Gear # 0 9 nabled Acc_1 10 Hz Calculated Gear # 0 9 nabled Acc_1 10 Hz Calculated Gear #

Pressing Channels button this window appears.

It shows all channels set on the logger with the related characteristics:

- **Channel identifier**: shows channel label. "ECU_X" are the ones received from the vehicle ECU.
- **Enabled/Disabled**: shows channel status (enabled/disabled). It can be modified with a double click on the cell except for RPM, speed and gear channel that are only modifiable through system configuration window.
- Channel name: allows to name the channel.
- **Sampling frequency**: allows to set each channel sampling frequency. This last one influences the total available sampling time, highlighted by a blue box in the figure above, that diminishes increasing the sampling frequency because the memory fills up faster.
- Sensor type: allows to select the sensor installed on that channel selecting it from the drop down menu that appears clicking on that cell. On channels from CH_1 to CH_4 (for MyChron3 XG Log FR2000J, MyChron3 Log Bike) or CH_5 (for MyChron3 Log Advanced, MyChron3 XG Log) it is possible to connect temperature or pressure sensors, potentiometers, Lambda probe and gyroscopes (except for MyChron3 Log Bike that has channel CH_7 devoted to the gyroscope). To set the desired sensor select it from the available sensors list. Channel CH_6 is the gear channel.
- Measure unit: allows to select the sensor unit of measure.
- **High/Low scale**: shows the range of values shown by the graph that will be created by Race Studio Analysis software after data download.
- **Param.1**: is the value of RPM or speed parameters set in system configuration window.

When all parameters have been set transmit the configuration to the logger.



6.3.1 – MyChron3 Visor and MyChron3 XG Log FR2000J channels

MyChron3 Visor, being just a dash, does not allow sensor installation on the different channels but only receives ECU signals.

MyChron3 XG Log FR2000J channels are already set but it is possible to set additional temperature and pressure sensors, potentiometers, gyroscope and Lambda probe on channels from CH_1 to CH_4.

6.4 – Creating a custom sensor

This function allows to configure a "custom" sensor setting its characteristic curve and is very useful when the used sensor (temperature, pressure or other) is not included in the available sensor lists.

Please note: "Custom sensors" option is intended for expert users only.

Press "Custom Sensor Manager" button in channel window or in the menu bar or in the left vertical keyboard.

Go to Analysis					Temp 14					
Go to Analysis	System m		Configuration	Channe				C	Customize senso	
	Gen	sral	Logger identification	Transm			Online	L	Calibrate	
Download data	Channel id	. Enabled/di.		Sampli	Sensor type	Mea	Low scale	High scale	Param. 1	
	SPD_1	Enabled	Speed_1	10 Hz	Speed	km/h	0.0	250.0	1666.0	
	CH_1	Enabled	Channel_1	10 Hz	Thermocouple	°C	0	150		
AIM system manager	CH_2	Enabled	Channel_2	10 Hz	Thermocouple	°C	0	150		
	CH_3	Disabled	Channel_3	10 Hz	Thermocouple	°C	0	150		
	CH_4	Enabled	Channel_4	10 Hz	Thermocouple	°C	0	1000		
	CH_5	Disabled	Channel_5	10 Hz	Thermocouple	°C	0	50		
AIM system identification	CH_6	Enabled	Channel_6	10 Hz	Calculated Gear	#	0	9		
· · · · · · · · · · · · · · · · · · ·	ACC_1	Enabled	Acc_1	10 Hz	Lateral accelerometer	g .01	-3.00	3.00		
	LOG_TMP	Enabled	Datalogger_Temp	10 Hz	Cold joint	°C	0	50		And the second s
	BATT	Enabled	Battery	1 Hz	Battery	V .1	5.0	15.0		Commission and Commission
Online	ECU_1	Enabled	AEM_RPM	10 Hz	Engine speed sensor	rpm	0	20000		
onnie	ECU_2	Enabled	AEM_LOAD	10 Hz	Pressure sensor	bar		150.00		
	ECU_3	Enabled	AEM_TPS	10 Hz	Percentage sensor	% .1	0.0	100.0		
	ECU_4	Enabled	AEM_AIR_TEMP	10 Hz	Temperature sensor	°C	-30	60		
A IBA annota an a Bh and an	ECU_5	Enabled	AEM_WATER_TEMP	10 Hz	Temperature sensor	°C	-30	120		
AIM system calibration	ECU_6	Enabled	AEM_ADCR11	10 Hz	Voltmeter	V .1	0.0	20.0		
	ECU_7	Enabled	AEM_ADCR13	10 Hz	Voltmeter	V .1	0.0	20.0		
	ECU_8	Enabled	AEM_ADCR14	10 Hz	Voltmeter	V .1	0.0	20.0		
	ECU_9	Enabled	AEM_ADCR17	10 Hz	Voltmeter	V .1	0.0	20.0		
Custom sensors manager	ECU_10	Enabled	AEM_ADCR18	10 Hz	Voltmeter	V .1	0.0	20.0		
	ECU_11	Enabled	AEM_ADCR15	10 Hz	Voltmeter	V .1	0.0	20.0		
	ECU_12	Enabled	AEM_ADCR16	10 Hz	Voltmeter	V .1	0.0	20.0		- 1 A C
C.L	ECU_13	Enabled	AEM_BATTERY	10 Hz	Voltmeter	V .1	0.0	20.0		
Select Language									Exit	
	Instal	lation name	Logger type		Vehicle name	Availa	able time	Tot	al frequency	
			M3LOG - Advanced		DEFAULT	1 07 1	10 (h.m.s)		251 (Hz)	

The procedure to create a custom sensor is the same already explained for MyChron3 Car/Bike Plus/Gold/Extreme (paragraph 5.3).



6.5 – System configuration

MyChron3 Log/Visor/XGLog has 14 fully configurable coloured led; the 2 on the left and on the right of the display are the four high/low alarm led of the analog channels (temperatures and pressures), while the other 10 led on top of the display are the Shift lights that warn the pilot to shift gear.

Configuration M3L0G - Advanced		
Chan Speed_1 Vheel circumference 1666 (mm) Pulses per wheel revolution 1	Display language Italiano Shift Light Led 1 Led 2 0 0	AlM sensor ECU signal Multiply factor 7.1 MAX value 5000
Display Page 1 - Channels and alarms Field 1 Channel_1 LED Value HIGH None 0 LOW None 0 Field 2 Channel_1 _ LED Value HIGH None 0 LOW None 0	shift light 1 2 3 4 5 5 4 3 2 1 1 0 0 0 5 0 0 0 3 2 0 1 5 8 6 0 3 6 8 9 1 2 0 3 5 0 4 0 1 1 5 8 6 0 4	Display page 2 - Channels and alarms Field 1 Channel_1 LED Value HIGH None 0 MIN None 0 Filed 2 Channel_1 HIGH None 0 Filed 2 Channel_1 HIGH None 0 HIGH None 0 UOW None 0
- Measure Units Speed unit km/h ▼ Temperature unit *℃ ▼	Cear sensor None Potentiometer ECU Calculated Highest gear number 6	Lap Obscuring time (sec.) 8 Number of split times 0

To set alarms, high/low threshold values and all configuration parameters it is necessary to complete the window shown here above.

First of all select the display language red circled in the figure above.

6.5.1 – Speed box

Speed	Speed
Chan Speed_1	Chan Speed_1
None Speed_1 PECTEL_WHEELSPD	Wheel circumference 1666 (mm)
Pulses per wheel revolution 1	Pulses per wheel revolution 1

- **Channel**: select from the drop down menu the speed channel to be used as reference and that will be shown by the logger display, used for gear calculation (paragraph 5.7), for some Race Studio Analysis computations etc. Available options are: speed coming from the speed sensor, speed coming from the ECU and none.
- Wheel circumference: fill in the vehicle wheel circumference;
- Number of pulses per wheel revolution: fill in the number of pulses per wheel revolution (that corresponds to the number of magnets installed on the wheel).



6.5.2 – Shift Light box



Sets 10 led placed on top of MyChron3. Led colors: the first two on the left and on the right are green, the central two are orange and the last four are red. To set RPM threshold value fill in the cases. Led switches progressively on and when the engine reaches the RPM value set for Led 5 all led start blinking warning the pilot to shift gear. If a value is set on 0 the corresponding led is disabled.

6.5.3 – RPM box

Rpm	Rpm
AIM sensor ECU signal	AIM sensor ECU signal
Multiply factor	Multiply factor
MAX value 20000	MAX value 5000 💌

This box layout depends on the logger and on the settings defined by the user when creating a new configuration.

MyChron3 XG Log e MyChron3 Log Bike are the only loggers of this group that can work also without the connection with the ECU. So, setting ECU parameters of the new configuration on "none", the button labelled AIM sensor is enabled – figure above on the left. Ensure that RPM sensor is correctly installed and connected and insert Multiply factor and RPM Max value.

All other loggers can work only if connected to the vehicle ECU, which means that their system configuration window always shows this box with the only ECU signal button enabled (figure above on the right). Fill in RPM max value.



6.5.4 – Display Pages 1/2 – Channels and alarms box

- Display	Page 1 - Channels and alarms	- Display	page 2 - Channels and alarms
Field 1	Channel_1	Field 1	Channel_1
HIGH LOW	LED Value None O None O	HIGH MIN	LED Value None O None O
Field 2 HIGH	Channel_1 LED Value None 0	Filed 2 HIGH	Channel_1
LOW	None 💌 0	LOW	None V

These boxes are connected to the field shown by the logger display. Each logger of this family shows two pages and each of them is configurable as follows:

- match each case labelled as field (1, 2, 3 e 4) with a channel
- match, if needed, a led to that channel max/min values and insert these values.

Available led for these function are the four logger lateral led. Each of them can be associated to each channel no matter its position and can work as minimum or maximum alarm.

6.5.5 – Lap box

Lap		
		Obscuring time
(s	ec.)	8
	Nice	mber of split times
	NU	
		Jo

- **Obscuring time**: it's a time period during which the optical receiver installed on the vehicle, after having recorded a lap signal, is "blind": it does not record signals. This function is useful for split times management on tracks with more magnetic strips/optical transmitters: set obscuring time on a minimum value to sample split times; not to sample split times set obscuring time on a value lower than best lap time and higher then the time elapsed between last split and start finish line.
- **Number of split times**: is the number of segments the track is divided in and corresponds to the number of transmitters there installed.



6.5.6 – Gear sensor box

Gear sensor			Gear sensor		
None	Potentiometer	ECU	None	Potentiometer	ECU
Calculated	Highest gear num	ber 6	Calculated	Highest gear num	ber 6

- **None**: not to see the engaged gear on the display.
- **Potentiometer** (except for **MyChron3 Visor**): there is a gear potentiometer (see paragraph 5.6.3 for its calibration procedure).
- ECU: to sample gear signal from the ECU (assuming it can transmit it).
- **Calculated**³: to calculate gears; fill in highest gear number.

6.6.7 – Measure unit box

– Measure Unit	is	
	Speed ur	nit
k	.m/h	•
Τe	emperature	e unit
Ŀ	С	•

Select the unit of measure used for speeds (km/h or mph) and Temperatures (°C or °F).

³ Gear calculation procedure is described at paragraph 5.7.



6.5.8 – System configuration of MyChron3 XG Log FR2000J

In case of a **MyChron3 XG Log FR2000J**, configuration window – shown below – is partially set.

Configuration M3 XG LOG FR2000	1	
Speed Chan Wheel_Speed_Sx v Wheel circumference 1666 (mm) Pulses per wheel revolution 1	Display language Italiano Shift Light Led 1 Led 2 0 0	Rpm AIM sensor ECU signal Multiply factor 7 1 MAX value 5000
Display Page 1 - Channels and alarms Field 1 Clutch_Pos LED Value HIGH None 0 LOW None 0 Field 2 Clutch_Pos ✓ LED Value ✓ HIGH None ✓ Value ✓ ✓ Value ✓ ✓ Value ✓ ✓ LOW None ✓ Value ✓ ✓ Value ✓ ✓ Value ✓ ✓ Value ✓ ✓	shift light 1 2 3 4 5 5 4 3 2 1 1 0 0 0 5 0 0 0 0 2 0 1 5 8 0 0 0 0 2 0 1 5 8 0 0 0 0 3 4	Display page 2 - Channels and alarms Field 1 Clutch_Pos LED Value HIGH None None O Filed 2 Clutch_Pos LED Value HIGH None O Value Value O Value O Value O Value O Value O Value Va Value Va
- Measure Units Speed unit km/h ▼ Temperature unit °C ▼	Gear sensor None Potentiometer ECU Calculated Highest gear number 6	Lap Obscuring time (sec.) 8 Number of split times 0

This window is to be completed following the same procedure explained for all other MyChron3 of this group.



6.6 – Transmitting the configuration

To transmit the configuration the logger has to be switched on and connected to the PC USB port through the proper cable. Pressing "Transmit" button in system manager window, the system automatically will transmit the configuration to the logger. See paragraph 4.4 for further information.

6.7 – Sensors calibration and auto-calibration

When the configuration has been transmitted it is necessary to perform calibration procedure, to say auto-calibrate the accelerometer, the gyroscope and the distance potentiometer and calibrate the gear sensor, the mid zero potentiometer and the zero based potentiometer installed on the vehicle. The procedure is the same explained for MyChron3 Car/Bike Plus/Gold/Extreme (paragraph 5.6).

Warning: if potentiometers, gyroscope and accelerometers have not been correctly calibrated it will not be possible to sample correct data nor the engaged gear or create the track map. Pls. pay particular attention to sensors calibration/auto-calibration procedures.

6.8 – Gear calculation

Gear calculation procedure is the same for all AIM loggers (paragraph 5.7).

6.9 – Online

When the calibration is over and the configuration has been transmitted to the logger it is suggested to enter "Online" pressing the corresponding button on the menu bar, in System Manager window or on the left vertical keyboard to check that all works properly. Ensure that the logger is switched on and correctly connected to the PC. The window here below appears. See paragraph 5.8 for further information.

🏭 On	line											
Tipo sis	tema:	alle alle alle alle alle alle alle alle	Versione del firmware:	Frequen	za totale:							
MXL P	ISTA		14.86.0	14.86.0 296 (Hz)			91191 Mostra conteggi					
N	ID	Nome canale	Sensore usato	Unità	Misura	~	Mostra mV					
1	RPM	Engine	Giri motore	rpm	0							
2	SPD_1	Speed_1	Velocità	km/h .1	0.0		Batteria					
3	CH_1	Channel_1	Generico lineare 0-5 V	∀.1	0.2		13.705					
4	CH_2	Channel_2	Generico lineare 0-5 V	V .1	2.6		13.705					
5	CH_3	Channel_3	Generico lineare 0-5 V	V .1	0.0							
6	CH_4	Channel_4	Generico lineare 0-5 V	V .1	0.0		Memoria					
7	CH_5	Channel_5	Generico lineare 0-5 V	V.1	0.0		1 %					
8	CH_6	Channel_6	Generico lineare 0-5 V	V.1	0.0		Memorizzazione ATTIVA					
9	CH_7	Channel_7	Generico lineare 0-5 V	V .1	0.0							
10	CH_8	Channel_8	Generico lineare 0-5 V	V .1	0.0		Ricevitore traguardo					
11	CALC_GEAR	Calculated_Gea	Marce calcolate	#	0		0.00.000					
12	ACC_1	LatAcc	Accelerometro trasversale	g .01	-0.75		In attesa - Ultimo giro nr. 0					
13	LOG_TMP	Datalogger_Tem	Giunto freddo	°C	27							
14	BATT	Battery	Batteria	V.1	13.7		Collegamento logger-pc					
15	ECU_1	BOSCH_RPM	Sensore giri motore	rpm	4096		Comunicazione ATTIVA.					
16	ECU_2	BOSCH_SPEED1	Velocità Bosch	km/h .1	64.0							
17	ECU_3	BOSCH_SPEED2	Velocità	km/h	ERR.							
18	ECU_4	BOSCH_OIL_PRES	Sensore pressione	bar .1	ERR.		Stato della configurazione					
19	ECU_5	BOSCH_FUEL_PRE	Sensore pressione	bar .1	ERR.		Configurazione: OK.					
20	ECU_6	BOSCH_ATM_PRES	Sensore pressione	mbar	ERR.							
21	ECU_7	BOSCH_FUEL_TEM	Sensore temperatura	°C	ERR.							
22	ECU_8	BOSCH_OIL_TEMP	Sensore temperatura	°C	ERR.							
23	ECU_9	BOSCH_ENGINE_T	Sensore temperatura	°C	ERR.		Esci					
24	ECU 10	BOSCH ATR TEMP	Sensore temperatura	۰۲	FRR	~	LSC					



Chapter 7 – How to configure MXL Strada/Pista/Pro/Pro05

To correctly configure **MXL Strada/Pista/Pro/Pro05** (from here onward **MXL**), use a PC and **Race Studio 2** software. This logger can only be configured via software.

Before starting the configuration install **Race Studio 2** and the USB driver, as explained in chapter 2.

Run the program clicking on Race Studio 2 icon: the window below appears.



In the title bar – white on a blue background in the figure – you can see the **Race Studio 2** version installed on the PC.

Immediately under there is the menu bar, shown in a more intuitive way on the left thanks to the graphic keys buttons: Go to Analysis (this button runs Race Studio Analysis software), Data download, AIM system manager, AIM system identification, Online, AIM system calibration, Custom sensors management, Select language.

From this window it is possible to perform all necessary operations to manage all AIM systems.



To enter configuration menu click on "AIM system manager" button. A panel showing all systems managed through **Race Studio 2** software appears: double click on "**MXL**" or select it and click on "**√**Go to".



Race Studio 2 system manager window appears.



7.1 – System manager window

an	🔤 Sy	stem manager													E
Passag Baka Preser	2	j Transmit	23	Receive		CAN-Net i	t alv	🙆 Sel a	cquisition time	system					
AIM Sportline	Outer	t configuration			-			_	-	_					
World Leader in Data Acquisition		lation na Data log	gert. Ecu	Vehicle name	Available time	Time with OPS	Total trequery	Mader tri	qu. Da	pienskona	t. Vid	to system T	t. Lankd	a To	. Expensi
	DEF	ALLT MAL STR	RADA None - None	DEFAULT	0.00.00 (h.m.	7.13.04 (h.m.	0 (Hz)	0(Hz)	0.0	Hz)	Ves	1		0	-
Go to Analysis	Sala	et confesation 0	annels System cord	gaation CAN-Expa	nion configuration	a l									
	0		8	2	Clone	5	Import	P	Export						
Download data		_					and the second	-		_			_		
	N	Installation name	Logger	ECU Manufi		Model	Vehicle n		6. Splin		Tenp				Tot
		DEFAULT	MU, STRAD	• None	• Non		DEFAULT		1			February 1			0
AIM system manager	1	DEFAULT	MOL PESTA MOL PRO	None BOSCH	 Non MS3 		DEFAULT		1			 February 1 February 1 			0
	1	DEFAULT	MOL PRO 05	• BUSCH	 Mon 		DEFAULT		1	Reda .		 February 1 February 1 		1	0
		DEFAILT	MOL PISTA	* None	• Nor		DEFAULT		1	Res.		 February 1 		0	0
AIM system identification	1 in	DEPALAT		None	Nor		DEPAULT		i -			February 1			0
	7	DEFAULT	MUL PISTA	• VAMAHA	• R1		• DEPAULT		1			February 2			0
		DEFAULT	MQ PISTA	. None	Nor		DEFAULT		1			- February S			0
g Online		DEFALLT	MOL STRADA	S.BARU	555		DEFALLT		1			* March D6.			0
AM system calibration Contom sensor manager Sefect language															

Using the keyboards and the layers (pointed out by an arrow in the figure above) it is possible to perform all necessary operations to manage AIM systems.

The **top keyboard** of system manager window, shown here below, is made up of for buttons:



- **Transmit**: transmits a configuration to the logger and is active in any layer; needs the logger to be switched on and connected to the PC.
- **Receive**: reads and saves the configuration of the logger and is active only in "Select configuration" layer.
- CAN-Net info: identifies the CAN network connected to the PC, that means the logger and its eventual peripherals. Pressing it a waiting window appears and – once the connection established – "CAN-Net info" window shown here below appears. It shows all the CAN network components. In the example below the CAN network is made of an MXL Pista Master and four CAN expansions: DaVid, LCU-ONE, GPS and Memory Key.

CAN	- net info.						
Ν	Category of Logger	Type of Logger	Expansion Name	Logger ID	ID Date	Firmware	Firmware D
1	MASTER	MXL PISTA	Master	12345	16/01/2008	14.86.23	19/12/2007
2	CAN EXPANSION	DaVid		47111881	18/01/2008	22.03	09/11/2007
3	CAN EXPANSION	LCU-ONE	LC	111111	13/12/2007	25.09	19/11/2007
4	CAN EXPANSION	GPS		902499	14/01/2008	35.13	17/12/2007
5	CAN EXPANSION	MEMORY KEY		7613105	17/12/2007	37.05	18/12/2007


Set acquisition system time: makes the logger time matching the PC one. Pressing it "Acquisition system time" window - below on the left - appears with PC clock on the left and **MXL** one on the right. Pressing the central button, PC and **MXL** will have the same time. This operation does not modify data sampled by the logger nor influence its peripherals. In case the window on the right appears it means that PC-logger connection is wrong. Check it and try again.

PC Time		Acquisition system time	PC Time	······	Acquisition system time
12/03/2008 10.59.56	Set acquisition system time	08/12/2002 4.55.26	12/03/2008 11.00.25	Set acquisition system time	Impossible to rea time

Current Configuration Table, immediately under the keyboard and shown here below, shows the main information concerning the configuration user is working on.

Current configuration									
Installation name	Data logger type	Ecu	Vehicle name	Available time	Time with GPS	Total frequency	Master frequency	Expansions freq	Tot. Expansions
DEFAULT	MXL PISTA	None - None	DEFAULT	9.32.39 (h.m.s)	4.06.35 (h.m.s)	121 (Hz)	121 (Hz)	0 (Hz)	0

Again under this table are **four layers**:

Select configuration Channels System configuration CAN-Expansions configurator

- Select configuration: allows the user to select the configuration to work on; it is always active.
- **Channels**: allows to set **MXL** channels. It is active only if there are configurations in "Select configuration" layer.
- **System configuration**: allows to set or modify **MXL** configuration. It is active only if there are configurations in "Select configuration" layer.
- **CAN-expansions configurator**: allows to configure the expansions connected through the CAN bus to **MXL**, DaVid Slave video system included. It is active only if there are configurations in "Select configuration" layer; if not, it doesn't even appear.



7.1.1 – Select configuration layer

"Select configuration" layer shown here below, is made as follows:

Sele	ct configuration) Channe	els System configu	ration	CAN-Expansions	confi	gurator												
4	New	Delet	e	2	Clo	ne 🗗 I	mp	ort	E	kport								
N	Installation name	Logger		ECU Manufacturer		ECU Model		Vehicle name	Obs	Spli	Spee	ed .	Temp		Created	Vi	Tot	Tot
1	DEFAULT	MXL STRADA	-	None	-	None		DEFAULT	8	1	k	-	°C	-	February 13,	(6)	1	0
2	DEFAULT	MXL PISTA	-	AUTRONIC	-	SM2_V190/1 / SMC	-	DEFAULT	8	1	k	-	°C	-	February 13,	0	0	0
3	DEFAULT	MXL PRO	-	BOSCH	-	MS3	-	DEFAULT	5	3	k	-	°C	•	February 14,	0	0	0
4	DEFAULT	MXL PRO 05	-	None	-	None		DEFAULT	8	1	k	-	°C	-	February 15,	0	0	0
5	DEFAULT	MXL PISTA	-	None	-	None		DEFAULT	8	1	k	-	°C	-	February 15,	•	0	0
6	DEFAULT	MXL PISTA	-	None		None		DEFAULT	8	1	k	-	°C	•	February 15,	0	0	0
7	DEFAULT	MXL PISTA	-	YAMAHA	-	R1_04_06	-	DEFAULT	8	1	k	-	°C	-	February 27,	0	0	0
8	DEFAULT	MXL PISTA	-	None		None		DEFAULT	8	1	k	-	°C	-	February 15,	0	0	0
9	DEFAULT	MXL STRADA	. 🔻	SUBARU		SSM		DEFAULT	8	1	k	-	°C	•	March 06, 2008	0	0	0
10	DEFAULT	MXL STRADA	-	None	-	None		DEFAULT	8	1	k	-	°C	•	March 12, 2008	0	0	0

On top is a keyboard made up of five buttons.

- **New**: creates a new configuration;
- **Delete**: deletes a configuration;
- **Clone**: clones a configuration;
- **Import**: imports a new configuration from a file;
- **Export**: exports a configuration to a file;

Central is the available configurations database. To work on one of them click on any cell of its row and the entire row is selected (highlighted in yellow).

In case of first configuration central table shows up empty.



7.2 – Creating a new configuration

Pressing "New" button in select configuration layer this window appears:

New configuration	
Data logger type	MXL PISTA
ECU Manufacturer	None
ECU Model	None
New configuration name	DEFAULT
Vehicle name	DEFAULT
Speed measure unit	km/h
Temperature measure unit	▼
Pressure measure unit	bar
	Image: Concel Image: Concel

Some parameters need to be set:

- Data logger type: select the logger to be configured.
- ECU Manufacturer: select the Manufacturer of the ECU installed on the vehicle if supported or none.
- **ECU Model**: select the ECU model.
- **New configuration name**: fill in the new configuration name.
- Vehicle name: fill in the vehicle name.
- Speeds unit of measure: choose between km/h and mph.
- Temperatures unit of measure: choose between °C and °F.
- Pressures unit of measure: choose between Bar and PSI.

Press "OK" to save ("Cancel" to quit without saving). The system comes back to system manager window.



7.2.1 – MXL Strada/Pista and Pro05 Plug&Play configurations

MXL Strada/Pista/Pro05 Plug&Play kits for Car or Bike installations include, beside the logger, all what is needed for an easy installation on the vehicle (wiring, bracket, screws, washers, user manuals etc..). Currently the mpst common models/brands are available. For further information refer to AIM corporate website <u>www.aim-sportline.com</u>.

Once correctly installed the kit (see the kits user manuals for further information) just switch the vehicle on. In case there are problems depending on the configuration select the correct one in "New configuration" window shown here below. The blue box highlights Plug&Play configurations currently available.

New configuration	
Data logger type	MXL PISTA
ECU Manufacturer	MXL PISTA MXL STRADA MXL PRO 05
ECU Model	MXL PISTA SUZUKI GSXR K3 - K5 (WIRING 04.554.13)
New configuration name	MXL PISTA SUZUKI GSXR 600 2006-2007 (WIRING 04.554.54) MXL PISTA SUZUKI GSXR 750 2006-2007 (WIRING 04.554.54) MXL PISTA SUZUKI GSXR 1000 2005-2006 (WIRING 04.554.54)
Vehicle name	MXL PISTA SUZUKI GSXR 600 2008 (WIRING 04.554.54) MXL PISTA SUZUKI GSXR 750 2008 (WIRING 04.554.54) MXL PISTA SUZUKI GSXR 1000 2007-2008 (WIRING 04.554.54)
Speed measure unit	MXL STRADA SUZUKI GSXR K3 - K5 (WIRING 04.554.14) MXL STRADA SUZUKI GSXR 600 2006-2007 (WIRING 04.554.55)
Temperature measure unit	MXL STRADA SUZUKI GSXR 750 2006-2007 (WIRING 04.554.55) MXL STRADA SUZUKI GSXR 1000 2005-2006 (WIRING 04.554.55) MXL STRADA SUZUKI GSXR 600 2008 (WIRING 04.554.55)
Pressure measure unit	MXL STRADA SUZUKI GSXR 750 2008 (WIRING 04.554.55) MXL STRADA SUZUKI GSXR 1000 2007-2008 (WIRING 04.554.55) MXL PR0 05 SUZUKI GSXR 1000 2007-2008 (WIRING 04.554.55) MXL PR0 05 SUZUKI GSXR 1000 2007-2008 (WIRING 04.554.55) MXL PR0 05 SUZUKI GSXR 1000 2007-2008 MXL PR0 05 GSXR YOSHIMURA MXL STRADA YOSHIMURA MXL STRADA YOSHIMURA ZER0-50 MXL PISTA YAMAHA-RE-04-07 MXL PISTA YAMAHA-RE-06-07-08 MXL STRADA YAMAHA-RE-04-05 MXL STRADA YAMAHA-RE-04-05 MXL STRADA YAMAHA-RE-04-05 MXL STRADA YAMAHA-RE-06-07-08 MXL STRADA YAMAHA-RE-04-05 MXL STRADA YAMAHA-RE-06-07-08 MXL STRADA YAMAHA-RE-06-07-08 MXL STRADA YAMAHA-RE-06-07-08 MXL STRADA YAMAHA-RE-06-07-08 MXL STRADA YAMAHA-RE-06-07-08 MXL STRADA XAWASAKI ZX68_ZX10R MXL STRADA SUBARU 2X68_ZX10R MXL STRADA SUBARU 99-07 MXL STRADA SUBARU 99-07 M

Warning: all parameters set in Plug&Play configurations have been tested to work properly with vehicles completely corresponding to the stock ones sold by the manufacturers. Refer to the kits user manuals for any further information.



7.3 – Channels

Enable "Channels" layer.

an	🔤 System ma	nager									
Racing Data Power		Fransmit	Rece	ive 🧃	CAN-Net	info 💰	Set acquisition s time	ystem			
AIM Sportline World Leader in Data Acquisition	Current configura	tion									
world ceader in Data Acquisition	Installation name	e Data gertyp	e Ecu	Vehicle name	Available time	Time with GPS	Total frequency	Master freq	uency	Expansions freq	Tot. Expansions
	DEFAULT	MXL RADA	None - None	DEFAULT	0.00.00 (h.m.s)	7.13.04 (h.m.s)	0 (Hz)	0 (Hz)		0 (Hz)	0
Go to Analysis	Select configur	ation Channels S	ystem configuration C	AN-Expansions config	urator						
Download data	Wheel circumf	erence (mm) 10 sel revolution 1	566								
AIM system manager	Channel ide	Enabled/disabled	Channel name		Sampling frequ	Sensor type		Measure uni	t Low	v scale Hi	gh scale
	RPM	Enabled	Engine			Engine revolution spe	ed	rpm	0		000
	SPD_1	Enabled	Speed_1		No_Mem	Speed		km/h .1	0.0	25	i0.0
AIM system identification	CH_1	Enabled	Channel_1			Generic linear 0-5 V		V.1	0.0	5.	0
	CH_2	Enabled	Channel_2		No_Mem	Generic linear 0-5 V		V .1	0.0	5.	0
	CH_3	Enabled	Channel_3		No_Mem	Generic linear 0-5 V	-	V .1	0.0	5.	0
	CH_4	Enabled	Channel_4		No_Mem	Generic linear 0-5 V	-	V .1	0.0	5.	0
] Online	CH_5	Enabled	Channel_5		No_Mem	Generic linear 0-5 V	-	V.1	0.0	5.	0
	CH_6	Enabled	Channel_6		No_Mem	Generic linear 0-5 V	-	V.1	0.0	5.	0
	CH_7	Enabled	Channel_7		No_Mem	Generic linear 0-5 V		V.1	0.0	5.	0
AIM system calibration	CH_8	Enabled	Channel_8		No_Mem	Generic linear 0-5 V	-	V.1	0.0	5.	0
	CALC_GEAR	📈 Enabled	Calculated_Gear		No_Mem	Calculated Gear		#	0	9	
	LOG_TMP	🕅 Enabled	Datalogger_Temp		No_Mem	Cold joint		°C	<u> </u>	50	1
Custom sensors manager	BATT	🐖 Enabled	Battery		No_Mem	Battery		V.1	5.0	15	i.0
Select Language											
aim-sportline.com © 2007 AIM SRL ALL RIGHTS RESERVED											

This layer sets all channels sampled by the logger and its layout depends on the logger version.

7.3.1 – Speed panels

On top of the layer you see the panels concerning speeds (1 for **MXL Strada** and **Pista** and 4 for **MXL Pro** and **Pro05)**. They are labelled like speed channels in the table below. Changing the channel name in the tables the panel label is modified live.

The panels are enabled through the related checkbox as shown in the figure below. Fill in wheel circumference and number of pulses for wheel revolution (corresponding to the number of magnets installed on the vehicle wheel). Enable and set the speeds to be used and disable the ones not to be used.

Select configura	tion Channels S	vstem configuration CAN-Expansion conf	igurator
Speed_1			
Wheel circumfe	rence (mm) 16	66 Wheel circumference (mm)	1666
Pulses per whe	el revolution 1	Pulsesper wheel revolution	
Channel ida	Enabled/disabled	Chaptel name	Samplin
RPM	🔽 Enabled	Engine	10 Hz
SPD_1	🕝 Enabled 🛛 🔺	Speed_1	10 Hz
SPD_2	🔽 Disabled	Speed_2	10 Hz
SPD_3	Enabled	Speed_3	10 Hz
SPD_4	Enabled	Speed_4	10 Hz
CH_1	✓ Enabled	Channel_1	10 Hz
CH_2	 Enabled 	Channel_2	10 Hz



7.3.2 – Channels table

	10										
Tran:	mit	Receive	🤣 CAN	-Net info	Set .	acquisition system time					
nstallation name	Data logger type	Ecu	Vehicle name	Availe	bletime	ime with GPS	Total frequency	Master fre	dilebox.	Expansions frequenc	y Tot. Expansions
DEFAULT	MXL PRO 05	BOSCH - MS3	DEFAULT		59 (h.m.s)	4.29.45 (h.m.s)	356 (Hz)	356 (Hz)	quency	0 (Hz)	0
	MALTINO 05	000011-1800	DELYOPT	0.00.	55 (1111.3)	4.25.45 (11.0.5)	330 (112)	550 (12)		0 (112)	0
Select configuration	Channels Sustem co	nfiguration CAN-Expansions cor	oficial								
	Charinels System Co										
Speed_1		Speed_2	Spe	ed_3		Speed_4					
Wheel circumference	e (mm) 1666	Wheel circumference (mm)	1666 Whe	el circumference	(mm) 1666	Wheel circumferer	nce (mm) 1666				
Dulara any shaal sa	salarian 1	pulses and the strength time.	D./s			. Dulara annu da al u					
Pulses per wheel re	volution 1	Pulses per wheel revolution	Puis	es per wheel rev	olution 1	Pulses per wheel r	evolution 1				
Channel identifier	Enabled/disabled	Channel name		Somoling	requency Sen	sor type		Measure unit	Low	scale Hid	ah scale
RPM	Disabled	Engine		10 Hz		ne revolution speed		rom	0		n scale
SPD 1	Enabled	Speed 1		10 Hz	Speriod			km/h .1	0.0	25	
SPD_2	Disabled	Speed 2		10 Hz	Spe			✓ km/h .1	0.0	25	
SPD_3	Enabled	Speed 3		10 Hz	Spei			km/h .1	0.0	25	
SPD_4	Enabled	Speed_4		10 Hz	Spe			km/h .1	0.0	25	
CH_1	Enabled	Channel_1		10 Hz		eric linear 0-5 V		▼ V .1	0.0	5.0	
CH_2	Enabled	Channel 2		10 Hz		eric linear 0-5 V		▼ V .1	0.0	5.0	
CH_3	Enabled	Channel_3		10 Hz	_	eric linear 0-5 V		▼ V .1	0.0	5.0	
 CH_4	Enabled	Channel 4		10 Hz	▼ Gen	eric linear 0-5 V		▼ V .1	.00	5.0)
сн 5	Enabled	Channel_5		10 Hz	▼ Gen	eric linear 0-5 V		▼ V .1	.0	5.0)
сн_6	Enabled	Channel_6		10 Hz	🗾 Gen	eric linear 0-5 V		▼ V .1	.00	5.0)
сн_7	Enabled	Channel_7		10 Hz	🗾 Dist	ance potentiometer		💌 mm .1	• 0.0	5.0)
сн_8	Enabled	Channel_8		10 Hz	🗾 Gen	eric linear 0-5 V		▼ V .1	• 0.0	5.0)
сн_9	Enabled	Channel_9		10 Hz	🗾 Gen	eric linear 0-5 V		▼ 1.1	• 0.0	5.0)
CH_10	Enabled	Channel_10		10 Hz	🗾 Gen	eric linear 0-5 V		▼ ¥ .1	• 0.0	5.0)
CH_11	Enabled	Channel_11		10 Hz	🗾 Gen	eric linear 0-5 V		▼ V .1	1 0.0	5.0)
CH_12	📈 Enabled	Channel_12		No_Mem	🗾 Cald	ulated Gear		#	0	5	
CALC_GEAR	🖂 Enabled	Calculated_Gear		10 Hz	🗾 Calc	ulated Gear		#	0	9	
ACC_1	🔽 Enabled	LatAcc		10 Hz	🗾 Late	ral accelerometer		g .01	-3.00	3.0	10
LOG_TMP	🕅 Enabled	Datalogger_Temp		10 Hz	🗾 Cold	l joint		°C	_ 0	50	
BATT	🕅 Enabled	Battery		1 Hz	🗾 Batt			V.1	5.0	15	.0
ECU_1	🕅 Enabled	BOSCH_RPM		10 Hz		ine speed sensor		rpm	0	18	
ECU_2	 Enabled 	BOSCH_SPEED1		10 Hz		h speed sensor		km/h .1	0.0	50	
ECU_3	 Enabled 	BOSCH_SPEED2		10 Hz		ed sensor		km/h	0	50	D
ECU_4	 Enabled 	BOSCH_OIL_PRESS		10 Hz		sure sensor		bar .1	• 0.0	15	
ECU_5	Enabled	BOSCH_FUEL_PRESS		10 Hz		sure sensor		bar .1	0.0	15	
ECU_6	Enabled	BOSCH_ATM_PRESS		10 Hz		sure sensor		mbar	_ 0	13	
ECU_7	Enabled	BOSCH_FUEL_TEMP		5 Hz		perature sensor		°C	-50	21	
ECU_8	Enabled	BOSCH_OIL_TEMP		5 Hz		perature sensor		°C	-50	21	
ECU_9	Enabled	BOSCH_ENGINE_TEMP		5 Hz		perature sensor		°C	-50	15	
ECU_10	Enabled	BOSCH_AIR_TEMP		5 Hz		perature sensor		°⊂	-50	15	
ECU_10 ECU_11	Enabled Enabled	BOSCH_AIR_TEMP BOSCH_THROTT_ANG		5 Hz 10 Hz		perature sensor ottle position sensor		°C % .1	· -50 0.0		0 0.0

This table shows al logger channels with the related characteristics:

- **Channel identifier**: shows the channel label. "ECU_X" channels are the ones received from the vehicle ECU.
- Enabled/disabled: shows channel status (enabled or disabled). It can be modified double clicking on the cell except for RPM, Speed and Gear that has to be modified through "System Configuration" layer.
- Channel name: allows to name the channel.
- **Sampling Frequency**: allows to set each channel sampling frequency. This last one influences the total available time, highlighted in blue in the figure above, that diminishes growing sampling frequency because the memory fills up faster.
- **Sensor type**: shows the type of sensor installed on that channel; it is selected through the drop down menu that appears clicking on the cell. See the following page for further information.
- **Measure unit**: shows the selected unit of measure for each channel; it is possible to change it double clicking on the cell.
- **High/low scale**: shows high/low scale values of the sensor and can be modified double clicking on the cell.



	Temperatures	Pressures	Potentiometers	Lambda Probe	Gyroscope	Accelerometer
MXL Str	rada/MXL Pist	ta				
Ch_1	Х	Х	Х	Х		
Ch_2	x	Х	X	Х		
Ch_3	Х	X	X	Х		
Ch_4	Х	X	X	Х	Х	X
Ch_5	Х	X	X	Х	Х	Х
Ch_6	Х	X	X	Х	Х	Х
Ch_7	х	X	X	Х	Х	Х
Ch_8* ⁴	Х	Х	X	Х	Х	Х
MXL Pro	0					
Ch_1	х	Х	х	Х	Х	Х
Ch_2	х	X	x	х	Х	х
Ch_3	х	X	x	Х	Х	х
Ch_4	х	X	X	Х	Х	х
Ch_5	х	X	X	Х	х	Х
Ch_6	х	X	x	Х	Х	х
Ch_7	х	X	x	х	Х	х
Ch_8 ⁴	Х	Х	X	Х	Х	Х
MXL PR	005					
Ch_1	х	Х	х	Х		
Ch_2	х	X	x	х		
Ch_3	х	Х	X	Х		
Ch_4	х	Х	X	Х		
Ch_5	x	Х	X	Х		
Ch_6	x	Х	X	Х		
Ch_7	x	Х	X	Х	Х	х
Ch_8	x	Х	X	Х	Х	х
Ch_9	X	Х	X	Х	Х	х
Ch_10	х	Х	X	Х	Х	х
Ch_11	x	Х	X	х	Х	х
Ch_12 ⁴	Х	X	X	Х		

This table shows which sensors can be installed on each channel of MXL.

⁴ Channels CH_8 (MXL Strada/Pista/Pro) and CH_12 (Pro05) are gear channels. If system configuration window (paragraph 7.2) sets them on "Potentiometer CH_8" (MXL Strada/ Pista/Pro), "Potentiometer CH_12" (Pro05) or on "Calculated+Neutral Signal" channel CH_8 or CH_12 sets on calculated gear and it is only possible to set channel name, sampling frequency, high and low scale. If not these channels work as shown in the table.



Setting some sensor on some channels that support them a configuration panel appears (bottom left of Channels layer). The figure below shows distance potentiometer configuration panel.

Tran	ismit	Receive	KAN-N	et info	Set a	acquisition system time					
nstallation name	Data logger type	Ecu	Vehicle name	Available	time	Time with GPS	Total frequency	Master free	uency E	apansions frequency	Tot. Expansions
EFAULT	MXL PRO 05	BOSCH - MS3	DEFAULT	6.30.59 (4.29.45 (h.m.s)	356 (Hz)	356 (Hz)		(Hz)	0
elect configuration	Channels System co	nfiguration CAN-Expansions co	nfigurator					·	·		
Speed_1		-Speed_2	Speed_	3		Speed_4					
Wheel circumferen Pulses per wheel re		Wheel circumference (mm)		ircumference (i ier wheel revoluti		Wheel circumference Pulses per wheel re-					
Channel identifier	Enabled/disabled	Channel name		Sampling free	Sen	sor type		Measure unit	Low scale	High s	cale
RPM	Disabled	Engine		10 Hz		ne revolution speed		rpm	0	20000	
SPD 1	Enabled	Speed 1		10 Hz	Spee			km/h .1	0.0	250.0	
SPD 2	Disabled	Speed 2		10 Hz	Speed Speed			km/h .1	0.0	250.0	
SPD 3	Enabled	Speed 3		10 Hz	Spec			km/h .1	0.0	250.0	
SPD 4	Enabled	Speed 4		10 Hz	Spec			km/h .1	0.0	250.0	
CH 1	Enabled	Channel 1		10 Hz		aric linear 0-5 V		V .1	0.0	5.0	
CH 2	Enabled	Channel 2		10 Hz		ance potentiometer			0.0	5.0	
CH_3	Enabled	Channel 3		10 Hz		ichica 95V	-	V .1	0.0	5.0	
 CH_4	Enabled	_ Channel_4		10 Hz	- Gen	eric linear 0-54		• V .1	0.0	5.0	
сн_5	Enabled	Channel 5		10 Hz		eric linear 0-5 V		• V .1	0.0	5.0	
CH_6	Enabled	Channel_6		10 Hz	🗾 Gen	aric linear 0-5 V	1	• V .1	• 0.0	5.0	
CH_7	Enabled	Channel_7		10 Hz	💌 Dista	ance potentiometer		🚽 mm .1	0.0	5.0	
CH_8	🔽 Enabled	Channel_8		10 Hz	Gen	eric linear 0-5 V		• V .1	.00	5.0	
CH_9	🔽 Enabled	Channel_9		10 Hz	🗾 Gen	eric linear 0-5 V		• V.1	• 0.0	5.0	
CH_10	🔽 Enabled	Channel_10		10 Hz	🗾 Gen	eric linear 0-5 V		• V .1	• 0.0	5.0	
CH_11	🔽 Enabled	Channel_11		10 Hz	🗾 Gen	eric linear 0-5 V		• V .1	0.0	5.0	
CH_12	🕅 Enabled	Channel_12		No_Mem	🗾 Calc	ulated Gear		#	0	5	
CALC_GEAR	🕅 Enabled	Calculated_Gear		10 Hz	🗾 Calc	ulated Gear		#	0	9	
ACC_1	🔽 Enabled	LatAcc		10 Hz	🗾 Late	ral accelerometer		g .01	-3.00	3.00	
LOG_TMP	🕅 Enabled	Datalogger_Temp	/	10 Hz	🗾 Cold	joint		°C	0	50	
BATT	🕅 Enabled	Battery		1 Hz	🗾 Batt			V.1	5.0	15.0	
ECU_1	🕅 Enabled	BOSCH_RPM		10 Hz		ne speed sensor		rpm	0	18000	
ECU_2	Finabled	BOSCH_SPEED		10 Hz		h speed sensor		km/h .1	0.0	500.0	
ECU 3	Enabled	BOSCH SPEED2		10 Hz	▼I Spee	ed sensor		km/h	0	500	



7.4 – Creating a custom sensor

This function allows to configure a "custom" sensor setting the proper calibration curve and it is very useful when the used sensor (pressure, temperature or other) is not included in the available sensors list.

Please note: "Custom sensors" option is intended for expert users only.

Press "Custom sensors manager" button in the menu bar or in the left vertical keyboard.

(iiii)		nager								
			(
Racing Data Power		Transmit	Receive	*	AN-Net info	o 🚺 St	t acquisition system time			
AIM Sportline	Current configura	tion								
World Leader in Data Acquisition	Installation nam		pe Ecu	Vehicle name Availal		Time with GPS T	tal frequency Master fre	quency Expansi	Tet For	ansions
	DEFAULT	MXL PRO 05							0	ansions
m	DEFAULT	MAL PRO 05	BUSCH - MISS	DEFAULT 0.30.3	9 (h.m.s)	4.29.45 (h.m.s) 3	6 (Hz) 356 (Hz)	0 (Hz)	U	
Go to Analysis	L	,								
	Select configur	ation Channels 9	system configuration CAN-	Expansions configurator						
	Speed_1		Speed_2		Speed_3		Speed_4			
Download data	Wheel circumf	erence (mm) 1	666 Wheel circumfere	ence (mm) 1666	Wheel circumF	erence (mm) 166	Wheel circumference	(mm) 1666		
2	wheel circum	erence (mm) [*	wheel circulinere		wheel circum	erence (mm) [1000	wheel circumerence	(mm) [roos		
	Pulses per wh	eel revolution 1	Pulses per wheel	revolution 1	Pulses per wh	eel revolution 1	Pulses per wheel revo	lution 1		
AIM system manager	Channel ide	Enabled/disabled	Channel name	Sampling I	req Sens	or type	Measure unit	Low scale	High scale	^
	RPM	Disabled	Engine	10 Hz	💌 Engin	e revolution speed	rpm	0	20000	
	SPD_1	 Enabled 	Speed_1	10 Hz	 Speel 	d	💌 km/h .1	0.0	250.0	
AIM system identification	SPD_2	Disabled	Speed_2	10 Hz	Spee	d	💌 km/h .1	0.0	250.0	
	SPD_3	Enabled	Speed_3	10 Hz	💽 Spee	d	💌 km/h .1	0.0	250.0	
	SPD_4	Enabled	Speed_4	10 Hz	💌 Spee	d	💌 km/h .1	0.0	250.0	
) Online	CH_1	Enabled	Channel_1	10 Hz	🗾 Gene	ric linear 0-5 V	💌 V .1	• 0.0	5.0	
g Onnine	CH_2	Enabled	Channel_2	10 Hz	💌 Dista	nce potentiometer		• 0.0	5.0	
	CH_3	Enabled	Channel_3	10 Hz	🗾 Gene	ric linear 0-5 V		• 0.0	5.0	
	CH_4	Enabled	Channel_4	10 Hz	💌 Gene	ric linear 0-5 V		• 0.0	5.0	
AIM system calibration	CH_5	Enabled	Channel_5	10 Hz		ric linear 0-5 V		• 0.0	5.0	
	CH_6	Enabled	Channel_6	10 Hz		ric linear 0-5 V		• 0.0	5.0	
	CH_7	Enabled	Channel_7	10 Hz		nce potentiometer		- 0.0	5.0	
Custom sensors manager	CH_8	Enabled	Channel_8	10 Hz		ric linear 0-5 V		• 0.0	5.0	
1 custom sensors manager	CH_9	Enabled	Channel_9	10 Hz		ric linear 0-5 V		- 0.0	5.0	
	CH_10	Enabled	Channel_10	10 Hz		ric linear 0-5 V		• 0.0	5.0	
	CH_11	Enabled	Channel_11	10 Hz		ric linear 0-5 V		• 0.0	5.0	
Select Language	CH_12	Enabled	Channel_12	No_Mem		lated Gear	#	0	5	
-	CALC_GEAR	Enabled	Calculated_Gear	10 Hz		lated Gear	#	0	9	
	ACC_1	Enabled	LatAcc	10 Hz		al accelerometer	g .01	-3.00	3.00	
	LOG_TMP	Enabled	Datalogger_Temp	10 Hz	Cold :	,		• 0	50	
	BATT	Enabled	Battery	1 Hz	✓ Batte		V .1	5.0	15.0	
	ECU_1 ECU_2	Enabled	BOSCH_RPM	10 Hz 10 Hz		ie speed sensor n speed sensor	rpm km/b 1	0.0	18000	
	-	Enabled	BOSCH_SPEED1 BOSCH_SPEED2	10 Hz	 Boscr Spee 		km/h .1 km/h	0.0	500.0	
	ECU_3 ECU_4	Enabled	-	10 Hz		a sensor sure sensor		-	15.0	
	ECU_4 ECU_5	Enabled	BOSCH_OIL_PRESS	10 Hz		ure sensor aure sensor		• 0.0 • 0.0	15.0	
	ECU_6	Enabled	BOSCH_FUEL_PRESS BOSCH_ATM_PRESS	10 Hz		are sensor		• 0.0	130	
aim-sportline.com	ECU_8 ECU_7	Enabled	BOSCH_FUEL_TEMP	10 Hz		ierature sensor		- 0 -50	215	
E 2007 AIM SRL	ECU_8	Enabled	BOSCH_FUEL_TEMP	5 Hz		ierature sensor		-50 -50	215	
ALL RIGHTS RESERVED	ECU_9	Enabled	BOSCH_ENGINE_TEMP	5 Hz		ierature sensor			150	

The procedure to create a custom sensor is the same explained for MyChron3 Car/Bike Plus/Gold/Extreme (paragraph 5.3).



7.5 – System configuration

MXL has 16 fully configurable coloured led; the 3 on the left and on the right of the display represent the 6 max or min alarms of the analog channels (temperatures and pressures), while the other 10 led on top of the display are the Shift Lights that warn the pilot to shift gear.



To set the alarms, max and min threshold values and all parameters it is necessary to fill in the window above.

Note: in case of Plug&Play kit this window is already set.

7.5.1 – RPM box



AIM sensor	Multiply factor	/ 1	-
ECU signal	MAX value	16000	•
Over-rev log			
Alarm led 4	Over-	rev threshold 3	000

Select "**AIM Sensor**" to sample this value from an RPM sensor installed on the vehicle; fill in multiply factor and RPM max value. RPM row in channel table (see paragraph 7.3) is enabled.

Select "**ECU sensor**" and set RPM max value to sample this value from the ECU, assuming it can transmit it.

It is also possible to connect RPM max value to one of the 6 alarm led (in the figure above on the right it has been linked to led 4) so that it switches on when the engine reaches a fixed RPM value. The led does not switch off until data download is made. In this situation, the channel for alarm corresponding to that led is disabled. It is suggested to set over-rev threshold on a value corresponding to the ECU limiter⁵.

⁵ This setting can be very useful to detect over-revs situation without opening Race Studio Analysis.



7.5.2 – Gear sensor box



MXL can sample the engaged gear from a gear sensor or from the vehicle ECU. It can also calculate it with an algorithm based on RPM and speed. Available options are:

- "**None**": there is no gear sensor on the vehicle (or not to see the engaged gear). This option is disabled on the display.
- "Potentiometer Channel 8/12": there is a gear potentiometer installed on channel 8/12. The corresponding row in channel table (see paragraph 7.3) is set on Calculated Gear.
- "ECU": to sample this information from the vehicle ECU (assuming it can transmit it).
- "Calculated": to calculate the engaged gear with an algorithm based on RPM and speed; fill in "Highest gear number" case.
- "Calculated with neutral signal: Channel 8/12":there is a neutral sensor that can be used to see neutral gear and to calculate gears. "Highest gear number" case enables: fill it in.

Note: gear channel is always the last one of the logger. This means that it's Channel 8 for **MXL Strada**, **Pista** and **Pro** (having 8 channels) and channel 12 for **MXL Pro05** (having 12 channels).

7.5.3 – Shift light box



It manages the 10 led placed on top of **MXL**. Led colors: the first two on the left and on the right are green, the central two are orange and the last two are red. To set RPM threshold values fill in the cases. The led switch progressively on and when the engine reaches RPM values set for the top case all led start blinking, warning the pilot to shift gear.

If one case is set on "0" the corresponding led is disabled.



7.5.4 – Channel for alarm and measure boxes

Channel for alarm boxes are linked to the 6 alarm led of MXL.



- Set each channel as Max (">") or Min ("<") alarm.
- Fill in the threshold value.
- See the paragraph "Condition enabling checked alarm" for further information concerning "status" (grey) button right of "threshold" cases, disabled in the figure above.

Note: setting "Over-rev log/alarm led" in RPM box, the channel linked to that channel is completely disabled as shown above.



Channels for alarm cases are linked to the field shown by MXL display. The first on the left and on the right are always shown. The other four channels can be shown two by two on the display static string with the name set in "Short name" case or as "CH_X".

Select the channel to show and fill in its short name.

HIGH LOW Channel for alarm	Threshold	HIGH LOW Channel for alarm	Threshold
HChannel_1	• 0	H Channel_1	0
H Channel_3	0	H Channel_3	0
H Channel_5	• 0	H Channel_5	0
Link alarm to measure fie Measure Field 1 - always displayed Channel_1	dds Short name CH_1	ink alarm to measure fiel Measure Field 1 - always displayed Channel_1	ds Short name CH_1
Field 3 - page 1 Channel_3	CH_3	Field 3 - page 1 Channel_3	СН_З
Field 3 - page 2 Channel_5	CH_5	Field 3 - page 2 Channel_5	CH_5

"Link alarm to measure field" option (enabled in the figure on the right) allows to link the 6 alarm led to the 6 shown alarms.

In this case channel for alarm cases disables and it is only possible to set threshold value and ">"/"<" (except if over-rev alarm led has been set as explained before).

7.5.5 – Speed box

_Speed —		٦
Channel	Speed_1	
	Speed 1 AUTR_SPEED AUTR_DRVWHEEL_SPD	

It is possible to select the reference speed, that will be used for gear calculation and for some Race Studio Analysis computations. Available options are logger speed(s) (1 speed for **MXL Strada/Pista** and up to 4 speeds for **MXL Pro/Pro05**) and ECU speed(s). In the figure below the logger is connected to an Autronic ECU that transmits two speed channels.



7.5.6 – Lap box

Lap Obscuring time 8 (sec.) Lap segments 1	Lap Obscuring time 5 (sec.) Lap segments 3
Show lap time	Show lap time
📒 Show odometer	📒 Show odometer
Show running lap time	Show running lap time

Obscuring time: is a time period during which the optical receiver installed on the vehicle, after having recorded a lap signal, is "blind": it does not record signals. This function is useful to manage split times on tracks where more optical receivers are installed: set obscuring time on a low value (min accepted value is 3 seconds) to record splits and set it on a value lower than best lap time and higher than the time elapsed between last split and start/finish line (max accepted value is 255 seconds) not to record splits.

Lap segments: is the number of segment the track is divided in and corresponds to the number of transmitters there installed.

Show lap time: MXL display shows lap time in the related field.

Show odometer: MXL display shows odometer in the related field.

Show running lap time: **MXL** display shows running lap time from last lap signal in the related filed. The value resets when the logger detects a lap signal.

Notes:

Split number setting is ignored in case the track has the new lap/split transmitter installed.

Setting "Show odometer", the system switches automatically on "Show lap time" when detects a lap signal.

The logger stores the visualization set.

Refer to **MXL** user manual for any further information concerning the fields shown by the logger display.



7.5.7 – Condition enabling checked alarms box

Condition enabling che	ecked al	arms	
Engine	-	\geq	0

This box - disabled by default - allows, if enabled, to condition the alarm led to an additional condition that – once set – becomes discriminating. It is very useful to avoid "false alarms", as explained in the following pages.

Warning: to set the condition that enables checked alarms it is necessary to have previously set channels for alarm.

To set channels for alarms follow this procedure:

- 1. set selecting from the drop down menu the channels for alarm to be shown;
- **2.** fill in its threshold value;
- **3.** set the alarm limit (">"/"<");
- **4.** enable "Condition enabling selected alarms" case (this operation enables "status" button but shows them all red and set on "Off");
- 5. select the channel to use as conditioning one from the drop down menu;
- 6. fill in its threshold value;
- **7.** set its alarm limit (">"/"<");
- **8.** select the alarms to condition setting the related button on "On" (green).
- **9.** this setting implies that the led of the conditioned alarms switches on only if two conditions occur contemporarily: their threshold value is overcome and, at the same time, the threshold value of the conditioning channel is overcome.

The images in the following pages show this procedure.



Rom	Shift Lights	Speed
	1 🗾 🔘 15000 🔘	Channel Speed_1
ECU signal MAX value 16000) 🔄 🌀 14700 🔕	Lap
Over-rev log Alarm led None Over-rev thresho		Obscuring time 8 (sec.)
Gear sensor		Lap segments
None Calculated	13900	Show lap time
Potentiometer Signal: Channel 8	13500	Show odometer
Highest gear number		Show running lap time
ECU 7	0.0444 - 400	Condition enabling checked alarms
Conditioned	Set the channel for alarm to sh	ow Conditioned
Channel for alarm Threshold	Fill in its threshold value	Channel for alarm Threshold
ECT IDS OFF	Set alarm limit (">"/"<")	Fuel_Level _ 20 Off
Oil_Press		None D Off
Battery		None 💽 > 0 Off
Link alarm to measure fields	guo p	MXL
Measure Short name		Measure Short name
Field 1 - always displayed	Enable static string	Field 2 - always displayed Battery BATT
Field 3 - page 1		Field 4 - page 1
	Welcome text	None
Field 3 - page 2	Text 1	Field 4 - page 2
None		None
-	Shift Liabte	
AIM sensor Multiply factor	Shift Lights	Speed
	1 . (5) 15300	Channel Speed_1
AIM sensor ECU signal Over-rev log	1 I I I I I I I I I I I I I I I I I I I	Channel Speed_1
AIM sensor ECU signal Over-rev log Alarm led None Over-rev thresho	1 I I I I I I I I I I I I I I I I I I I	Channel Speed_1
AIM sensor ECU signal MAX value Alarm led Mone Calculated		Channel Speed_1
AIM sensor ECU signal Over-rev log Alarm led None Calculated Calculated with neutral	1 I I I I I I I I I I I I I I I I I I I	Channel Speed_1
AIM sensor ECU signal MAX value Alarm led Mone Calculated	1 I I I I I I I I I I I I I I I I I I I	Channel Speed_1
AIM sensor ECU signal Over-rev log Alarm led None Over-rev thresho Gear sensor Calculated Calculated with neutral signal: Channel 8 Highest gear number	1 I I I I I I I I I I I I I I I I I I I	Channel Speed_1
AIM sensor ECU signal Over-rev log Alarm led None Over-rev thresho Gear sensor None Potentiometer Channel 8	1 I I I I I I I I I I I I I I I I I I I	Channel Speed_1
AIM sensor ECU signal Over-rev log Alarm led None Over-rev thresho Gear sensor Calculated Calculated with neutral signal: Channel 8 Highest gear number 7 Channel for alarm Conditioned	1	Channel Speed_1
AIM sensor ECU signal Over-rev log Alarm led None Over-rev thresho Gear sensor Calculated Calculated with neutral signal: Channel 8 Highest gear number 7 Channel for alarm Conditioned Threshold	1 I I I I I I I I I I I I I I I I I I I	Channel Speed_1 Lap Obscuring time (sec.) Lap segments Lap segments Show lap time Show running lap time Condition enabling checked alarms Engine Condition enabling checked alarms Engine Checked Threshold
AIM sensor ECU signal MAX value MAX value MAX value MAX value MAX value MAX value MAX value MAX value MAX value Calculated Calculated Wone Calculated Calculated Calculated with neutral signal: Channel 8 Highest gear number Conditioned Channel for alarm ECT MAX value MAX value Calculated Calculated with neutral signal: Channel 8 Highest gear number 7 Conditioned Threshold Off	1 I I I I I I I I I I I I I I I I I I I	Channel Speed_1
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Rom	Shift Lights	_ Speed		
AIM sensor Multiply factor / 1		Channel Speed	d_1 💌	
ECU signal MAX value 16000	I (6) 15000 (6)		Lap	
Over-rev log Alarm led None 🔽 Over-rev threshold			Obscuring time 8 (sec.)	5
Gear sensor			Lap segments	AP
None Calculated	14000)	Show lap time	
Potentiometer Channel 8 Calculated with neutral signal: Channel 8	13500		Show odometer	
Highest gear number			Condition enabling checked alarms	
			Engine 200	0
Channel for alarm Conditioned				uoned
ECT VICE TOS	Fill in a threshold value for channel	the conditioning	Thireshold	Off
Oil_Press			None	Off
Battery 🗨 < 13 Off	Set its alarm limit (">"/"<")	, in the second s	None 🔽 🔁 O	Off
Link alarm to measure fields		A DAY		
Measure Short name		the set	Measure Short n	name
Field 1 - always displayed	Enable static strin		ield 2 - always displayed	
			ODESEL	
Field 3 - page 1	_ Welcome text		one	_
Field 3 - page 2	Text 1	Fi	ield 4 - page 2	
None		No	one	
Rom ATM sensor Multiply factor // 1	Shift Lights	- Speed		
AIM sensor Multiply factor	I I I I I I I I I I	Speed Channel Speed		
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AIM sensor Multiply factor / 1 ECU signal MAX value 16000 Over-rev log Alarm led None Over-rev threshold		Channel Speed	Lap Obscuring time 8 (sec.)	Ň
AIM sensor ECU signal MAX value Over-rev log Alarm led None Over-rev threshold Gear sensor Calculated	15300 15000 15000	Channel Speed	Lap Obscuring time (sec.) Lap segments	AP
AIM sensor ECU signal Over-rev log Alarm led None Calculated Calculated with neutral		Channel Speed	Lap Obscuring time (sec.) Lap segments I Show lap time	
AIM sensor ECU signal Over-rev log Alarm led None Over-rev threshold Gear sensor None Potentiometer Channel 8		Channel Speed	Lap Obscuring time (sec.) Lap segments	AP
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AIM sensor Multiply factor [/ 1] ECU signal MAX value 16000 Over-rev log Max value 16000 Alarm led None Over-rev threshold Gear sensor Calculated Calculated Potentiometer Calculated with neutral signal: Channel 8 Highest gear number ECU 7 7 Channel for alarm Conditioned Threshold Oil_Press < 2		Channel Speed	Lap Obscuring time (sec.) Lap segments 1 Show lap time Show running lap time Condition enabling checked alarms Engine Channel for alarm Fuel_Level Condition	itioned Off Off
AIM sensor ECU signal Multiply factor MAX value MAX value Cover-rev threshold Calculated Calculated Calculated with neutral signal: Channel 8 Highest gear number To Conditioned Threshold Channel for alarm Conditioned Threshold Oil_Press Calculated with neutral signal: Channel 8 Highest gear number Conditioned Threshold Oil_Press Conditioned Threshold Oil_Press Conditioned Conditioned Threshold Conditioned Conditioned Threshold Oil_Press Conditioned Conditi		Channel Speed	Lap Obscuring time (sec.) Lap segments 1 Show lap time Show running lap time Condition enabling checked alarms Engine Channel for alarm Condit Fuel_Level Channel for alarm Condit Fuel_Level Channel for alarm Condit Channel Chan	itioned Off Off Off
AIM sensor ECU signal Multiply factor MAX value MAX value MAX value MAX value MAX value MAX value Mone Calculated Calculated Calculated with neutral signal: Channel 8 Highest gear number 7 Channel for alarm Conditioned ECU Channel for alarm Conditioned ECT Oil_Press Calculated Conditioned Co		Channel Speed	Lap Obscuring time (sec.) Lap segments I Show lap time Show running lap time Condition enabling checked alarms Engine Channel for alarm Fuel_Level Condition enable Channel for alarm Condition Channel for alarm Condition Channel for alarm Condition Channel Condition	itioned Off Off Off
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AIM sensor Multiply factor [/ 1] ECU signal MAX value 16000 Over-rev log Max value 16000 Over-rev log None Over-rev threshold Gear sensor Calculated Calculated Potentiometer Channel 8 Highest gear number Channel for alarm Conditioned Threshold Oil_Press < 2	Isoo Isoo Isoo Isoo Isoo Itoo Itoo	Channel Speed	Lap Obscuring time (sec.) Lap segments 1 Show lap time Show running lap time Condition enabling checked alarms Engine Channel for alarm Channel for alarm Channel for alarm Channel for alarm Channel	itioned Off Off Off



Rom	Shift Lights	-Speed	
AIM sensor Multiply factor / 1	15300	On Channel	Speed_1
ECU signal MAX value 16000	I 15000		
Over-rev log Alarm led None Over-rev threshold	15000 14500		Obscuring time 8 (sec.)
Gear sensor			Lap segments 1
None Calculated	14000		Show lap time
Potentiometer Channel 8 Channel 8	13500	<u> </u>	Show odometer
ECU Highest gear number		0000	Condition enabling checked alarms
			Engine 🗾 🔁 2000
Conditioned Conditioned	pressure and Battery	channels have	ned bono
	en conditioned to RPM		
IOI Press VISIZ	nnel. The related led only if:	will switch	▼ > 0 Off
Battery 🔍 < 13 🔽	any n.		None 🗸 🚬 0 Off
Link alarm to measure fields	l pressure <2 Bar + RF or	MX	
Ivieasure Short name	nttery voltage <13 Volt	s + RPM >2000	Measure Short name
Field 1 - always displayed			Field 2 - always displayed MODESEL MAP
Field 3 - page 1			Field 4 - page 1
None 💌	come text		None
Field 3 - page 2	ext 1		Field 4 - page 2
None			None





7.5.8 – Enable static string box

AIM RACING TEAM	

the static string is a message that is shown on bottom of **MXL** display. To enable it enable the related checkbox and fill in the text of the message to show.

When the static string is disabled the corresponding part of the display shows two by two the fields connected to field 3 and 4 of page 1 and 2 of the display.

Note: if gear sensor box is set on "Calculated", **MXL** has to calculate the engaged gear (paragraph 5.7). During this procedure the static string is excluded and the display shows "Running Gear Cal" on its bottom part.

7.5.9 – Welcome message box

- Welcome text -	
Text 1	HI CHAMPION

The welcome message is a text shown for some seconds at start up on the bottom of the logger display. To show it fill in the text in the case shown here above.



7.6 – Configuring the CAN expansions (video system excluded)

MXL can be connected to different expansions that, communicating with him through the CAN bus, supply him with a lot of additional information without engaging any analog channel of the logger. To select the expansion to configure, enable "CAN expansions configurator" layer, shown here below.

📓 System manag	jer -								
Trar	nsmit] Receive		CAN-Net in	fo 🚺	Set acquisition s time	ystem		
Current configuration									
Installation name	Data logger type	Ecu	Vehicle name	Available time	Time with GPS	Total frequency	Master frequency	Expansions freq	Tot. Expansions
DEFAULT	MXL PRO 05	BOSCH - MS3	DEFAULT	6.30.59 (h.m.s)	4.29.45 (h.m.s)	356 (Hz)	356 (Hz)	0 (Hz)	0
Add Expa	ansion	Del. Expansion							
No configuration for expansions									
Click on "Add expansion" button to create a new one.									

In case of first expansions configuration or of very first configuration the layer shows up empty. To select the expansion to configure press "Add Expansion" button and the panel shown here below appears.

Aggiungi configurazione espa	insione 🛛 🗙
Scegliere il tipo di espansione	
DaVid (espansione)	Р LCU-ONE (uscite solo CAN o CAN + analogica) LCU-ONE (uscite solo CAN o CAN + analogica) LCU-ONE CAN (solo uscita CAN) LCU-ONE (spansione 4 termocoppie)
	Nome della configurazione dell'espansione (max. 6 caratteri)
	EXP
	Numero di serie dell'espansione (5.N.) Ottieni il numero di serie da una espansione collegata
	espansione collegata
	Annulla

Select the expansion to configure pressing the button placed under each one.

It is suggested to perform all expansions configuration with all of them (except for DaVid) switched on and connected to the logger.



For all CAN expansions, **except for DaVid**, the fields placed under the keyboard enables, as shown below.

Add expansion configuration
Select the expansion type
David (Slave expansion) LCU-ONE (CAN only or CAN + analog output)
Name of expansion configuration (6 characters max.)
Serial number of the expansion (S.N.) Get serial number from a connected expansion
<mark>√∕ <u>Ω</u>K Cancel</mark>

- Fill in the expansion name.
- Press "Get serial number from a connected expansion" button highlighted in the figure above and the system uploads the expansion univocal serial number.
- press "OK" (or "Cancel" to quit without saving).

The system loads the configuration layer of the added expansion and it appears in "CAN expansions configurator" layer. This operation is to be repeated for each CAN expansions to be added. The image below shows "CAN expansions configurator" layer with three activated expansions (red circled): the video system, a Lambda Controller CAN (LCU-ONE CAN) and a TC Hub.

Select configuration Chann	nels System configuration	CAN-Expansions configurator
Add Expansion	Del. Expansion	
DaVid LCC - LCU-ONE C	AN TCH - TC HUB	

Each MXL expansion is optional to the logger and is supplied with the related user manual. Refer to those user manuals for further information concerning each expansions configuration.



To delete an expansion from MXL configuration press "Del. expansion" button. This window appears:

D	elete	e espar	sion				
	V ii	<u>5</u> e	lect all	eselect all			
	N	Del	Exp. configuration name			Exp. Type	
	1		DaVid			DaVid	
	2		LCC			LCU-ONE CAN	
	3		тсн			TC HUB	
			<mark>v∕</mark> D <u>e</u>	elete selected expansions	4	Cancel	

Enable the checkbox of the expansion to delete and press "Delete selected expansions" button. The system shows a confirmation message...



...and the related layer is deleted from "CAN expansions configurator" layer.

The images below show – on the left - "CAN Expansions configurator" layer with three expansions (DaVid, LCU-ONE CAN and TC Hub) and – on the right – the same layer where LCU-ONE expansion deleted: the related layer disappeared.

Select configuration Channels System configuration CAN-Expansions configurator	Select configuration Channels System configuration CAN-Expansions configurator
Add Expansion 🗹 Del. Expansion	Add Expansion 🗹 Del. Expansion
David LCC - LCU-ONE CAN TCH - TC HUB	David TCH - TC HUB



Among CAN expansion that can be connected to **MXL** there is also a Video system, **DaVid** Slave Expansion, connected with up to two cameras. For further information on these objects refer to **DaVid** User Manual.

When the video system has been correctly installed and connected to **MXL** it will be necessary to load it as expansion using the panel shown before and its configuration window, shown here below, appears.



It allows to show all parameters of the video system. It is the same used to configure **DaVid** master and works exactly at the same way. Refer to paragraph 8.6 for further information.



7.7 – Transmitting the configuration

To transmit the configuration the logger has to be switched on and connected to the PC USB port through the proper cable. Press "Transmit" button in system manager window and the system automatically transmits the configuration to the logger. See paragraph 4.4 for further information.

7.8 – Sensors calibration and auto-calibration

When the configuration has been transmitted it is necessary to perform calibration procedure, to say auto-calibrate the accelerometer, the gyroscope and the distance potentiometer and calibrate the gear sensor, the mid zero potentiometer and the zero based potentiometer installed on the vehicle. The procedure is the same explained for MyChron3 Car/Bike Plus/Gold/Extreme (paragraph 5.6).

Warning: if potentiometers, gyroscope and accelerometers have not been correctly calibrated it will not be possible to sample correct data nor the engaged gear or create the track map. Pls. pay particular attention to sensors calibration/auto-calibration procedures.

7.9 – Gear calculation

Gear calculation procedure is the same for all AIM loggers (paragraph 5.7).

7.10 – Online

When the calibration is over and the configuration has been transmitted to the logger it is suggested to enter "Online" pressing the corresponding button on the menu bar, in System Manager window or on the left vertical keyboard to check that all works properly. Ensure that the logger is switched on and correctly connected to the PC. The window here below appears. See paragraph 5.8 for further information.

Tipo sist	tema:		Versione del firmware:	Frequen	za totale:		6
MXL PISTA			14.86.0	296 (H	z)	_	91191 Mostra conteggi 91191
N	ID	Nome canale	Sensore usato	Unità	Misura	~	Mostra mV
1	RPM	Engine	Giri motore	rpm	0	217	
2	SPD_1	Speed_1	Velocità	km/h .1	0.0		Batteria
3	CH_1	Channel_1	Generico lineare 0-5 V	V .1	0.2		13.705
4	CH_2	Channel_2	Generico lineare 0-5 V	V .1	2.6		13.705
5	CH_3	Channel_3	Generico lineare 0-5 V	V .1	0.0		
6	CH_4	Channel_4	Generico lineare 0-5 V	¥ .1	0.0		Memoria
7	CH_5	Channel_5	Generico lineare 0-5 V	V .1	0.0		1%
8	CH_6	Channel_6	Generico lineare 0-5 V	V .1	0.0		Memorizzazione ATTIVA
9	CH_7	Channel_7	Generico lineare 0-5 V	V .1	0.0		
10	CH_8	Channel_8	Generico lineare 0-5 V	V.1	0.0		Ricevitore traguardo
11	CALC_GEAR	Calculated_Gea	Marce calcolate	#	0		0.00.000
12	ACC_1	LatAcc	Accelerometro trasversale	g .01	-0.75		In attesa - Ultimo giro nr. 0
13	LOG_TMP	Datalogger_Tem	Giunto freddo	°C	27		In access counts provint o
14	BATT	Battery	Batteria	V .1	13.7		Collegamento logger-pc
15	ECU_1	BOSCH_RPM	Sensore giri motore	rpm	4096		Comunicazione ATTIVA.
16	ECU_2	BOSCH_SPEED1	Velocità Bosch	km/h .1	64.0		
17	ECU_3	BOSCH_SPEED2	Velocità	km/h	ERR.		
18	ECU_4	BOSCH_OIL_PRES	Sensore pressione	bar .1	ERR.		Stato della configurazione
19	ECU_5	BOSCH_FUEL_PRE	Sensore pressione	bar .1	ERR.		Configurazione: OK.
20	ECU_6	BOSCH_ATM_PRES	Sensore pressione	mbar	ERR.		
21	ECU_7	BOSCH_FUEL_TEM	Sensore temperatura	°C	ERR.		
22	ECU_8	BOSCH_OIL_TEMP	Sensore temperatura	°C	ERR.		
23	ECU_9	BOSCH_ENGINE_T	Sensore temperatura	°C	ERR.		- Esci
24	ECU 10	BOSCH ATR TEMP	Sensore temperatura	97	FRR	~	630



Chapter 8 – How to configure DaVid

To configure DaVid, use a PC and **Race Studio 2** software. This logger can only be configured via software.

Before starting the configuration, install **Race Studio 2** and the USB driver as explained in chapter 2.

Run the software clicking on **Race Studio 2** icon and the window here below appears.



In the title bar – white with blue background in the figure – you can see the **Race Studio 2** version installed on the PC.

Immediately under there is the menu bar, shown in a more intuitive way on the left thanks to the graphic buttons: Go to Analysis (this button runs Race Studio Analysis software), Data download, AIM system manager, AIM system identification, Online, AIM system calibration, Custom sensors management, Select language.

From this window it is possible to perform all operations necessary to manage all AIM systems.



To enter configuration menu press "AIM system manager" button; a panel showing all systems managed through **Race Studio 2** software appears: double click on "**MXL**" or select it and click on " \checkmark Go to".



Race Studio 2 system manager window appears.



8.1 – System manager window



Using the keyboards and the layers (red circled in the figure above) it is possible to perform all operations needed to manage an AIM system.

The top keyboard, shown below, is made up of two buttons:



- **Transmit**: transmits a configuration to the logger and is active with any layer; it needs the logger to be switched on and connected to the PC.
- **Receive**: reads and saves the configuration of the logger and is active only in "Select Configuration" layer.

Current configuration table, immediately under the keyboard and shown here below, shows the main information concerning the configuration user is working on.

Current configuration							
Installation name	Data logger type	Ecu	Vehicle name	Available time	Total frequency		
DEFAULT	DaVid Standalone	AUTRONIC - SM2_V190/1 / SM	DEFAULT	4.59.57 (h.m.s)	231 (Hz)		



Again, under this table there are four layers:

Select configuration Channels Display DaVid

- Select configuration: allows to select the configuration to work on; it is always active.
- **Channels**: allows to set **DaVid** channels. It is active only if there are configurations in "Select Configuration" layer.
- **Display**: allows to set the configuration of **DaVid** display. It is active only if there are configurations in "Select Configuration" layer.
- **DaVid**: allows to configure **DaVid** video. It is active only if there are configurations in "Select Configuration" layer.

8.1.1 – Select configuration layer

"Select configuration" layer is shown here below:

Selec	Select configuration Channels Display DaVid										
¢	New	Delete	Clone		port	Ex	port	F	Restart (gear calibration	Г
(sec	curing time 8	Measure Unit Speed u Temperatur	nit km/t	•							
N	Installation name	Logger	ECU Manufactu	ECU Model	Vehicle name	ОЬ	Lap	Speed	Temp	Display	Created
1	DEFAULT	DaVid Standalone	BOSCH	MS3	DEFAULT	8	1	km/h	°C	M3-Dash	February 26, 2008
2	DEFAULT	DaVid Standalone	DELPHI	MEFI-4B	DEFAULT	8	1	km/h	°C	None	February 26, 2008

On top is a keyboard whose buttons are used to:

- **New**: creates a new configuration;
- **Delete**: deletes a configuration;
- **Clone**: clones a configuration;
- **Import**: imports a new configuration from a file.
- **Export**: exports a configuration to a file.

Beside the keyboard is a checkbox:

• **Restart gear calibration**: it allows to start/re-start **DaVid** gear calibration; to do so enable this checkbox, transmit the configuration to the logger and follow the procedure described at paragraph 5.7.



Under the keyboard there are two panels:

Lap box:

Lap	
Obscuring time	8
(sec.)	
Lap segments	1 I-LAP

- **Obscuring time**: is a time period during which the optical receiver installed on the vehicle, after having recorded a lap signal, is "blind": it does not record signals. This function is useful to manage split times on tracks where more optical receivers are installed: set obscuring time on a low value (min accepted value is 3 seconds) to record splits and set it on a value lower than best lap time and higher than the time elapsed between last split and start/finish line (max accepted value is 255 seconds) not to record splits.
- Lap segments: is the number of segments the track is divided into and corresponds to the number of transmitters installed there .

Measure units box:

Measure Units	
Speed unit	km/h 💌
Temperature unit	∘⊂ ▼

- **Speed units**: allows to modify the unit of measure to be used for speed (mph or km/h) in the selected configuration (highlighted in yellow).
- **Temperature unit**: allows to modify the temperatures unit of measures (°C or °F) in the selected configuration (highlighted in yellow).

Central in the layer is configurations database. To work on one of them click on any cell of its row and the entire row is selected (highlighted in yellow).

In case of first configuration the central table shows up empty.



8.2 – Creating a new configuration

Pressing "New" in "Select configuration" layer of "System manager" window this window appears:

New configuration		
ECU Manufacturer	None	•
ECU Model	None	•
New configuration name	DEFAULT	
Vehicle name	DEFAULT	
Display Type	None	•
Speeds measure unit	km/h	•
Temperatures measure unit	°C	•
Pressures measure unit	bar	•
	asol	
<u> </u>	A <u>C</u> ancel	

Some parameters need to be set:

- ECU Manufacturer: select the manufacturer of the ECU installed on the vehicle or none.
- ECU Model: select the ECU model.
- **New configuration name**: fill in the configuration name.
- Vehicle name: fill in the vehicle name.
- **Display type**: select the type of display installed and connected to DaVid.
- **Speeds measure unit**: choose between km/h and mph.
- Temperatures unit of measure: choose between °C and °F.
- **Pressures unit of measure**: choose between Bar and PSI.

Press "OK" to save (or "Cancel" to quit without saving). The system comes back to "System Manager" window.



8.3 – Channels

Activate "Channels" layer.

Control Control <t< th=""><th></th><th>📓 System mana</th><th>ger</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>		📓 System mana	ger								
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Gestione sistema AIM Construction models (m) Construction (m) Cool (m) <td>Scarico dati</td> <td>Sensore AIM</td> <td>Segnale ECU</td> <td>ABILITATO</td> <td></td> <td>ABILITATO</td> <td>-</td> <td>_</td> <td>Calcolate</td> <td></td> <td></td>	Scarico dati	Sensore AIM	Segnale ECU	ABILITATO		ABILITATO	-	_	Calcolate		
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Calibratione sistema AIM Ch 3 ABLITATO Channel, 3 10 Hz Generico Ineare 0.5 V V, 1 0.0 5.0 Gestione sensori personalizzati Ch 4 ABLITATO Channel, 4 10 Hz Generico Ineare 0.5 V V, 1 0.0 5.0 Gestione sensori personalizzati Ch 4 ABLITATO Channel, 5 10 Hz Termcoppia C 0 5.0 Scelta Lingua Ch 4 ABLITATO Channel, 5 10 Hz Termcoppia V. 1 0.0 5.0 Scelta Lingua Scelta Lingua Cl 4 ABLITATO Channel, 5 10 Hz Genetio Ineare 0.5 V V. 1 0.0 5.0 Scelta Lingua Cl 5 Disble LintaTo Obscheger Temp 10 Hz Genetio Ineare 0.5 V V. 1 0.0 5.0 Go 10 ABLITATO Dataregram 10 Hz Scelta Lingua 0.1 Batteria V. 1 0.0 5.0 Go 10 Disble LintaTo Dataregram 10 Hz Sensore pressione mh .1 0.0 15.0 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>km/h 1</td> <td>0.0</td> <td></td> <td>1666.0</td> <td>1.0</td>							km/h 1	0.0		1666.0	1.0
Calibrazione sistema AIM Chi 4 A BLITATO Channel 4 10 Hz Genesio Ineare 0-5 V V. 1 0.0 5.0 Gestione sensori personalizzati Chi 5 DisAbilitatio Channel 5 10 Hz Marce calculate # 0 6 1 ACC_1 ABILITATO Channel 5 10 Hz Marce calculate # 0 6 1 ACC_2 ABILITATO Channel 6 10 Hz Maccelerometro trasversale g.01 3.00 3.00 1 ACC_2 ABILITATO Datalogger_Temp 10 Hz Accelerometro trasversale g.01 3.00 3.00 1 ACC_2 ABILITATO Datalogger_Temp 10 Hz Garcetornegromodulate Y.1 5.0 15.0 1 BATT ABILITATO Datalogger_Temp 10 Hz Sensore grip motore rpm 0 18000 CU_2 ABILITATO BOSCH_SPEED1 10 Hz Sensore pressione bar.1 0.0 15.0 1 CU_4 ABILITATO		CH_1	ABILITATO	Channel_1	10 Hz	Temperatura VDO 50-150 °C	km/h 1 °⊂	0.0	5		1.0
Acc Obstabilitation Oct Sector Sector Gestione sensori personalizzati 0 6 0 6 Acc ABUITATO Channel, 6 10 Hz Maccackolate # 0 6 Acc ABUITATO Acc, 1 10 Hz Accelerometro traversale 9,01 -3,00 3,00 Acc ABUITATO Acc, 2 10 Hz Accelerometro traversale 9,01 -3,00 3,00 Lod_TMP ABUITATO Datagoger_Temp 10 Hz Accelerometro traversale 9,01 -3,00 3,00 Scetta Lingua ABUITATO Datagoger_Temp 10 Hz Sensore grimohe rpm 0 18000 CO_2 ABUITATO BOSCH_RPM 10 Hz Sensore grimohe rpm 0 15,0 CO_2 ABUITATO BOSCH_PEED 10 Hz Velorita km/h .1 0.0 15,0 CO_3 ABUITATO BOSCH_PEED 10 Hz Sensore pressione bar .1 0.0 15,0 <		CH_1 CH_2	ABILITATO ABILITATO	Channel_1 Channel_2	10 Hz 10 Hz	Temperatura VDO 50-150 °C Potenziometro distanza	km/h 1 °⊂ mm .1	0.0 0 0.0	5 5.0		1.0
Gestione sensori personalizzati Ch 6 ABLITATO Channel 6 101± Marce cakalate # 0 6 ACC_1 ABLITATO Acc_1 104± Marce cakalate # 0.01 -3.00 3.00 ACC_1 ABLITATO Acc_1 104± Accelerometro longitudinale 0.01 -3.00 3.00 100± LoG_TMP ABLITATO Bacteria V1.1 5.0 15.0 100± Scelta Lingua ABLITATO Boddey Temp 104± Sensore gin motore rpm 0 15.0 100± EQU_4 ABLITATO BOSCH_FRED 104± Sensore gin motore rpm 0 15.0 EQU_4 ABLITATO BOSCH_FRED 104± Sensore pressione bar.1 0.00 15.0 EQU_5 ABLITATO BOSCH_FRED 104± Sensore pressione bar.1 0.0 15.0 EQU_5 ABLITATO BOSCH_FRED 104± Sensore pressione bar.1 1.0 15.0	Calibrazione sistema AIM	CH_1 CH_2 CH_3	ABILITATO ABILITATO ABILITATO	Channel_1 Channel_2 Channel_3	10 Hz 10 Hz 10 Hz	Temperatura VDO 50-150 °C Potenziometro distanza Generico lineare 0-5 V	km/h 1 °⊂ mm .1 ∀ 1	0.0 0 0.0 0.0	5 5.0 5.0		1.0
Gestione sensori personalizzati ACC_1 ACL_1/10 ACc_1 10 Hz Accelerometro insystensel 9.01 -3.00 3.00 ACC_2 ABULTATO Acc_2 10 Hz Accelerometro insystensel 9.01 -3.00 3.00 ACC_2 ABULTATO Acc_2 10 Hz Accelerometro insystensel 9.01 -3.00 3.00 Scelta Lingua ABULTATO Datalogger_Temp 10 Hz Scelerometro insystensel 9.01 -3.00 3.00 EQ_1 Dissettinato Accelerometro insystensel 9.01 -3.00 3.00 EQ_1 Dissettinato Bottery 11 Hz Batteria V.1 5.0 15.0 EQ_2 ABULTATO BOSCH_SPEEDI 10 Hz Velocità km/h.1 0.0 500.0 EQ_3 ABULTATO BOSCH_SPEEDI 10 Hz Sensore pressione bar.1 0.0 15.0 EQ_4 ABULTATO BOSCH_SPEEDI 10 Hz Sensore temperatura CC	Calibrazione sistema AIM	CH_1 CH_2 CH_3 CH_4	ABILITATO ABILITATO ABILITATO ABILITATO	Channel_1 Channel_2 Channel_3 Channel_4	10 Hz 10 Hz 10 Hz 10 Hz	Temperatura VDO 50-150 °C Potenziometro distanza Generico lineare 0-5 V Generico lineare 0-5 V	km/h 1 °⊂ mm .1 V 1 V 1	0.0 0 0.0 0.0 0.0 0.0	5 5.0 5.0 5.0		1.0
Scela Lingua Acc2 AllITATO Acc2 ID H2 Accelerometro longludinale 9.01 3.00 00 Scela Lingua LoG_TMP ABLITATO Daktory 1H2 Accelerometro longludinale 9.01 3.00 0.00 10 Scela Lingua Co_TMP ABLITATO Daktory 1H2 Battria Violation 5.0 15.0 Cu_J DSABILITATO DBSCH_PRM 10H2 Sensore pressione truth 0.0 50.0 ECU_J ABLITATO DSCH_SPEED2 10H2 Sensore pressione truth 1.0.0 50.0 ECU_J ABLITATO DSCH_SPEED2 10H2 Sensore pressione bar.1 0.0 15.0 ECU_J ABLITATO DSCH_FLIE_PRESS 10H2 Sensore pressione bar.1 0.0 15.0 ECU_J ABLITATO DSCH_FLIE_PRESS 10H2 Sensore temperatura °C -50 215 ECU_J ABLITATO DSCH_FLIE_PRESS 10H2 Sensore temperatura °C	Calibrazione sistema AIM	CH_1 CH_2 CH_3 CH_4 CH_5	ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO	Channel_1 Channel_2 Channel_3 Channel_4 Channel_5	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Temperatura VDO 50-150 °C Potenziometro distanza Generico lineare 0-5 V Generico lineare 0-5 V Termocoppia	km/h 1 °⊂ mm .1 V 1 V 1 ∘⊂	0.0 0 0.0 0.0 0.0 0.0 0.0	5 5.0 5.0 5.0 5		1.0
Personanzzani Scelta Lingua No. 5 (100 - 100		CH_1 CH_2 CH_3 CH_4 CH_5 CH_6	ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO	Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Temperatura VDO 50-150 °C Potenziometro distanza Generico lineare 0-5 V Generico lineare 0-5 V Termocoppia Marce calcolate	km/h 1 °⊂ mm .1 V 1 V 1 °⊂ #	0.0 0 0.0 0.0 0.0 0 0	5 5.0 5.0 5.0 5 6		1.0
Scelta Lingua Battri ABLITATO Battry 11/k Battria V, 1 5,0 15,0 ECU_1 DISABILITATO BOSCH_SPEED1 10 Hz Sensore gimmotic mm 0 18000 ECU_2 ABLITATO BOSCH_SPEED1 10 Hz Velocità Bosch km/h · 1 0.0 500.0 1 ECU_3 ABLITATO BOSCH_SPEED2 10 Hz Velocità Bosch km/h · 1 0.0 500.0 1 ECU_4 ABLITATO BOSCH_SPEED2 10 Hz Sensore pressione bar .1 0.0 15.0 ECU_5 ABLITATO BOSCH_FUEL_PRESS 10 Hz Sensore pressione bar .1 0.0 15.0 ECU_6 ABLITATO BOSCH_FUEL_PRESS 10 Hz Sensore pressione bar .1 0.0 15.0 ECU_7 ABLITATO BOSCH_FUEL_PREMP 5 Hz Sensore temperatura °C -50 215 ECU_9 ABLITATO BOSCH_FUEL_PREMP 5 Hz Sensore temperatura °C -50 <td< td=""><td>Gestione sensori</td><td>CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1</td><td>ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO ABILITATO</td><td>Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Acc_1</td><td>10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz</td><td>Temperatura VDO 50-150 °C Potenziometro distanza Generico lineare 0-5 V Generico lineare 0-5 V Termocoppia Marce calcolate Accelerometro trasversale</td><td>km/h 1 °C mm 1 V 1 V 1 °C # g 01</td><td>0.0 0 0.0 0.0 0.0 0 0 -3.00</td><td>5 5.0 5.0 5.0 5 6 3.00</td><td></td><td></td></td<>	Gestione sensori	CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1	ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO ABILITATO	Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Acc_1	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Temperatura VDO 50-150 °C Potenziometro distanza Generico lineare 0-5 V Generico lineare 0-5 V Termocoppia Marce calcolate Accelerometro trasversale	km/h 1 °C mm 1 V 1 V 1 °C # g 01	0.0 0 0.0 0.0 0.0 0 0 -3.00	5 5.0 5.0 5.0 5 6 3.00		
Scela Lingua ECU_1 DISABILITATO BOSCH_PEMD 10Hz Sensore primotore pm 0 18000 Scela Lingua ECU_2 ABLITATO BOSCH_SPEED1 10Hz Velocità Bosch km/h. 1 0.0 500.0 ECU_3 ABLITATO BOSCH_SPEED2 10Hz Velocità Bosch km/h. 1 0.0 500.0 ECU_4 ABLITATO BOSCH_QU_PRESS 10Hz Sensore pressione bar. 1 0.0 15.0 ECU_5 ABLITATO BOSCH_QU_PRESS 10Hz Sensore pressione bar. 1 0.0 15.0 ECU_7 ABLITATO BOSCH_QU_PRESS 10Hz Sensore pressione bar. 1 0.0 15.0 ECU_6 ABLITATO BOSCH_QU_PRESS 10Hz Sensore temperatura °C -50 215 ECU_9 ABLITATO BOSCH_PRESS 10Hz Sensore temperatura °C -50 150 ECU_9 ABLITATO BOSCH_PREST 10Hz Sensore temperatura °C -50 150	Gestione sensori	CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2	ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO ABILITATO ABILITATO	Channel_1 Channel_2 Channel_3 Channel_4 Channel_6 Acc_1 Acc_1 Acc_2	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Temperatura VDO 50-150 °C Potensiometro distanza Generico lineare 0-5 V Generico lineare 0-5 V Termocoppia Marce calcolate Accelerometro trasversale Accelerometro longitudinale	km/h 1 °C mm .1 V 1 V 1 °C # g 01 g 01	0.0 0 0.0 0.0 0.0 0 0 -3.00 -3.00	5 5.0 5.0 5.0 5 6 3.00 3.00		
Scelta Lingua Scelta Lingua ECU_2 ABILITATO BOSCH_SPEED1 10 Hz Velocità Imh 1 0.0 S00.0 ECU_3 ABILITATO BOSCH_SPEED2 10 Hz Velocità Imh 1 0.0 S00.0 ECU_3 ECU_4 ABILITATO BOSCH_SPEED2 10 Hz Velocità Imh 1 0.0 15.0 Imh ECU_5 ABILITATO BOSCH_FREES 10 Hz Sensore pressione bar .1 0.0 15.0 Imh ECU_7 ABILITATO BOSCH_FREES 10 Hz Sensore temperatura °C -50 215 ECU_9 ABILITATO BOSCH_FREEP 5 Hz Sensore temperatura °C -50 150 ECU_9 ABILITATO BOSCH_FREEP 5 Hz Sensore temperatura °C -50 150 ECU_10 ABILITATO BOSCH_FREEP 5 Hz Sensore temperatura °C -50 150 ECU_11 ABILITATO BOSCH_FREEP 10 Hz <	Gestione sensori	CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP	ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO ABILITATO ABILITATO ABILITATO	Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Datalogger_Temp	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Temperatura VDO 50-150 °C Potenziometro distanza Generico Imezer 0-5 V Generico Imezer 0-5 V Termocoppia Marce calcolate Accelerometro trasversale Accelerometro longitudinale Giunto freddo	km/h .1 °⊂ mm .1 V .1 V .1 °⊂ # g .01 g .01 °⊂	0.0 0 0.0 0.0 0.0 0 0 -3.00 0 0	5 5.0 5.0 5.0 6 3.00 3.00 50		
alm-sportline.com all.ITATO BOSCH_SPEED2 10 Hz Velocità km/h 1 0.0 500.0 ECU_4 ABLITATO BOSCH_OIL PRESS 10 Hz Sensore pressione bar.1 0.0 15.0 ECU_5 ABLITATO BOSCH_OIL PRESS 10 Hz Sensore pressione bar.1 0.0 15.0 ECU_5 ABLITATO BOSCH_OIL PRESS 10 Hz Sensore pressione bar.1 0.0 15.0 ECU_7 ABLITATO BOSCH_FLUE, TEMP 5 Hz Sensore temperatura °C -50 215 ECU_8 ABLITATO BOSCH_FLUE, TEMP 5 Hz Sensore temperatura °C -50 150 ECU_9 ABLITATO BOSCH_FLUE, TEMP 5 Hz Sensore temperatura °C -50 150 ECU_10 ABLITATO BOSCH_FLUE, TEMP 5 Hz Sensore temperatura °C -50 150 ECU_11 ABLITATO BOSCH_FLUE, TEMP 1 Hz Sensore temperatura °C -50 150 <tr< td=""><td>Gestione sensori</td><td>CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LO6_TMP BATT</td><td>ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO</td><td>Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Datalogger_Temp Battery</td><td>10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz</td><td>Temperatura VDO 50-150 °C Potenziometro distanza Generico Ineare 0-5 V Termocoppia Marce calcolate Accelerometro trasversale Accelerometro longitudinale Giunto freddo Batteria</td><td>km/h .1 °⊂ mm .1 V .1 V .1 °⊂ # g .01 g .01 °⊂ V .1</td><td>0.0 0.0 0.0 0.0 0.0 0 -3.00 -3.00 0 5.0</td><td>5 5.0 5.0 5.0 6 3.00 3.00 50 15.0</td><td></td><td>1.0</td></tr<>	Gestione sensori	CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LO6_TMP BATT	ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO	Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Datalogger_Temp Battery	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Temperatura VDO 50-150 °C Potenziometro distanza Generico Ineare 0-5 V Termocoppia Marce calcolate Accelerometro trasversale Accelerometro longitudinale Giunto freddo Batteria	km/h .1 °⊂ mm .1 V .1 V .1 °⊂ # g .01 g .01 °⊂ V .1	0.0 0.0 0.0 0.0 0.0 0 -3.00 -3.00 0 5.0	5 5.0 5.0 5.0 6 3.00 3.00 50 15.0		1.0
aim-sportline.com ECU_4 ABLITATO BOSCH_OLL_PRESS 10 hz Sensore pressione bar .1 0.0 15.0 Bill COL 5 ABLITATO BOSCH_FULL_PRESS 10 Hz Sensore pressione bar .1 0.0 15.0 ECU_5 ABLITATO BOSCH_FULL_PRESS 10 Hz Sensore pressione mbar 0 130 ECU_7 ABLITATO BOSCH_FULL_PRESS 10 Hz Sensore temperatura °C -50 215 ECU_9 ABLITATO BOSCH_FULL_PRESP 5 Hz Sensore temperatura °C -50 150 ECU_9 ABLITATO BOSCH_FULL_PRESP 5 Hz Sensore temperatura °C -50 150 ECU_11 ABLITATO BOSCH_FURCIT_ANS 10 Hz Sensore temperatura °C -50 150 ECU_11 ABLITATO BOSCH_FURCIT_ANS 10 Hz Sensore appertura farfala %.1 0.0 100.0 100.0 ECU_12 ABLITATO BOSCH_FURCIT_ANS 10 Hz Sensore appertura farfala %.1 <td>Gestione sensori personalizzati</td> <td>CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP BATT ECU_1</td> <td>ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO</td> <td>Channel 1 Channel 2 Channel 3 Channel 4 Channel 5 Channel 6 Acc_1 Acc_1 Datalogger_Temp Battery BoSCH_RPM</td> <td>10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz</td> <td>Temperatura VDO 50-150 °C Potensiometro distanza Generico Ineare 0-5 V Generico Ineare 0-5 V Termocoppia Marce calcolate Accelerometro trasversale Accelerometro longitudinale Giunto freddo Batteria Sensore ogi motore</td> <td>km/h .1</td> <td>0.0 0 0.0 0.0 0 0 -3.00 -3.00 0 5.0 0</td> <td>5 5.0 5.0 5 6 3.00 3.00 50 50 15.0 18000</td> <td></td> <td></td>	Gestione sensori personalizzati	CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP BATT ECU_1	ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO	Channel 1 Channel 2 Channel 3 Channel 4 Channel 5 Channel 6 Acc_1 Acc_1 Datalogger_Temp Battery BoSCH_RPM	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Temperatura VDO 50-150 °C Potensiometro distanza Generico Ineare 0-5 V Generico Ineare 0-5 V Termocoppia Marce calcolate Accelerometro trasversale Accelerometro longitudinale Giunto freddo Batteria Sensore ogi motore	km/h .1	0.0 0 0.0 0.0 0 0 -3.00 -3.00 0 5.0 0	5 5.0 5.0 5 6 3.00 3.00 50 50 15.0 18000		
Bits of the service of the s	Gestione sensori personalizzati	CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP BATT ECU_1 ECU_1 ECU_2	ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO	Channel_1 Channel_2 Channel_3 Channel_3 Channel_4 Channel_6 Acc_1 Acc_2 Datalogger_Temp Battery BostCH_RPM BOSCH_SPEED1	10 Hz 10 Hz	Temperatura VDO 50-150 °C Potensiometro distanza Generico Ineare 0-5 V Generico Ineare 0-5 V Termocoppia Marce calcolate Accelerometro trasversale Accelerometro longitudinale Giunto freddo Batteria Sensore grii motore Velocità Bosch	km/h .1	0.0 0 0.0 0.0 0 0 0 -3.00 -3.00 -3.00 0 5.0 0 0 0.0	5 5.0 5.0 5.0 5 6 3.00 3.00 50 15.0 18000 500.0		
aim-sportline.com Discon_set MultiParto BOSCH_ATM_PRESS 10 Hz Sensore pressione mbar 0 130 aim-sportline.com EGU_7 ABULTATO BOSCH_FUEL_TEMP 5 Hz Sensore temperatura °C -50 215 EGU_9 ABULTATO BOSCH_FUEL_TEMP 5 Hz Sensore temperatura °C -50 215 EGU_9 ABULTATO BOSCH_FUEL_TEMP 5 Hz Sensore temperatura °C -50 150 EGU_10 ABULTATO BOSCH_FUEL_TEMP 5 Hz Sensore temperatura °C -50 150 EGU_11 ABULTATO BOSCH_FUEL_TEMP 5 Hz Sensore apertura farfala %.1 0.0 100.0 EGU_11 ABULTATO BOSCH_FUEL_TEMP 10 Hz Sensore apertura farfala %.1 0.0 100.0 EGU_13 ABULTATO BOSCH_FUEL_TEMP 10 Hz Sensore apertura farfala %.1 0.00 120.00 EGU_14 ABULTATO BOSCH_FUEL_TEMP 10 Hz Sensore apertura farfala %.0	Gestione sensori personalizzati	CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP BATT ECU_1 ECU_2 ECU_3	ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO	Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Datalogger_Temp Battery BOSCH_SPEED1 BOSCH_SPEED1 BOSCH_SPEED2	10 Hz 10 Hz	Temperatura VDO 50-150 °C Potenziometro distanza Generico lineare 0-5 V Generico lineare 0-5 V Termocoppia Marce calcolate Accelerometro trasversale Accelerometro longitudinale Giunto freddo Batteria Sensore giri motore Velocità Bosch Velocità	km/h .1	0.0 0 0.0 0.0 0.0 0 0 -3.00 -3.00 0 5.0 0 0.0 0.0 0.0	5 5.0 5.0 5 6 3.00 3.00 50 15.0 15.0 18000 500.0 500.0		1.0
ECU_7 ABILITATO BOSCH_FUEL_TEMP 5Hz Sensore temperatura CC -50 215 ECU_8 ABILITATO BOSCH_OLL_TEMP 5Hz Sensore temperatura CC -50 215 ECU_9 ABILITATO BOSCH_OLL_TEMP 5Hz Sensore temperatura CC -50 215 ECU_9 ABILITATO BOSCH_AUR_TEMP 5Hz Sensore temperatura CC -50 150 ECU_10 ABILITATO BOSCH_TROTT_MIG 1Hz Sensore temperatura CC -50 150 ECU_11 ABILITATO BOSCH_TROTT_MIG 1Hz Sensore temperatura CC -50 150 ECU_11 ABILITATO BOSCH_TROTT_MIG 1Hz Sensore temperatura CC -50 150 ECU_12 ABILITATO BOSCH_TROTT_MIG 1Hz Sensore temperatura % 0 190 ECU_13 ABILITATO BOSCH_TROTT_MIG 1Hz Sensore temperatural % 0 10.000 10.00 EC	Gestione sensori personalizzati	CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 LOG_TMP BATT ECU_1 ECU_1 ECU_2 ECU_3 ECU_4	ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO ABILITATO ABILITATO ABILITATO	Channel, 1 Channel, 2 Channel, 2 Channel, 3 Channel, 5 Channel, 5 Channel, 6 Acc, 1 Acc, 2 Detalogger, Temp Battery BoSch, PRPM BoSch, SPEED1 BoSch, SPEED2 BoSch, Cul, PRESS	10 Hz 10 Hz	Temperatura VDO 50-150 °C Potenziometro distanza Generico lineare 0-5 V Generico lineare 0-5 V Termocoppia Marce calcolate Accelerometro trasversale Accelerometro longitudinale Giunto freddo Batteria Sensore girimokore Velocità Bosch Velocità Sensore pressione	km/h .1	0.0 0 0.0 0.0 0.0 0 -3.00 -3.00 0 5.0 0 0 0.0 0.0 0.0	\$ 5.0 5.0 5.0 5 6 3.00 3.00 3.00 50 15.0 18000 500.0 500.0 15.0		
Bits Sensore temperature CC -50 215 ECU_9 ABULTATO BOSCH_OUL_TEMP 5Hz Sensore temperature °C -50 150 ECU_9 ABULTATO BOSCH_ENSINE_TEMP 5Hz Sensore temperature °C -50 150 ECU_10 ABULTATO BOSCH_TROTT_ANS 10Hz Sensore temperature °C -50 150 ECU_11 ABULTATO BOSCH_TROTT_ANS 10Hz Sensore apprunt afridal %.1 0.0 100.0 ECU_13 ABULTATO BOSCH_AIR_CHARGE 10Hz Sensore apprunt afridal %.0 190 ECU_13 ABULTATO BOSCH_AIR_CTIMEZ 10Hz Sensore apprunt afridal %.0 100.00 120.00 ECU_15 ABULTATO BOSCH_AIR_CTIMEZ 10Hz Orologic distema ms.01 0.00 210.00 ECU_16 ABULTATO BOSCH_AIR/ETMEZ 10Hz Sonda Lambds #.001 0.000 16.000 ECU_16 ABULTATO BOSCH_AIR/ETMEXEL 10Hz <td>Gestione sensori personalizzati</td> <td>CH_1 CH_2 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP BATT ECU_1 ECU_2 ECU_3 ECU_4 ECU_5</td> <td>ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO</td> <td>Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Datalogor_Temp Battery BOSCH_SPED1 BOSCH_SPED1 BOSCH_SPED1 BOSCH_SPED1 BOSCH_SPED1 BOSCH_SPED1 BOSCH_SPED1</td> <td>10 Hz 10 Hz</td> <td>Temperatura VIO 50-150 °C Potenziometro distanza Generico Ineare 0-5 V Termocoppia Marce calcolate Accelerometro longitudinale Giunto freddo Batteria Sensore giri motore Velocità Sensore pressione Sensore pressione</td> <td>km/h .1</td> <td>0.0 0.0 0.0 0.0 0.0 0 -3.00 -3.00 0 5.0 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0</td> <td>5 5.0 5.0 5.0 5 6 3.00 3.00 550 15.0 18000 500.0 500.0 15.0 15.0</td> <td></td> <td></td>	Gestione sensori personalizzati	CH_1 CH_2 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP BATT ECU_1 ECU_2 ECU_3 ECU_4 ECU_5	ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO	Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Datalogor_Temp Battery BOSCH_SPED1 BOSCH_SPED1 BOSCH_SPED1 BOSCH_SPED1 BOSCH_SPED1 BOSCH_SPED1 BOSCH_SPED1	10 Hz 10 Hz	Temperatura VIO 50-150 °C Potenziometro distanza Generico Ineare 0-5 V Termocoppia Marce calcolate Accelerometro longitudinale Giunto freddo Batteria Sensore giri motore Velocità Sensore pressione Sensore pressione	km/h .1	0.0 0.0 0.0 0.0 0.0 0 -3.00 -3.00 0 5.0 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	5 5.0 5.0 5.0 5 6 3.00 3.00 550 15.0 18000 500.0 500.0 15.0 15.0		
Bit Sport Exclusion CCU_9 ABILITATO BOSCH_EXAGNE_TEMP Site Sensore temperatura °C -50 150 ECU_10 ABILITATO BOSCH_EXAGNE_TEMP Site Sensore temperatura °C -50 150 ECU_11 ABILITATO BOSCH_TARKIT_ANKS 10Hz Sensore temperatura °C -50 150 ECU_12 ABILITATO BOSCH_TARKIT_ANKS 10Hz Sensore temperatura °C -50 150 ECU_13 ABILITATO BOSCH_TARKIT_ANKS 10Hz Sensore temperatura °C -50 150 ECU_13 ABILITATO BOSCH_TARK 10Hz Sensore temperatura °C -50 150 ECU_14 ABILITATO BOSCH_TARK_CHARGE 10Hz Sensore temperatura °K 0 190 ECU_15 ABILITATO BOSCH_TARKCT_TARKE 10Hz Sensore temperatura °K 0 1000 1000 ECU_15 ABILITATO BOSCH_TARKETARKE 10Hz Senda Lamdda #.001 0.000<	Gestione sensori personalizzati	CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP BATT ECU_1 ECU_2 ECU_3 ECU_4 ECU_5 ECU_6	ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO	Channel_1 Channel_2 Channel_2 Channel_4 Channel_5 Channel_5 Channel_6 Acc_1 Acc_1 Acc_2 Debtalogger_Temp Battery BoSCH_SPEED1 BoSCH_SPEED2 BoSCH_VEM_PRESS BOSCH_FUE_PRESS	10 Hz 10 Hz	Temperatura VDO 50-150 °C Potencismetro distanza Generico lineare 0-5 V Generico lineare 0-5 V Termocoppia Marce calcolate Accelerometro longitudinale Giunto freddo Batteria Sensore gri motore Velocità Bosch Velocità Sensore pressione Sensore pressione Sensore pressione	km/h .1	0.0 0 0.0 0.0 0 0 -3.00 -3.00 0 5.0 0 0 0.0 0.0 0.0 0.0 0.0 0.0 0.	5 5.0 5.0 5.0 5 6 3.00 3.00 50 50 15.0 18000 500.0 500.0 500.0 15.0 15.0 15.0 13.0		
Bit Mathematical State Control Mathematical State Sensore temperatura Sensore tempera	Gestione sensori personalizzati	CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP BATT ECU_2 ECU_4 ECU_2 ECU_4 ECU_5 ECU_6 ECU_6 ECU_7	ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO	Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Dataloger_Temp Battery BOSCH_SPED1 BOSCH_S	10 Hz 10 Hz	Temperatura VDO 50-150 °C Potensiometro distanza Generico Ineare 0-5 V Generico Ineare 0-5 V Termocoppia Marce calcolate Accelerometro longitudinale Giunto freddo Batteria Sensore grir motore Velocità Bosch Velocità Sensore pressione Sensore pressione Sensore pressione	km/h .1	0.0 0.0 0.0 0.0 0 0 -3.00 0 5.0 0 0.0 0.0 0.0 0.0 0.0	5 5.0 5.0 5.0 5 6 6 3.00 3.00 50 50 15.0 18000 500.0 500.0 15.0 15.0 15.0 15.0 125.0		
Bit Mathematical State ECU_11 ABILITATO BOSCH_THROTT_ANIS 10 Hz Sensore apprtuz farfala %.1 0.0 100.0 BCU_12 ABILITATO BOSCH_TANIS 10 Hz Sensore apprtuz farfala %.1 0.0 100.0 BCU_13 ABILITATO BOSCH_TANIS 10 Hz Sensore apprtuz farfala %.0 190 BCU_13 ABILITATO BOSCH_TANIS 10 Hz Sensore apprtuz farfala %.0 190 BCU_13 ABILITATO BOSCH_TANIS 10 Hz Sensore apprecentuale % 0 100.0 BCU_14 ABILITATO BOSCH_TANIS 10 Hz Sensore apprecentuale % 0 100.0 BCU_14 ABILITATO BOSCH_TANIS 10 Hz Sensore apprecentuale % 0 100.00 10.00 BCU_15 ABILITATO BOSCH_TANIS 10 Hz Sensore apprecentuale # 0.00 16.000 BCU_15 ABILITATO BOSCH_TANIS 10 Hz Sensore apprecentuale # .0000 16.000	Gestione sensori personalizzati	CH_1 CH_2 CH_3 CH_5 CH_5 CH_5 CH_6 ACC_1 ACC_1 ACC_1 ACC_1 ACC_2 LOG_TMP BATT ECU_2 ECU_3 ECU_3 ECU_3 ECU_4 ECU_5 ECU_6 ECU_6 ECU_6	ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO DISABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO	Channel_1 Channel_2 Channel_2 Channel_4 Channel_5 Channel_5 Channel_5 Acc_1 Acc_1 Acc_2 Datalogger_temp Battery BoSCH_RPM BoSCH_SPED1 BoSCH_SPED2 BoSCH_OIL_PRESS BOSCH_FUE_TEMP BOSCH_FUE_TEMP	10 Hz 10 Hz 5 Hz	Temperatura VDO 50-150 °C Potencismetro distanza Generico lineare 0-5 V Generico lineare 0-5 V Termicoppia Marce calcolate Accelerometro trasversale Accelerometro longitudinale Giunto freddo Batteria Sensore qui imotore Velocità Sensore pressione Sensore pressione Sensore pressione Sensore temperatura	km/h .1	0.0 0 0.0 0.0 0 0 0 0 -3.00 -3.00 0 -3.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 5.0 5.0 5 5 6 3.00 3.00 50 15.0 15.0 15.0 15.0 15.0 15.0 15.		
ECU_12 ABILITATO BOSCH_IGNIT_ANS 10 Hz Sensore angolo deg -90 90 aim-sportline.com ECU_13 ABILITATO BOSCH_ARCEL 10 Hz Sensore angolo deg -90 90 ECU_14 ABILITATO BOSCH_ARCEL 10 Hz Sensore percentuale % 0 190 ECU_15 ABILITATO BOSCH_JINEC_TIMEL 10 Hz Orologio di sistema ms.01 0.00 210.00 ECU_15 ABILITATO BOSCH_JINEC_TIMEL 10 Hz Orologio di sistema ms.01 0.00 210.00 ECU_16 ABILITATO BOSCH_JIAMEDA1 10 Hz Sonda Lambda #.001 0.000 16.000 ECU_17 ABILITATO BOSCH_JIAMEDA1 10 Hz Sonda Lambda #.001 0.000 16.000	Gestione sensori personalizzati	CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP BATT ECU_2 ECU_4 ECU_3 ECU_4 ECU_5 ECU_4 ECU_6 ECU_7 ECU_6 ECU_9	ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO	Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Acc_1 Acc_1 Acc_2 Datalogger_Temp Battery BoScH_SPED1 BoScH_SPED1 BoScH_SPED1 BoScH_SPED1 BoScH_SPED1 BoScH_PUEL_TEMP BOSCH_FUEL_TEMP BOSCH_FUEL_TEMP BOSCH_FUEL_TEMP BOSCH_FUEL_TEMP	10 Hz 10 Hz 5 Hz 5 Hz	Temperatura VDO 50-150 °C Potensiometro distanza Generico Ineare 0-5 V Generico Ineare 0-5 V Termocoppia Marce calcolate Accelerometro trasversale Accelerometro longitudinale Giunto freddo Batteria Sensore gri motore Velocità Bosch Velocità Sensore pressione Sensore pressione Sensore pressione Sensore temperatura Sensore temperatura	km/h .1 °C mm .1 V .1 V .1 V .1 V .1 °C # .1 .1 v .1 km/h .1 bar .1 bar .1 bar .1 wdr .1 v .2 .2 .2	0.0 0.0 0.0 0.0 0 0 0 -3.00 0 5.0 0 0 5.0 0 0.0 0.0 0.0 0.0 0.0	5 5.0 5.0 5.0 5.0 5 6 3.00 50 15.0 15.0 18000 500.0 500.0 500.0 15.0 15.0 15.0 130 215 215 215 215		
aim-sportline.com ECU_13 ABILITATO BOSCH_ARR_CHARGE 10 Hz Sensore percentuale % 0 190 0 2007 MILITATO BOSCH_ARR_CTIME1 10 Hz Orologia di sistema ms.01 0.00 210.00 U 2007 MILITATO BOSCH_ARR_CTIME1 10 Hz Orologia di sistema ms.01 0.00 210.00 ECU_15 ABILITATO BOSCH_ARRECTIME2 10 Hz Orologia di sistema ms.01 0.00 16.000 ECU_16 ABILITATO BOSCH_LAMEDA1 10 Hz Sonda Lambda # .001 0.000 16.000 ECU_17 ABILITATO BOSCH_LAMEDA1 10 Hz Sonda Lambda # .001 0.000 16.000	Gestione sensori personalizzati	CH_1 CH_2 CH_3 CH_6 CH_6 CH_7 CH_6 CH_7 ACC_1 ACC_2 LOG_TMP BATT ECU_2 ECU_3 ECU_4 ECU_5 ECU_6 ECU_7 ECU_8 ECU_9 ECU_9 ECU_9 ECU_10	ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO BISABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO ABILITATO	Channel_1 Channel_2 Channel_2 Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Datalogoer_temp Battery BoSCH_RPM BOSCH_SPED1 BOSCH_SPED2 BOSCH_FRM POSCH_PRES BOSCH_FRM_PRESS BOSCH_FRE_TEMP BOSCH_FRETEMP	10 Hz 10 Hz 5 Hz 5 Hz 5 Hz	Temperatura VDO 50-150 °C Potenciometro distanza Generico lineare 0-5 V Termicoppia Marce calcolate Accelerometro trasversale Accelerometro longitudinale Giunto freddo Batteria Sensore gri imotore Velocità Sensore pressione Sensore pressione Sensore temperatura Sensore temperatura Sensore temperatura Sensore temperatura	km/h .1	0.0 0 0.0 0.0 0 0 0 -3.00 0 0 5.0 0 0 5.0 0 0 0.0 0 0.0 0.0 0 0.0 0 0.0 0 0.0 0 0 5.0 0 0 5.0 0 0 0	5 5.0 5.0 5.0 5 5 6 3.00 3.00 50 15.0 15.0 15.0 15.0 15.0 15.0 15.		
aim-sportline.com ECU_14 ABILITATO BOSCH_INJEC_TIME1 10 Hz Orologio di sistema ms. 01 0.00 210.00 W 2007 AIM SAL ALL NORTS RESERVED CU_15 ABILITATO BOSCH_INJEC_TIME2 10 Hz Orologio di sistema ms. 01 0.00 210.00 W 2007 AIM SAL ECU_16 ABILITATO BOSCH_IAMEDA1 10 Hz Sonda Lambda #.001 0.000 16.000 ECU_16 ABILITATO BOSCH_IAMEDA2 10 Hz Sonda Lambda #.001 0.000 16.000	Gestione sensori personalizzati	CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_1 ACC_1 ACC_1 ACC_2 LOG_TMP BATT ECU_2 ECU_3 ECU_4 ECU_5 ECU_6 ECU_7 ECU_6 ECU_9 ECU_9 ECU_9 ECU_10	ABILITATO ABILITATO	Channel_1 Channel_2 Channel_2 Channel_3 Channel_5 Channel_5 Channel_6 Acc_1 Acc_1 Acc_2 Detalogger_Temp Battery BoScH_RPM BoScH_SPEE01 BoScH_SPEE01 BoScH_OL_PRESS BoScH_UEL_PRESS BoScH_UEL_PRESS BoScH_UEL_PRESS BoScH_UEL_PRESS BoScH_UEL_PRESS BoScH_UEL_PRESS BoScH_UEL_PRESS	10 Hz 10 Hz 5 Hz 5 Hz 5 Hz 5 Hz 5 Hz 5 Hz	Temperatura VDO 50-150 °C Potenziometro distanza Generico Ineare 0-5 V Generico Ineare 0-5 V Termocoppia Marce calcolate Accelerometro trasversale Accelerometro longitudinale Giunto freddo Batteria Sensore gri motore Velocità Sensore pressione Sensore pressione Sensore pressione Sensore pressione Sensore pressione Sensore temperatura Sensore temperatura Sensore temperatura	km/h .1 ~C mm .1 V .1 V .1 g .01 ~C # g .01 ~C W .1 pn/h .1 bar .1 bar .1 bar .2 ~C ~C <tr tr=""> <</tr>	0.0 0.0 0.0 0.0 0.0 0 0 0 0 5.0 0 0 0.0 0.	5 5.0 5.0 5 5 6 3.00 5 5 6 3.00 5 5 0 15.0 15.0 15.0 15.0 15.0 15.0		
aimsportune.com ECU_15 ABLITATO BOSCH_JNUEC_TIME2 10 Hz Orologio di sistema ms 0.1 0.00 210.00 0.000 ALL radits' antestavico ECU_16 ABLITATO BOSCH_JNUEC_TIME2 10 Hz Sonda Lambda # .001 0.000 16.000 0.00 ECU_17 ABLITATO BOSCH_JAMEDA1 10 Hz Sonda Lambda # .001 0.000 16.000	Gestione sensori personalizzati	CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_1 ACC_1 BATT ECU_2 ECU_3 ECU_4 ECU_5 ECU_6 ECU_7 ECU_9 ECU_9 ECU_9 ECU_10 ECU_11 ECU_122	ABILITATO ABILITATO ABILITATO DISABILITATO DISABILITATO ABILITATO	Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Dataloger_Temp Battery BOSCH_SPED1 BOSCH_SPED1 BOSCH_SPED1 BOSCH_SPED1 BOSCH_SPED1 BOSCH_SPED1 BOSCH_CHAIN_PRESS BOSCH_FUEL_PRESS BOSCH_FUEL_PRESS BOSCH_CHAIN_PRESS BOSCH_CHAIN_FRESS BOSCH_CHA	10 Hz 10 Hz 5 Hz 5 Hz 5 Hz 5 Hz 5 Hz 5 Hz	Temperatura VDO 50-150 °C Potenziometro distanza Generico Ineare 0-5 V Termocoppia Marce calcolate Accelerometro longitudinale Giunto freddo Batteria Sensore giri motore Velocità Bosch Velocità Sensore pressione Sensore pressione Sensore pressione Sensore pressione Sensore temperatura Sensore temperatura Sensore temperatura Sensore temperatura	km/h .1	0.0 0.0 0.0 0.0 0.0 0 0 0 3.00 0 0 5.0 0 0 0.0 0.0 0.0 0.0 0.0 0.0	5 5.0 5.0 5.0 5.0 3.00 3.00 50 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 15.0 15		
W 2007 AIM SRL RLL ROOTS AM SRL ROOTS	Gestione sensori personalizzati	CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_1 ACC_1 ACC_1 ACC_2 LOG_TWP BATT ECU_1 ECU_2 ECU_3 ECU_4 ECU_3 ECU_4 ECU_5 ECU_6 ECU_7 ECU_8 ECU_10 ECU_10 ECU_11 ECU_12 ECU_13	ABILITATO ABILITATO	Channel, 1 Channel, 2 Channel, 2 Channel, 4 Channel, 5 Channel, 5 Channel, 6 Acc, 1 Acc, 2 Detalogger, Temp Battery BoSCH, 2000, 5PEED1 BoSCH, 2000, 5PEED1 BoSCH, 2000, 5PEED2 BoSCH, 200	10 Hz 10 Hz 5 Hz 5 Hz 5 Hz 5 Hz 10 Hz 10 Hz	Temperatura VDO 50-150 °C Potenciometro distanza Generico lineare 0-5 V Generico lineare 0-5 V Termocoppia Marce calcolate Accelerometro trasversale Accelerometro longitudinale Giunto freddo Batteria Sensore gri mokore Velocità Bosch Velocità Sensore pressione Sensore pressione Sensore pressione Sensore temperatura Sensore temperatura Sensore temperatura Sensore temperatura Sensore temperatura	km/h.1 <c< td=""> mm.1 wr.1 v.1 v.1 v.1 wr.1 wr.1 wr.1 wr.1 wr.1 wr.1 wr.1 bar.1 bar.1 bar.1 wr.2 <c< td=""> <<<</c<></c<></c<></c<></c<></c<></c<></c<></c<>	0.0 0.0 0.0 0.0 0.0 0 0 -3.00 0 0 0 0 0 0 0.0 0.0 0.0 0.0 0.0 0.0	5 5.0 5.0 5 5 6 3.00 3.00 550 15.0 18000 550.0 15.0 15.0 15.0 15.0 15.0 15.0		
ALL ROATS ASSERVED ECU_17 ABILITATO BOSCH_LAMEDAL 1012 Stond Lambda \$ 001 0.000 16:000 ECU_17 ABILITATO BOSCH_LAMEDAL 1012 Stond Lambda \$ 001 0.000 16:000 ECU_17 ABILITATO BOSCH_LAMEDAL 1012 Stond Lambda \$ 001 0.000 16:000 ECU_17 ABILITATO BOSCH_LAMEDAL 1012 Stond Lambda \$ 001 0.000 16:000 ECU_17 ABILITATO BOSCH_LAMEDAL 1012 Stond Lambda \$ 001 0.000 16:000 ECU_17 ABILITATO BOSCH_LAMEDAL 1012 Stond Lambda \$ 001 0.000 16:000 ECU_17 ABILITATO BOSCH_LAMEDAL 1012 Stond Lambda \$ 001 0.000 16:000 ECU_17 ABILITATO BOSCH_LAMEDAL 1012 Stond Lambda \$ 001 0.000 16:000 ECU_17 ABILITATO BOSCH_LAMEDAL 1012 Stond Lambda \$ 001 0.000 16:000 ECU_17 ABILITATO BOSCH_LAMEDAL 1012 Stond Lambda \$ 001 0.000 16:000 ECU_17 ABILITATO BOSCH_LAMEDAL 1012 Stond Lambda \$ 001 0.000 16:000 ECU_17 ABILITATO BOSCH_LAMEDAL 1012 Stond Lambda \$ 001 0.000 16:000 ECU_17 ABILITATO BOSCH_LAMEDAL 1012 Stond Lambda \$ 001 0.000 16:000 ECU_17 ABILITATO BOSCH_LAMEDAL \$ 001 0.000 ECU_1	Gestione sensori personalizzati Scelta Lingua	CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP BATT ECU_2 ECU_4 ECU_2 ECU_4 ECU_5 ECU_6 ECU_6 ECU_7 ECU_6 ECU_9 ECU_10 ECU_11 ECU_12 ECU_14	ABILITATO ABILITATO ABILITATO DISABILITATO DISABILITATO ABILITATO	Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_5 Channel_6 Acc_1 Acc_1 Acc_2 Datalogger_Temp Battery BoScH_SPED1 BoScH_SPED1 BoSCH_SPED1 BoSCH_PRES BoSCH_FUEL_PRESS BoSCH_FUEL_PRESS BoSCH_FUEL_TEMP BOSCH_OIL_TEMP BOSCH_OIL_TEMP BOSCH_OIL_TEMP BOSCH_AIR_TEMP BOSCH_AIR_TEMP BOSCH_AIR_TEMP BOSCH_AIR_TEMP BOSCH_AIR_TEMP BOSCH_AIR_TEMP BOSCH_AIR_TEMP BOSCH_AIR_TEMP	10 Hz 10 Hz 5 Hz 5 Hz 5 Hz 5 Hz 10 Hz 10 Hz 10 Hz	Temperatura VDO 50-150 °C Potensiometro distanza Generico Ineare 0-5 V Generico Ineare 0-5 V Termocoppia Marce calcolate Accelerometro traxversale Accelerometro toraversale Giunto freddo Batteria Sensore gri motore Velocità Bosch Velocità Sensore pressione Sensore pressione Sensore pressione Sensore temperatura Sensore temperatura Sensore temperatura Sensore temperatura Sensore temperatura Sensore temperatura Sensore temperatura Sensore temperatura	km/h.1 °C mm.1 V.1 V.1 g.01 g.01 %C V.1 rpm im/h.1 bar.1 mbar.1 bar.1 deg %C %G %G	0.0 0.0 0.0 0.0 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 5.0 5.0 5 5 6 3.00 3.00 50 50 500.0 15.0 15.0 15.0 15.0 15.0		
ECU_17 ABILITATO BOSCH_LAMBDA2 10 Hz Sonda Lambda # .001 0.000 16.000	Gestione sensori personalizzati Scelta Lingua	CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_1 ACC_1 BATT ECU_1 ECU_2 ECU_3 ECU_4 ECU_6 ECU_7 ECU_6 ECU_7 ECU_9 ECU_10 ECU_11 ECU_10 ECU_11 ECU_11 ECU_12 ECU_13 ECU_14 ECU_15	ABILITATO ABILITATO	Channel, 1 Channel, 2 Channel, 4 Channel, 5 Channel, 5 Channel, 6 Acc, 1 Acc, 1 Detalogoer, Temp Battery BoSCH, 20M, PRESS BOSCH, 70M, PRE	10 Hz 10 Hz 5 Hz 5 Hz 5 Hz 5 Hz 10 H	Temperatura VDO 50-150 °C Potenciametro distanza Generico lineare 0-5 V Generico lineare 0-5 V Termocoppia Marce calcolate Accelerometro trasversale Accelerometro longitudinale Giunto freddo Batteria Sensore presione Sensore pressione Sensore pressione Sensore pressione Sensore temperatura Sensore percontuale Orologio di sistema	km/h.1 %C mm.1 V.1 V.1 %C # g.01 g.01 %C W.1 %C %S %S	0.0 0.0 0.0 0.0 0.0 0 0 -3.00 0 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	5 5.0 5.0 5 5 6 3.00 3.00 50 15.0 18000 500.0 15.0 18000 500.0 15.0 15.0 15.0 15.0 15.0 15.0		
UNA GRUNDLAINT, 8 SOS SUL RAVIGLIO, MILAN - ITALY ECU_18 ABILITATO BOSCH_LAM_CONTR1 10 Hz Valore grezzo # .001 0.000 2.000	Calibrazione sistema AIM Gestione sensori personalizzati Scelta Lingua	CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP BATT ECU_2 ECU_4 ECU_3 ECU_4 ECU_5 ECU_4 ECU_6 ECU_7 ECU_6 ECU_7 ECU_6 ECU_7 ECU_12 ECU_12 ECU_12 ECU_12 ECU_12 ECU_12 ECU_12 ECU_13 ECU_14 ECU_12 ECU_13 ECU_14 ECU_12 ECU_16 E	ABILITATO ABILITATO ABILITATO ABILITATO DISABILITATO ABILITATO	Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_5 Channel_5 Acc_1 Acc_1 Acc_2 Datalogger_Temp Bastery BoScH_SPED1 BoScH_SPED1 BoScH_SPED1 BoScH_SPED1 BoScH_SPED1 BOSCH_PUEL_PRESS BOSCH_FUEL_TEMP BOSCH_FUEL_TEMP BOSCH_FUEL_TEMP BOSCH_CAIR_TEMP BOSCH_CAIR_TEMP BOSCH_CAIR_TEMP BOSCH_CAIR_TEMP BOSCH_CAIR_TEMP BOSCH_CAIR_TEMP BOSCH_CAIR_TEMP BOSCH_CAIR_TEMP BOSCH_CAIR_TEMP BOSCH_CAIR_TEMP BOSCH_CAIR_TEMP BOSCH_CAIR_TEMP BOSCH_CAIR_TEMP	10 Hz 10 Hz 5 Hz 5 Hz 5 Hz 5 Hz 10 Hz	Temperatura VDO 50-150 °C Potensiometro distanza Generico Ineare 0-5 V Generico Ineare 0-5 V Termocoppia Marce calcolate Accelerometro trasversale Accelerometro longitudinale Giunto freddo Batteria Sensore gri motore Velocità Bosch Velocità Sensore pressione Sensore pressione Sensore pressione Sensore pressione Sensore temperatura Sensore percentuale Orologio di sistema Orologio di sistema	km/h .1 ℃ mm .1 √ w.1 √.1 √.1 √.1 ∞ g.01 g.01 % mbar v mbar v im/h .1 bar.1 bar.1 bar.1 bar.2 % ~ ~ ~ ~ ~ % mbar ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ mbar ms<01	0.0 0.0 0.0 0.0 0.0 0 0 0 0 0.0 0 0 0 0	5 5.0 5.0 5 5 6 3.00 5 5 0 5 0 15.0 15.0 15.0 15.0 15.0 1		

This layer allows to set the logger sampled channels.

On top of the window are the panels concerning RPM, speed and gear sensor. Their layout depends on the configuration set.

Enable and set the speed to be used and disable the ones not to be used.



8.3.1 – RPM panel

Select configuration	Channels Display	Sele
Rpm		Rpi
AIM sensor	ECU signal	
Multiply factor	/1 💌	Mu
MAX value	4000 💌	МА
-Reference speed -		Rel
Chan	BOSCH_SPEED1	
Channel identifie	Enabled/dicaCt	-
RPM	Enabled in	RPM
SPU_I	Disabled Sp	SPD
SPD_2	Enabled Sp	SPD
CH 1	Enabled Ch	CH

Select configuration	Channels	Display
Rpm		
AIM sensor	ECU sigr	nal
Multiply factor		-
MAX value	4900	-
	/	
Reference speed		
Chan	BOSCH_	SPEED1
Channel identifier	Enabled/dic:	Ch
RPM	Disabled	En
SPD_1	Disabled	Sp
SPD_2	Enabled	Sp
CH_1	Enabled	Ch

- Select "AIM Sensor" to sample this information from an RPM sensor installed on the vehicle; set Multiply factor and RPM Max value. RPM row in the table below enables (figure below on the left).
- Select "ECU Signal" and set RPM Max value to sample this value from the vehicle ECU. RPM row in the table below disables (figure above on the right).

Select configuration	n Channels Dis	play DaVid		
AIM sensor	ECU signal	Speed_1 Disabled		Enabled
Multiply factor	/1	Wheel arcumference (mm)	1666 Wh	eel circumference (mm) 1666
MAX value	4000	Puttes per wheel revolution	Pul	ses per wheel revolution 1
Reference speed				
Chan	BOSCH_SPE	.01		
Channel identifier	Enabled/dis	Channel name	Samplin	Sensor type
RPM	Disabled	Engine	10 Hz	Engine revolution speed
SPD_1	Disabled	Speed_1	10 Hz	Speed
SPD 2	Enabled	Speed 2	10 Hz	Speed
CH_1	Enabled	Channel_1	10 Hz	Temperature VDO 50-150 °C

8.3.2 – Speed panel

The panels and their channels are enabled/disabled through the related button, as shown here above. The button changes its color.

Once enabled the speed fill in wheel circumference and number of pulses per wheel revolution (corresponding to the number of magnets installed on the vehicle wheel).



8.3.3 – Gear sensor panel



DaVid can sample the engaged gear from a gear sensor or from the vehicle ECU. It can also calculate it with an algorithm based on RPM and speed. Available options are:

- "None": there is no gear sensor on the vehicle (or not to see the engaged gear). This option is disabled on the display and channel table shows row labelled CH_5 enabled with configurable sensor and row labelled CH_6 disabled.
- "ECU": to sample this information from the vehicle ECU (assuming it can transmit it); channel table shows row labelled CH_5 enabled with configurable sensor and row labelled CH_6 set on calculated gear.
- **"Potentiometer Channel 5**": there is a gear potentiometer installed on channel 5. Channel table shows row labelled CH_5 enabled and set on gear potentiometer and row labelled CH_6 disabled and set on calculated gear.
- "Calculated": to compute the engaged gear with an algorithm based on RPM and speed; fill in "Highest gear number". Channel table shows row labelled CH_5 disabled (but can be enabled with configurable sensor) and row labelled CH_6 enabled and set on calculated gear.

8.3.4 – Reference speed panel



It is possible to select the reference speed, that is used for gear calculation and for some Race Studio Analysis calculation.

Available options are: logger speed/speeds (depending on how many of them were enabled) and speed(s) coming from the vehicle ECU.

In the figure below the logger has one only speed enabled and is connected to an Autronic ECU that transmits two speed channels.



8.3.5 – Channel table:

z Tra	nsmit	Receive								
urrent configuration					_					
Installation name	D	ata logger type	Ecu	Vehicle name	Avai	lable time		otal frequenc	SV.	
DEFAULT		aVid Standalone	BOSCH - MS3	DEFAULT	4.1*	1.03 (h.m.s)	:	276 (Hz)		
Select configuratio	n Channels Di	splay DaVid								
Rpm		Speed_1	Spe	eed 2	Gear sensor					
AIM sensor	ECU signal	Disabled		Enabled	Nor		Calculated			
Multiply factor	P .	Wheel circumference Pulses per wheel revolution		eel circumference (mm) 1666 ses per wheel revolution 1	Potentio	ometer	Highest gear n	umber		
Reference speed Chan	BOSCH_SPE									
Channel identifier	Enabled/disa		Samplin	Sensor type	Measure		High scale			^
RPM	Disabled	Engine	10 Hz	Engine revolution speed	rpm	0	20000	1.000	0	
SPD_1	Disabled	Speed_1	10 Hz	Speed	km/h 1	0.0	250.0	1666.0	1.0	
SPD_2	Enabled	Speed_2	10 Hz	Speed	km/h .1	0.0	250.0	1666.0	1.0	
CH_1	Enabled	Channel_1	10 Hz	Temperature VDO 50-150 °C	∘⊂	-	5	100.0		
	Enabled	Channel_2	10 Hz	Distance potentiometer	mm .1	0.0	5.0	100.0		
-										
сн_з	Enabled	Channel_3	10 Hz	Generic linear 0-5 V	V .1	0.0	5.0			
 СН_3 СН_4	Enabled Enabled	Channel_4	10 Hz	Generic linear 0-5 V	V .1	0.0	5.0			
– сн_з сн_4 сн_5	Enabled Enabled Disabled	Channel_4 Channel_5	10 Hz 10 Hz	Generic linear 0-5 V Thermocouple	V .1 °⊂	0.0 0	5.0 5			
 сн_3 сн_4 сн_5 сн_6	Enabled Enabled Disabled Enabled	Channel_4 Channel_5 Channel_6	10 Hz 10 Hz 10 Hz	Generic linear 0-5 V Thermocouple Calculated Gear	∀.1 °⊂ #	0.0 0 0	5.0 5 6			
CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1	Enabled Enabled Disabled Enabled Enabled	Channel_4 Channel_5 Channel_6 Acc_1	10 Hz 10 Hz 10 Hz 10 Hz	Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer	V.1 °⊂ # g.01	0.0 0 0 -3.00	5.0 5 6 3.00			
CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2	Enabled Enabled Disabled Enabled Enabled Enabled	Channel_4 Channel_5 Channel_6 Acc_1 Acc_2	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Longitudinal accelerometer	V .1 °⊂ # g .01 g .01	0.0 0 0 -3.00 -3.00	5.0 5 6 3.00 3.00			
CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP	Enabled Enabled Disabled Enabled Enabled Enabled Enabled	Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Datalogger_Temp	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Longitudinal accelerometer Cold joint	V .1 °⊂ # g .01 g .01 °⊂	0.0 0 -3.00 -3.00 0	5.0 5 6 3.00 3.00 50			
CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP BATT	Enabled Enabled Disabled Enabled Enabled Enabled Enabled Enabled	Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Datalogger_Temp Battery	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 1 Hz	Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Longitudinal accelerometer Cold joint Battery	V .1 °⊂ # g .01 g .01 °⊂ V .1	0.0 0 -3.00 -3.00 0 5.0	5.0 5 6 3.00 3.00 50 15.0			
CH_3 CH_4 CH_5 CH_5 ACC_1 ACC_2 LOG_TMP BATT ECU_1	Enabled Enabled Disabled Enabled Enabled Enabled Enabled Enabled Enabled	Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Datalogger_Temp Battery BoSCH_RPM	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 1 Hz 10 Hz	Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Longitudinal accelerometer Cold joint Battery Engine speed sensor	V .1	0.0 0 -3.00 -3.00 0 5.0 0	5.0 5 6 3.00 50 15.0 18000			
CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP BATT ECU_1 ECU_2	Enabled Enabled Disabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled	Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Datalogger_Temp Battery BOSCH_RPM BOSCH_SPEED1	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 1 Hz 10 Hz 10 Hz	Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Cold joint Battery Engine speed sensor Bosch speed sensor	V .1 °⊂ # g .01 g .01 °⊂ V .1 rpm km/h .1	0.0 0 -3.00 -3.00 0 5.0 0 0.0	5.0 5 6 3.00 50 50 15.0 18000 500.0			
CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP BATT ECU_1 ECU_2 ECU_2 ECU_3	Enabled Enabled Disabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled	Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Datalogger_Temp Battery BoSCH_PPM BOSCH_SPEED1 BOSCH_SPEED2	10 Hz 10 Hz	Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Longitudinal accelerometer Cold joint Battery Engine speed sensor Speed sensor Speed sensor	V .1	0.0 0 -3.00 -3.00 5.0 0 0.0 0.0	5.0 5 6 3.00 50 15.0 15.0 18000 500.0 500.0			
CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP BATT ECU_1 ECU_1 ECU_1 ECU_3 ECU_3 ECU_3	Enabled Enabled Disabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled	Channel_4 Channel_5 Channel_6 Acc_1 Datalogger_Temp Battery BOSCH_SPEED1 BOSCH_SPEED1 BOSCH_01L_PRESS	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Cold joint Battery Engine speed sensor Bosch speed sensor Speed sensor Pressure sensor	V .1	0.0 0 -3.00 -3.00 5.0 0 0.0 0.0 0.0 0.0	5.0 5 6 3.00 50 15.0 18000 500.0 500.0 500.0 15.0			
CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 ACC_2 BACT ECU_1 ECU_2 ECU_3 ECU_3 ECU_3 ECU_4 ECU_5	Enabled Enabled Disabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled	Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Datalogger_Temp Battery BOSCH_RPM BOSCH_SPEED1 BOSCH_SPEED2 BOSCH_PRES5	10 Hz 10 Hz	Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Longitudinal accelerometer Cold joint Battery Engine speed sensor Bosch speed sensor Speed sensor Pressure sensor Pressure sensor	V .1	0.0 0 -3.00 -3.00 0 5.0 0 0.0 0.0 0.0 0.0 0.0	5.0 5 6.0 3.00 50 15.0 18000 500.0 500.0 500.0 15.0 15.0			
CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_1 ACC_1 BATT ECU_1 ECU_2 ECU_2 ECU_2 ECU_3 ECU_4 ECU_5 ECU_6	Enabled Enabled Disabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled	Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Datalogger_Temp Battery BoSCH_PPM BOSCH_SPEED1 BOSCH_SPEED1 BOSCH_SPEED2 BOSCH_OIL_PRES5 BOSCH_OIL_PRES5 BOSCH_AIM_PRES5	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 1 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Cold joint Battery Engine speed sensor Bosch speed sensor Speed sensor Pressure sensor	V .1	0.0 0 -3.00 -3.00 5.0 0 0.0 0.0 0.0 0.0	5.0 5 6 3.00 50 15.0 18000 500.0 500.0 500.0 15.0			
CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP BATT ECU_1 ECU_1 ECU_2 ECU_3 ECU_4 ECU_5 ECU_6 ECU_7	Enabled Enabled Disabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled	Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Datalogger_Temp Battery BOSCH_RPM BOSCH_SPEED1 BOSCH_SPEED2 BOSCH_PRES5	10 Hz 10 Hz	Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Cold joint Battery Engine speed sensor Bosch speed sensor Speed sensor Pressure sensor Pressure sensor Pressure sensor	V .1 °⊂ # g .01 g .01 °⊂ V .1 rpm km/h .1 km/h .1 bar .1 mbar	0.0 0 -3.00 5.0 0 5.0 0 0.0 0.0 0.0 0.0 0.0 0.0	5.0 5 6 3.00 50 15.0 18000 500.0 500.0 15.0 15.0 15.0 13.0			
CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP BANT ECU_1 ECU_2 ECU_4 ECU_3 ECU_4 ECU_5 ECU_6 ECU_6 ECU_6 ECU_6	Enabled Enabled Disabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled	Channel_4 Channel_5 Acc_1 Acc_2 Datalogger_Temp Battery BOSCH_SPEED1 BOSCH_SPEED1 BOSCH_SPEED2 BOSCH_FUEL_PRESS BOSCH_FUEL_TEMP	10 Hz 10 Hz 5 Hz	Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Cold joint Battery Engine speed sensor Bosch speed sensor Speed sensor Pressure sensor Pressure sensor Temperature sensor	V .1	0.0 0 -3.00 5.0 0 0.0 0.0 0.0 0.0 0.0 0.	5.0 5 6 3.00 50 15.0 1500 500.0 500.0 500.0 15.0 15			the second se
CH_3 CH_4 CH_5 CCL_5 ACC_1 ACC_2 BATT ECU_1 ECU_2 ECU_2 ECU_3 ECU_4 ECU_4 ECU_5 ECU_6 ECU_7 ECU_6 ECU_7 ECU_8 ECU_9	Enabled Enabled Disabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled	Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Datalogger_Temp Battery BOSCH_PRE BOSCH_PRE BOSCH_PRESS BOSCH_OIL_PRESS BOSCH_AIM_PRESS BOSCH_OIL_TEMP BOSCH_OIL_TEMP	10 Hz 10 Hz 5 Hz 5 Hz	Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Longitudinal accelerometer Cold joint Battery Engine speed sensor Bosch speed sensor Speed sensor Pressure sensor Pressure sensor Pressure sensor Temperature sensor Temperature sensor	V .1 °C g .01 g .01 °C V .1 rpm km/h .1 km/h .1 bar .1 bar .1 bar .1 mbar °C °C	0.0 0 -3.00 -3.00 0 5.0 0 0.0 0.0 0.0 0.0 0.0	5.0 5 6 3.00 50 15.0 15.0 500.0 500.0 500.0 500.0 15.0 15			
CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 BATT ECU_1 ECU_1 ECU_2 ECU_4 ECU_4 ECU_5 ECU_6 ECU_7 ECU_8 ECU_9 ECU_9 ECU_9 ECU_9 ECU_9	Enabled Enabled Disabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled	Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Datalogger_Temp Battery BOSCH_SPEED1 BOSCH_SPEED2 BOSCH_SPEED2 BOSCH_OIL_PRESS BOSCH_FUE_PRESS BOSCH_FUE_TEMP BOSCH_FUE_TEMP BOSCH_ENGINE_TEMP	10 Hz 10 Hz 5 Hz 5 Hz	Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Cold joint Battery Engine speed sensor Bosch speed sensor Speed sensor Pressure sensor Pressure sensor Pressure sensor Temperature sensor Temperature sensor	V .1 °C # g .01 g .01 °C V .1 rpm km/h .1 bar .1 bar .1 bar .1 mbar °C °C	0.0 0 -3.00 -3.00 0 5.0 0 0.0 0.0 0.0 0.0 0.0	5.0 5 6 3.00 50 15.0 15.0 15.0 500.0 500.0 15.0 1			
CH_3 CH_4 CH_5 CH_5 ACC_1 ACC_2 LOG_TMP BART ECU_1 ECU_2 ECU_3 ECU_4 ECU_5 ECU_6 ECU_7 ECU_8 ECU_9 ECU_10 ECU_10 ECU_10 ECU_10 ECU_10 ECU_11 ECU_11	Enabled Enabled Disabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled	Channel_4 Channel_5 Acc_1 Acc_2 Datalogger_Temp Battery BOSCH_SPEED1 BOSCH_SPEED1 BOSCH_OIL_PRESS BOSCH_FUEL_PRESS BOSCH_FUEL_TEMP BOSCH_OIL_TEMP BOSCH_OIL_TEMP BOSCH_AIR_TEMP	10 Hz 10 Hz 5 Hz 5 Hz 5 Hz 5 Hz	Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Cold joint Battery Engine speed sensor Bosch speed sensor Speed sensor Pressure sensor Pressure sensor Tengerature sensor Temperature sensor Temperature sensor Temperature sensor	V .1 °C # g .01 g .01 °C V .1 rpm km/h .1 bar .1 bar .1 bar .1 mbar .1 mbar .2 °C °C °C °C	0.0 0 -3.00 0 5.0 0 0.0 0.0 0.0 0.0 0.0	5.0 5 6 3.00 50 15.0 18000 500.0 500.0 15.0			
CH_3 CH_4 CH_5 CH_5 ACC_1 ACC_2 ACC_2 BATT ECU_1 ECU_1 ECU_4 ECU_4 ECU_5 ECU_4 ECU_6 ECU_7 ECU_8 ECU_7 ECU_8 ECU_1 ECU_10 ECU_11 ECU_12 ECU_13 ECU_14 ECU_15 ECU_15 ECU_15 ECU_16 ECU_16 ECU_16 ECU_17 ECU_16 ECU_17 ECU_16 ECU_17 ECU_17 ECU_17 ECU_18 ECU_17 ECU_18	Enabled Enabled Disabled Enabled	Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Datalogger_Temp Battery BOSCH_SPEED1 BOSCH_SPEED2 BOSCH_OIL_PRESS BOSCH_ATM_PRESS BOSCH_OIL_TEMP BOSCH_OIL_TEMP BOSCH_ENDINE_TEMP BOSCH_HOLT_TEMP BOSCH_HAIN_TEMP	10 Hz 10 Hz 5 Hz 5 Hz 5 Hz 5 Hz 10 Hz	Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Cold joint Battery Engine speed sensor Bosch speed sensor Speed sensor Pressure sensor Pressure sensor Pressure sensor Temperature sensor Temperature sensor Temperature sensor Temperature sensor Throttle position sensor	V .1 °C # g .01 g .01 vC V .1 rpm km/h .1 bar .1 bar .1 bar .1 bar .1 mbar .2 °C °C °C °C °C °C °C °C °C °C	0.0 0 -3.00 -3.00 0 5.0 0 0 0 0 0 0 0 0 0 0 -50 -5	5.0 5 6 3.00 50 15.0 15.0 500.0 500.0 500.0 15.0			
CH_3 CH_4 CH_5 CH_5 ACC_1 ACC_2 LOG_TMP BANT ECU_1 ECU_2 ECU_4 ECU_4 ECU_5 ECU_6 ECU_7 ECU_8 ECU_7 ECU_8 ECU_10 ECU_10 ECU_11 ECU_12 ECU_12 ECU_13 ECU_14 ECU_14	Enabled Enabled Disabled Enabled	Channel_4 Channel_5 Acc_1 Acc_2 Datalogger_Temp Battery BOSCH_SPEED1 BOSCH_SPEED2 BOSCH_FUEL_PRESS BOSCH_OIL_PRESS BOSCH_OIL_TEMP BOSCH_OIL_TEMP BOSCH_OIL_TEMP BOSCH_ENGINE_TEMP BOSCH_ENGINE_TEMP BOSCH_INGINE_TEMP BOSCH_INGINE_TEMP	10 Hz 10 Hz 5 Hz 5 Hz 5 Hz 10 Hz	Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Longitudinal accelerometer Cold joint Battery Engine speed sensor Bosch speed sensor Speed sensor Pressure sensor Pressure sensor Pressure sensor Temperature sensor Temperature sensor Throttle position sensor Angle sensor System Cock	V .1 °C g .01 g .01 v .1 rpm km/h .1 km/h .1 bar .1 bar .1 bar .1 bar .1 c °C °C °C °C °C °C °C °C °C °C	0.0 0 -3.00 -3.00 0 5.0 0 0.0 0.0 0.0 0.0 0.0	5.0 5 6 3.00 50 15.			
CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 ACC_1 ACC_2 BATT ECU_1 ECU_3 ECU_4 ECU_4 ECU_5 ECU_6 ECU_7 ECU_6 ECU_7 ECU_1 ECU_10 ECU_11 ECU_11 ECU_11 ECU_11 ECU_11 ECU_15 ECU_15 ECU_15 ECU_15 ECU_15 ECU_15 ECU_15 ECU_15 ECU_15 ECU_15 ECU_15 ECU_15 ECU_15 ECU_15 ECU_15 ECU_15 ECU_15 ECU_15 ECU_16 ECU_17 ECU_11 ECU_11 ECU_11 ECU_11 ECU_11 ECU_11 ECU_11 ECU_11 ECU_11 ECU_11 ECU_11 ECU_12 ECU_25	Enabled Enabled Disabled Enabled	Channel_4 Channel_5 Channel_6 Acc_1 Acc_2 Datalogger_Temp Battery BOSCH_PREM BOSCH_PRED1 BOSCH_OIL_PRESS BOSCH_OIL_PRESS BOSCH_OIL_PRESS BOSCH_FUEL_PRESS BOSCH_FUEL_TEMP BOSCH_FUEL_TEMP BOSCH_ENSINE_TEMP BOSCH_GNIT_ANG BOSCH_AIR_TEMP BOSCH_AIR_CHARGE BOSCH_AIR_CTIME1 BOSCH_AIR_CTIME1	10 Hz 10 Hz 5 Hz 5 Hz 5 Hz 5 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Longtudinal accelerometer Cold joint Battery Engine speed sensor Bosch speed sensor Speed sensor Pressure sensor Pressure sensor Pressure sensor Temperature sensor Temperature sensor Temperature sensor Temperature sensor Throttle position sensor Throttle position sensor Angle sensor Percentage sensor System clock	V .1 °C # g .01 °C V .1 rpm km/h .1 km/h .1 bar .1 bar .1 bar .1 bar .1 c °C °C °C °C °C °C °C °C °C °C	0.0 0 -3.00 -3.00 0 5.0 0 0.0 0.0 0.0 0.0 -50 -50 -50 -50 -50 -50 -50 -5	5.0 5 6 3.00 3.00 50 15.0 18000 500.0 500.0 15.0 19.0 21.0 19.0 21.0 00 00 00 00 00 00 00 00 00			
CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP BATT	Enabled Enabled Disabled Enabled	Channel_4 Channel_5 Acc_1 Acc_2 Datalogger_Temp Battery BOSCH_SPEED1 BOSCH_SPEED2 BOSCH_FUEL_PRESS BOSCH_OIL_PRESS BOSCH_OIL_TEMP BOSCH_OIL_TEMP BOSCH_OIL_TEMP BOSCH_ENGINE_TEMP BOSCH_ENGINE_TEMP BOSCH_INGINE_TEMP BOSCH_INGINE_TEMP	10 Hz 10 Hz 5 Hz 5 Hz 5 Hz 10 Hz	Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Longitudinal accelerometer Cold joint Battery Engine speed sensor Bosch speed sensor Speed sensor Pressure sensor Pressure sensor Pressure sensor Temperature sensor Temperature sensor Throttle position sensor Angle sensor System Cock	V .1 °C g .01 g .01 v .1 rpm km/h .1 km/h .1 bar .1 bar .1 bar .1 bar .1 c °C °C °C °C °C °C °C °C °C °C	0.0 0 -3.00 -3.00 0 5.0 0 0 0 0 0 0 0 0 0 0 0 0 0	5.0 5 6 3.00 50 15.			

This table shows all loggers channels with the related characteristics:

- **Channel identifier**: shows the channel label. "ECU_X" channels are the ones coming form the ECU.
- Enabled/disabled: shows the channel status (enabled or disabled). It can be modified double clicking on the cell except for RPM, Speed and CH_6 that need to be modified through the above described panels.
- **Channel name**: it allows to give a name to the channel.
- **Sampling frequency**: allows to set each channel sampling frequency. This last one influences the total available time highlighted by a blue box in the figure above, that diminishes increasing sampling frequency because the memory fills up faster.



• **Sensor type**: allows to select the sensor installed on that channel from the drop down menu that appears clicking on the cell. Channel labelled CH_5 is always configurable except when "Gear Sensor" panel is set on calculated gear.

Note: setting some sensors on some channels that support them, a configuration panel appears on bottom of the layer. The figure below shows the distance potentiometer configuration panel.



- **Measure unit**: shows the selected unit of measure for each channel; it is possible to change it with a double click on the cell.
- **High/low scale**: shows high/low scale values of the sensor and allows to change them double clicking on the cell.



8.4 – Creating a custom sensor

This function allows to configure a "custom" sensor setting the proper calibration curve and it is very useful when the sensor (pressure, temperature or other) is not included in the available sensors list.

Please note: "Custom sensors" option is intended for expert users only.

Press "Custom sensors manager" button in the menu bar or in the left vertical keyboard.

	📓 System mana	ger								
Racing Data Power	Tra	nsmit	Receive							
AIM Sportline										
World Leader in Data Acquisition	Current configuration		Data la una dura	Ecu	Vehicle name	01	lable time	Te	tal frequency	
	DEFAULT		22 M	BOSCH - MS3	DEFAULT		1.03 (h.m.s)		6 (Hz)	Y
Go to Analysis	Select configuratio	n Channels D	isplay DaVid							
	Rpm		Speed_1	S	peed_2	Gear sensor				
Download data	AIM sensor	AIM sensor ECU signal Disabled		Enabled		None Calculated				
	Multiply factor	/1	Wheel circumference (m	m) 1666	/heel circumference (mm) 1666	ECI	U	Highest gear num	ober	
AIM system manager	MAX value	4000	Pulses per wheel revolutio		ulses per wheel revolution 1	Potentic	ometer	6		
AIM system identification	Chan Channel identifier	BOSCH_SP	-	Samplin	. Sensor type	Measure	Low scale	High scale	Daram 1	Param. 2 🔥
	RPM	Enabled	Engine	10 Hz	Engine revolution speed	rom	0	20000	1.000	0
	SPD 1	Disabled								
Online			Speed_1	10 Hz	Speed	km/h .1	0.0	250.0	1666.0	1.0
9 Online	SPD 2	Enabled	Speed_1 Speed_2	10 Hz	Speed Speed	km/h .1 km/h .1	0.0	250.0 250.0	1666.0	1.0
u Online										
g Online	SPD_2	Enabled	Speed_2	10 Hz	Speed	km/h .1	0.0	250.0		
	SPD_2 CH_1	Enabled Enabled	Speed_2 Channel_1	10 Hz 10 Hz	Speed Temperature VDO 50-150 °C	km/h .1 °⊂	0.0	250.0 5	1666.0	
	SPD_2 CH_1 CH_2	Enabled Enabled Enabled	Speed_2 Channel_1 Channel_2	10 Hz 10 Hz 10 Hz	Speed Temperature VDO 50-150 °C Distance potentiometer	km/h .1 °⊂ mm .1	0.0 0 0.0	250.0 5 5.0	1666.0	
	SPD_2 CH_1 CH_2 CH_3	Enabled Enabled Enabled Enabled	Speed_2 Channel_1 Channel_2 Channel_3	10 Hz 10 Hz 10 Hz 10 Hz	Speed Temperature VDO 50-150 °C Distance potentiometer Generic linear 0-5 V	km/h .1 °⊂ mm .1 V .1	0.0 0 0.0 0.0	250.0 5 5.0 5.0	1666.0	
	SPD_2 CH_1 CH_2 CH_3 CH_4	Enabled Enabled Enabled Enabled Enabled	Speed_2 Channel_1 Channel_2 Channel_3 Channel_4	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Speed Temperature VDO 50-150 °C Distance potentiometer Generic linear 0-5 V Generic linear 0-5 V	km/h .1 °⊂ mm .1 V .1 V .1	0.0 0 0.0 0.0 0.0 0.0	250.0 5 5.0 5.0 5.0 5.0	1666.0	
	SPD_2 CH_1 CH_2 CH_3 CH_4 CH_5	Enabled Enabled Enabled Enabled Enabled Disabled	Speed_2 Channel_1 Channel_2 Channel_3 Channel_4 Channel_5	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Speed Temperature VDO 50-150 °C Distance potentiometer Generic linear 0-5 V Generic linear 0-5 V Thermocouple	km/h .1 °C mm .1 V .1 V .1 °C	0.0 0 0.0 0.0 0.0 0.0 0	250.0 5 5.0 5.0 5.0 5.0 5.0 5.0	1666.0	
], AIM system calibration	SPD_2 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6	Enabled Enabled Enabled Enabled Enabled Disabled Enabled	Speed_2 Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Speed Temperature VDO 50-150 °C Distance potentiometer Generic linear 0-5 V Generic linear 0-5 V Thermocouple Calculated Gear	km/h .1 °⊂ mm .1 V .1 °C #	0.0 0 0.0 0.0 0.0 0 0	250.0 5 5.0 5.0 5.0 5.0 5.0 5 6	1666.0	
] AIM system calibration	SPD_2 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1	Enabled Enabled Enabled Enabled Disabled Enabled Enabled	Speed_2 Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Acc_1	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Speed Temperature VDO 50-150 °C Distance potentiometer Generic Inear 0-5 V Generic Inear 0-5 V Thermocouple Calculated Gear Lateral accelerometer	km/h .1 °⊂ mm .1 V .1 V .1 °⊂ # g .01	0.0 0 0.0 0.0 0.0 0 0 -3.00	250.0 5 5.0 5.0 5.0 5.0 5 6 3.00	1666.0	
] AIM system calibration	SPD_2 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2	Enabled Enabled Enabled Enabled Disabled Enabled Enabled Enabled	Speed_2 Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Acc_1 Acc_2	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Speed Temperature VDO 50-150 °C Distance potentiometer Generic Inear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Longitudinal accelerometer	km/h .1 °⊂ mm .1 V .1 V .1 °⊂ # g .01 g .01	0.0 0 0.0 0.0 0.0 0 0 -3.00 -3.00	250.0 5 5.0 5.0 5.0 5 6 3.00 3.00	1666.0	
] AIM system calibration	SPD_2 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_1 ACC_2 LOG_TMP	Enabled Enabled Enabled Enabled Disabled Enabled Enabled Enabled Enabled Enabled	Speed_2 Charnel_1 Charnel_2 Charnel_3 Charnel_5 Charnel_6 Acc_1 Acc_2 Datalogger_Temp	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Speed Temperature VDO 50-150 %C Distance potentiometer Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Longitudinal accelerometer Cold yint	km/h .1	0.0 0.0 0.0 0.0 0 0 -3.00 0 0	250.0 5 5.0 5.0 5.0 5 6 3.00 3.00 50	1666.0	
] AIM system calibration	SPD_2 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP BATT	Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled	Speed_2 Charnel_1 Charnel_2 Charnel_3 Charnel_4 Charnel_5 Charnel_5 Acc_1 Acc_2 Datalogger_Temp Battery	10 Hz 10 Hz	Speed Temperature VDO 50-150 °C Distance potentiometer Generic Imear 0-5 V Generic Imear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Longtudnal accelerometer Cold joint Battery	km/h .1 °C mm .1 V .1 V .1 °C # g .01 g .01 °C V .1 V .1	0.0 0.0 0.0 0.0 0 0 -3.00 -3.00 0 5.0	250.0 5 5.0 5.0 5.0 5 6 3.00 3.00 3.00 50 15.0	1666.0	
], AIM system calibration]] Custom sensors manager	SPD_2 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_TMP BATT ECU_1	Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Disabled	Speed_2 Charnel_1 Charnel_2 Charnel_3 Charnel_6 Charnel_6 Acc_1 Acc_2 Datalogger_Temp Battery BOSCH_RPM	10 Hz 10 Hz	Speed Speed Temperature VDO 50-150 °C Distance potentiometer Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Longitudinal accelerometer Cold joint Battery Engine speed sensor	km/h .1 °C mm MI V V .1 °C # g .01 °C V # Y 9 .01 °C V Y .1	0.0 0 0.0 0.0 0.0 0 0 -3.00 0 5.0 0	250.0 5 5.0 5.0 5.0 5 6 3.00 3.00 3.00 50 15.0 18000	1666.0	
], AIM system calibration]] Custom sensors manager	SPD_2 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_1 ACC_2 LOG_ITMP BATT ECU_1 ECU_2 ECU_4	Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled	Speed_2 Charnel_1 Charnel_2 Charnel_3 Charnel_4 Charnel_5 Acc_1 Acc_2 Dataloger_Temp Battery BOSCH_REED1	10 Hz 10 Hz	Speed Temperature VDO 50-150 °C Distance potentiometer Generic Inear 0-5 V Generic Inear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Longtudinal accelerometer Cold joint Battery Engine speed sensor Bosch speed sensor	km/h .1 °C mm .1 V .1 °C # g .01 g .01 °C V .1 rpm km/h .1	0.0 0 0.0 0.0 0 0 -3.00 -3.00 0 5.0 0 0 0.0 0.0 0.0	250.0 5 5.0 5.0 5.0 5.0 5.0 5.0 3.00 3.00 50 15.0 18000 500.0 500.0 15.0	1666.0	
], AIM system calibration]] Custom sensors manager	SP0_2 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 CH_6 CH_6 CH_6 CH_6 CH_6 CH_6 CH_6	Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled	Speed_2 Charnel_1 Charnel_2 Charnel_3 Charnel_6 Charnel_6 Acc_1 Acc_2 Datalogger_Temp Battery BOSCH_SPEED2	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 11 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Speed Speed Temperature VDO 50-150 °C Distance potentiometer Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Cold joint Battery Engine speed sensor Boych speed sensor Boych speed sensor Boych speed sensor	km/h .1 °C mm .1 V .1 V .1 g .01 °C # g .01 °C V .1 rpm km/h .1 km/h .1 bar .1	0.0 0.0 0.0 0.0 0 0 -3.00 -3.00 0 5.0 0 0 0.0 0.0 0.0 0.0 0.0 0.0 0.	250.0 5 5.0 5.0 5 6 3.00 3.00 50 15.0 18000 500.0 500.0 15.0 15.0	1666.0	
], AIM system calibration]] Custom sensors manager	90.2 GH_1 GH_2 GH_3 GH_4 GH_5 GH_6 ACC_1 ACC_1 ACC_2 LOS_TMP BATT ECU_2 ECU_3 ECU_3 ECU_5 ECU_6	Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled	Speed_2 Channel_1 Channel_2 Channel_3 Channel_4 Channel_6 Acc_1 Acc_2 Dataloger_Temp Battery BOSCH_RPM BOSCH_SPEED1 BOSCH_SPEED2 BOSCH_SPEED2 BOSCH_SPEES3	10 Hz 10 Hz	Speed Temperature VDO 50-150 °C Distance potentiometer Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Longitudinal accelerometer Codi gint Battery Engine speed sensor Bosch speed sensor Speed sensor Pressure sensor	km/h .1 °C mm .1 V .1 °C # g .01 °C # g .01 °C V .1 bar .1 bar .1	0.0 0.0 0.0 0.0 0 -3.00 -3.00 0 5.0 0 0.0 0.0 0.0 0.0 0.0	250.0 5 5.0 5.0 5 6 3.00 5 6 3.00 50 15.0 18000 500.0 500.0 15.0 15.0 13.0	1666.0	
], AIM system calibration]] Custom sensors manager	SP0_2 CH_1 CH_2 CH_3 CH_4 CH_6 ACC_2 LOG_IMP BATT ECU_1 ECU_2 ECU_3 ECU_4 ECU_5 ECU_6 ECU_7	Enabled Enabled Enabled Enabled Disabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled	Speed_2 Channel_1 Channel_3 Channel_4 Channel_6 Acc_1 Acc_2 Datalogger_Temp Battery BOSCH_SPEED1 BOSCH_OPEED1 BOSCH_OPEED1 BOSCH_OPEED3 BOSCH_OPEED3 BOSCH_OPEED3 BOSCH_OPEED3 BOSCH_OPEED3 BOSCH_OPEED3 BOSCH_OPEED3 BOSCH_OPEED3 BOSCH_OPEED3	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 11 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Speed Temperature VDO 50-150 °C Distance potentiometer Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Cold joint Battery Engine speed sensor Bosch speed sensor Bosch speed sensor Pressure sensor Pressure sensor	km/h .1 °C mm .1 V .1 °C g.01 g.01 °C W .1 v.1 v.1 v.1 bar.1 bar.1 mar.1	0.0 0.0 0.0 0.0 0 0 -3.00 0 5.0 0 0 5.0 0 0 0.0 0.0 0.0 0.0 0.	250.0 5 5.0 5.0 5 6 3.00 50 15.0 18000 500.0 500.0 15.0 15.0 15.0 15.0 15.0 13.0 215	1666.0	
], AIM system calibration]] Custom sensors manager	90.2 04.1 04.2 04.3 04.4 04.5 04.6 ACC 1 ACC 2 LOS_TMP BATT ECU_2 ECU_3 ECU_4 ECU_3 ECU_6 ECU_6 ECU_6 ECU_7 ECU_6 ECU_6 ECU_7 ECU_6 ECU_6 ECU_7 ECU_6 ECU_7 ECU_6 ECU_7 ECU_6 ECU_7 ECU_6 ECU_7 ECU_6 ECU_7 ECU_6 ECU_7 ECU_6 ECU_7 ECU_6 ECU_7 ECU_6 ECU_7 ECU ECU ECU ECU ECU ECU ECU ECU	Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled	Speed_2 Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Acc_1 Datalogger_Temp Battery BOSCH_RPM BOSCH_SPEED1 BOSCH_SPEED2 BOSCH_OLL_PRESS BOSCH_FUES BOSCH_FUES	10 Hz 10 Hz 5 Hz	Speed Temperature VDO 50-150 *C Distance potentiometer Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Longtudinal accelerometer Longtudinal accelerometer Cold joint Battery Engine speed sensor Bosch speed sensor Speed sensor Pressure sensor Pressure sensor Pressure sensor	km/h .1	0.0 0.0 0.0 0.0 0 0 0 -3.00 -3.00 0 5.0 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	250.0 5 5.0 5.0 5.0 5 6 3.00 3.00 3.00 50 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 215 215	1666.0	
], AIM system calibration]] Custom sensors manager	SP0_2 CH_1 CH_2 CH_3 CH_4 CH_6 ACC_2 LOG_IMP BATT ECU_1 ECU_2 ECU_3 ECU_4 ECU_5 ECU_6 ECU_7	Enabled Enabled Enabled Enabled Disabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled	Speed_2 Channel_1 Channel_3 Channel_3 Channel_4 Channel_5 Acc_1 Acc_2 Datalogger_Temp Battery DOSCH_PERD BOSCH_SPEED1 BOSCH_SPEED2 BOSCH_UPL_PRESS BOSCH_ATM_PRESS BOSCH_ATM_PRESS BOSCH_ATM_PRESS	10 Hz 10 Hz 5 Hz	Speed Speed Temperature VPO 50-150°C Distance potentiometer Generic linear 0-5 V Thermocougle Generic linear 0-5 V Thermocougle Calculated Gear Lateral accelerometer Cold joint Battery Engine speed sensor Speed sensor Pressure sensor Pressure sensor Pressure sensor	km/h .1	0.0 0.0 0.0 0.0 0 0 -3.00 0 -3.00 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	250.0 5 5.0 5.0 5.0 5 6 3.00 3.00 3.00 50 15.0 18000 500.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 215 215 215	1666.0	
], AIM system calibration]] Custom sensors manager	90.2 04.1 04.2 04.3 04.4 04.5 04.6 ACC 1 ACC 2 LOS_TMP BATT ECU_2 ECU_3 ECU_4 ECU_3 ECU_6 ECU_6 ECU_6 ECU_7 ECU_6 ECU_6 ECU_7 ECU_6 ECU_6 ECU_7 ECU_6 ECU_7 ECU_6 ECU_7 ECU_6 ECU_7 ECU_6 ECU_7 ECU_6 ECU_7 ECU_6 ECU_7 ECU_6 ECU_7 ECU_6 ECU_7 ECU_6 ECU_7 ECU ECU ECU ECU ECU ECU ECU ECU	Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled	Speed_2 Charnel_1 Charnel_2 Charnel_3 Charnel_6 Charnel_6 Acc_1 Acc_2 Datalogger_Temp Battery BOSCH_SPEED1 BOSCH_SPEED1 BOSCH_UL_PRESS BOSCH_UL_PRESS BOSCH_FLEL_TEMP BOSCH_FLEL_TEMP	10 Hz 10 Hz 5 Hz	Speed Speed Temperature VDO 50-150 °C Distance potentiometer Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Cold joint Battery Engine speed sensor Bosch speed sensor Speed sensor Pressure sensor Pressure sensor Pressure sensor Pressure sensor Temperature sensor Temperature sensor	km/h .1	0.0 0.0 0.0 0.0 0 0 0 -3.00 -3.00 0 5.0 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	250.0 5 5.0 5.0 5.0 5 6 3.00 3.00 3.00 50 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 215 215	1666.0	
], AIM system calibration]] Custom sensors manager	SP0_2 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 ACC_2 L0G_TMP BATT ECU_3 ECU_4 ECU_5 ECU_6 ECU_6 ECU_7 ECU_8 ECU_9	Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled	Speed_2 Channel_1 Channel_3 Channel_4 Channel_5 Acc_1 Acc_2 Datalogogr_Temp Battery BOSCH_PRED1 BOSCH_PRED1 BOSCH_PRED1 BOSCH_PRED1 BOSCH_PRED1 BOSCH_FUEL_PRES5 BOSCH_FUEL_TEMP BOSCH_CL_TEMP BOSCH_CL_TEMP BOSCH_OL_TEMP	10 Hz 10 Hz 5 Hz 5 Hz	Speed Speed Temperature VDO 50-150 °C Distance potentiometer Generic linear 0-5 V Thermocoupie Generic linear 0-5 V Thermocoupie Calculated Gear Lateral accelerometer Longitudinal accelerometer Cold joint Battery Engine speed sensor Speed sensor Pressure sensor Pressure sensor Pressure sensor Temperature sensor Temperature sensor Temperature sensor	km/h .1 °C mm .1 V .1 V .1 g .01 °C # rpm km/h .1 bar .1 bar .1 bar .1 e °C	0.0 0.0 0.0 0.0 0 0 -3.00 0 -3.00 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	250.0 5 5.0 5.0 5.0 5 6 3.00 3.00 3.00 15.0 15.0 18000 500.0 15.0 15.0 15.0 15.0 15.0 15.0 215 215 215	1666.0	
], AIM system calibration]] Custom sensors manager	90.2 GH_1 GH_2 GH_4 GH_5 GH_6 ACC_1 ACC_2 LOG_TMP BATT ECU_2 ECU_3 ECU_4 ECU_4 ECU_5 ECU_5 ECU_6 ECU_5 ECU_6 ECU_7 ECU_9 ECU_10	Enabled Enabled Enabled Enabled Disabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled	Speed_2 Charnel_1 Charnel_3 Charnel_4 Charnel_5 Charnel_6 Acc_1 Acc_2 Datalogger_Temp Battery DOSCH_RPM BOSCH_SPEED1 BOSCH_UNPRESS BOSCH_UNPRESS BOSCH_FUE_TEMP BOSCH_END_TEMP BOSCH_END_TEMP BOSCH_END_TEMP BOSCH_END_TEMP BOSCH_END_TEMP	10 Hz 10 Hz 5 Hz 5 Hz 5 Hz 5 Hz	Speed Speed Temperature VDO SD-150 °C Distance potentiometer Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Cold joint Battery Engine speed sensor Engine speed sensor Bosch speed sensor Speed sensor Pressure sensor Pressure sensor Temperature sensor Temperature sensor Temperature sensor Temperature sensor	km/h .1 °C mm .1 V .1 V .1 Q .01 Q .01 C W .1 rpm Km/h .1 km/h .1 bar .1 mbar °C °C °C °C °C °C °C °C °C °C	0.0 0.0 0.0 0.0 0.0 0 0 -3.00 0 0 0 0 0.0 0 0 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	250.0 5 5.0 5.0 5.0 5.0 5 6 3.00 50 15.0 18000 500.0 500.0 500.0 15.0 15.0 15.0 15.	1666.0	
], AIM system calibration]] Custom sensors manager	90.2 91.2 91.2 91.3 91.4 91.5	Enabled Enabled	Speed_2 Channel_1 Channel_2 Channel_3 Channel_4 Channel_6 Acc_1 Acc_2 Datalogor_Temp Battery BOSCH_RPM BOSCH_SPEED1 BOSCH_SPEED2 BOSCH_FUEL_PRESS BOSCH_FUEL_TEMP BOSCH_FUEL_TEMP BOSCH_ANR_ETMP BOSCH_ANR_TEMP BOSCH_FUEL_TEMP BOSCH_ANR_TEMP BOSCH_ANR_TEMP BOSCH_ANR_TEMP	10 Hz 10 Hz 5 Hz 5 Hz 5 Hz 5 Hz 5 Hz	Speed Speed Temperature VDO 50-150 *C Distance potentiometer Generic linear 0-5 V Canulated Gear Lateral accelerometer Longitudinal accelerometer Cold joint Battery Engine speed sensor Speed sensor Speed sensor Pressure sensor Pressure sensor Temperature sensor	km/h.1. °C mm.1. °C g.01 °C g.01 °C v.1 °C mm.1. km/h.1. km/h.1. bar.1. bar.1. °C °C °C % .1.	0.0 0.0 0.0 0.0 0 0 0 -3.00 0 -3.00 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	250.0 5 5.0 5.0 5.0 5 5 6 6 3.00 3.00 5 50 5 50 15.0 15.0 15.0 15.0 15.0 1	1666.0	
), AIM system calibration] Custom sensors manager Select Language	90.2 91.2 91.3 91.4 91.5 91.4 91.5	Enabled Enabled	Speed_2 Charnel_1 Charnel_3 Charnel_4 Charnel_6 Acc_1 Acc_2 Datalogger_Temp Battery BOSCH_RPM BOSCH_RPM BOSCH_RPEED1 BOSCH_PEED1 BOSCH_PEED2 BOSCH_UL_PRESS BOSCH_UL_TEMP BOSCH_UT_TEMP BOSCH_UT_TEMP BOSCH_UT_TEMP BOSCH_UT_TEMP BOSCH_UT_TANG BOSCH_UT_ANG	10 Hz 10 Hz 5 Hz 5 Hz 5 Hz 5 Hz 5 Hz 10 Hz	Speed Speed Temperature VDO SD-150 *C Distance potentiometer Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Cold joint Battery Battery Battery Pressure sensor Pressure sensor Pressure sensor Temperature sen	km/h .1 °C mm .1 V .1 V .1 V .1 g .01 g .01 °C V .1 km/h .1 bar .1 bar .1 bar .1 mbar °C °C °C °C °C °C °C °C °C °C	0.0 0.0 0.0 0.0 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	250.0 5 5.0 5.0 5.0 5.0 5 6 6 3.00 5 5 0.0 15.0 15.0 15.0 15.0 15.0 15.	1666.0	
AlM system calibration Custom sensors manager Select Language	90.2 91.2 91.2 91.3 91.4 91.5 91.4 91.5 91.4 91.5 91.4 91.5 91.4 91.5 91.4 91.5 91.4 91.5 91.4 91.5 91.4 91.5 91.4 91.5 91.4 91.5	Enabled Enabled	Speed_2 Charnel_1 Charnel_2 Charnel_3 Charnel_4 Charnel_5 Charnel_6 Acc_1 Acc_2 Dataloger_Temp Battery BOSCH_RPM BOSCH_SPEED1 BOSCH_PEED2 BOSCH_PILE_TEMP BOSCH_FULE_TEMP BOSCH_FULE_TEMP BOSCH_ENGINE_TEMP BOSCH_FULE_TEMP BOSCH_FULE_CHARGE BOSCH_FULE_CHARGE BOSCH_FULE_CHARGE	10 Hz 10 Hz 5 Hz 5 Hz 5 Hz 10 Hz 10 Hz	Speed Temperature VDO 50-150 *C Distance potentiometer Generic linear 0-5 V Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Longtudinal accelerometer Cold joint Battery Engine speed sensor Speed sensor Speed sensor Pressure sensor Pressure sensor Pressure sensor Temperature sensor Temperature sensor Temperature sensor Temperature sensor Temperature sensor Temperature sensor Temperature sensor Temperature sensor Temperature sensor	km(h ⋅ 1 °C mm ⋅ 1 V ⋅ 1 V ⋅ 1 °C # g ⋅ 01 g ⋅ 01 %C W ∨ ⋅ 1 bar mbar mbar ⋅ 1 bar ⋅ 1 %C %C %C	0.0 0.0 0.0 0.0 0.0 0 0 -3.00 0 0 0 0 0 0 0 0 0 0 0 0	250.0 5 5.0 5.0 5.0 5.0 5 6 3.00 3.00 15.0 15.0 15.0 15.0 15.0 15.0 15.0 1	1666.0	
AIM system calibration Custom sensors manager Select Language	90.2 0H.1 0H.2 0H.3 0H.4 0H.5 0H.6 ACC,2 L06,TMP BATT BCU,1 ECU,2 ECU,3 ECU,4 ECU,5 ECU,6 ECU,7 ECU,9 ECU,9 ECU,9 ECU,10 ECU,11 ECU,12 ECU,13 ECU,14	Enabled Enabled	Speed_2 Channel_1 Channel_3 Channel_4 Channel_6 Acc_1 Acc_2 Datalogger_Temp Battery B0SCH_SPEED1 B0SCH_OL_PRESS B0SCH_UNPESS B0SCH_UNPESS	10 Hz 10 Hz 5 Hz 5 Hz 5 Hz 5 Hz 5 Hz 10 Hz 10 Hz 10 Hz	Speed Speed Temperature VDO SD-150 °C Distance potentiometer Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Cold joint Battery Engine speed sensor Bosch speed sensor Bosch speed sensor Pressure sensor Pressure sensor Pressure sensor Temperature sensor System clock	km/h .1 °C mm .1 V .1 V .1 g.01 g .01 g .01 v .1 V .1 V.1 wc km/h .1 km/h .1 bar .1 bar .1 war °C %	0.0 0.0 0.0 0.0 0.0 0 -3.00 -3.00 0 0 0.0 0.0 0.0 0.0 0.0 0.0	250.0 5 5.0 5.0 5.0 5.0 5 6 6 3.00 50.0 15.0 15.0 15.0 15.0 15.0 15.0 1	1666.0	
AIM system calibration Custom sensors manager Select Language	90.2 0H.1 0H.2 0H.3 0H.4 0H.5 0H.6 ACC.1 ACC.2 LOG_TMP BATT ECU.4 ECU.4 ECU.4 ECU.5 ECU.6 ECU.7 ECU.6 ECU.7 ECU.6 ECU.7 ECU.6 ECU.7 ECU.6 ECU.7 ECU.9 ECU.10 ECU.11 ECU.11 ECU.12 ECU.13 ECU.14 ECU.15	Enabled Enabled	Speed_2 Charnel_1 Charnel_2 Charnel_2 Charnel_3 Charnel_6 Charnel_6 Acc_1 Acc_1 Datalogger_Temp Battery BOSCH_SPEED1 BOSCH_SPEED1 BOSCH_SPEED1 BOSCH_SPEED2 BOSCH_CL_PRESS BOSCH_FUEL_PRESS BOSCH_FUEL_PRESS BOSCH_FUEL_TEMP BOSCH_FUEL_TEMP BOSCH_FUEL_TEMP BOSCH_TEMP BOSCH_TEMP BOSCH_TEMP BOSCH_TATM_SES BOSCH_FUEL_TEMP BOSCH_TATM_SES BOSCH_TEMP	10 Hz 10 Hz 5 Hz 5 Hz 5 Hz 5 Hz 10 Hz	Speed Speed Temperature VDO SD-150 *C Distance potentiometer Generic linear 0-5 V Thermocouple Calculated Gear Lateral accelerometer Longitudinal accelerometer Cold joint Battery Engine speed sensor Speed sensor Speed sensor Pressure sensor Pressure sensor Pressure sensor Pressure sensor Temperature sensor Temperature sensor Temperature sensor Temperature sensor Temperature sensor Temperature sensor Temperature sensor Pressure sensor Pressure sensor Pressure sensor Pressure sensor Pressure sensor Temperature sensor Temperature sensor Temperature sensor Precentage sensor Percentage sensor System dock	km/h .1 °C mm .1 V.1 V .1 V.1 V .1 °C # g.01 g .01 v.1 V .1 °C rpm km/h .1 km/h .1 bar .1 bar .1 bar .1 bar .1 c °C °C %C °C %C °C %C °C %C °C %C °C %C 1 deg % ms .01 ms .01	0.0 0.0 0.0 0.0 0.0 0 0 -3.00 0 5.0 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	250.0 5 5.0 5.0 5.0 5.0 5 6 3.00 5 50 3.00 5 50 3.00 15.0 15.0 15.0 15.0 15.0 15.0 15.0 1	1666.0	

The procedure to create a custom sensor is the same explained for MyChron3 Car/Bike Plus/Gold/Extreme (paragraph 5.3).


8.5 – How to configure DaVid displays

Video recording with data acquisition system **DaVid** can be connected with two kinds of display: **TG-Dash** and **MyChron3 Dash**. To configure them (optional to the logger) activate the related layer (circled here below):

Select configuration Channels Display DaVid		
Available display	s None	
	None	
	M3-Dash TG-dash	

The first time the layer shows up empty. Activate the drop down menu and select the proper display.

8.5.1 – How to configure MyChron3 Dash

Select M3-Dash display and its configuration window appears.

Available displays M3-Das	sh 💌			
Speed Displayed speed Speed_1	Shift Light Led 1 Led 2	Led 3 Led 4	Led 5	Display messages Language Italiano
Display Page 1 - Channels and alarms Field 1 Channel_1 LED Value HIGH None • 0 LOW None • 0 Field 2 Channel_1 • HIGH None • 0 LOW None • 0		hift light 5 5432 5 5000 5 0000 16800 39 12035	1 • 3 • 4	Display page 2 · Channels and alarms Field 1 Channel_1 LED Value HIGH None 0 LOW None 0 Filed 2 Channel_1 HIGH None 0 Filed 2 Channel_1 HIGH None 0 LOW None 0 LOW None 0

Speed Channel box:

Speed	
Displayed speed	
Speed_1	•
Speed 1 Speed 2	
BOSCH_SPEED1 BOSCH_SPEED2	

This drop down menu allows to select the speed shown by the display.

In the example above **DaVid** is connected to a Bosch ECU that transmits two speed channels which are additional to the logger ones, both enabled.



Display Pages 1 e 2 – Channels and alarms

– Display	Page 1 - Channels and alarms
Field 1	Channel_1
	LED Value
HIGH	None 💌 0
LOW	None 💌 0
Field 2	Channel_1
	LED Value
HIGH	None 💌 0
LOW	None 💌 0

These boxes allow to set the displayed channels linking them to one of the four alarm led placed sideways of the display.

- select the channel to show from the drop down menu;
- set High/Low alarm selecting the led to link them to;
- fill in the threshold value.

Shift Lights box



It manages the 10 led placed on top of the logger display.

Led colors: the first two on the left and on the right are green, the central two are orange and the last four are red. To set RPM threshold values fill in the cases. The led switch progressively on and when the engine reaches RPM value set for led 5 all led start blinking, warning the pilot to shift gear.

If a case is set on "0" the corresponding led is disabled.

Display messages box

 Display mess 	sages
	Language
Italiano	•
English	
Italiano	
Deutsch	
Francais	
Slovensko	
Español	

This drop down menu allows the user to select the display language. Available options are: English, Italian, Deutsch, French, Spanish and Slovene.



8.5.2 – How to configure TG Dash

Select TG-Dash display and this window appears.

Select configuration Channels Display DaVid	
Available displays TG-dash	_
Speed channel Displayed speed	(IIII)
BOSCH_SPEED1	LAGUNA SECA

The only settable channel is the speed.

Speed channel
Displayed speed
Speed_1
Speed_1 Speed_2 BOSCH_SPEED1 BOSCH_SPEED2

In the example below **DaVid** is connected to a Bosch ECU, that transmits two speed channels; it is thereby possible to show one of **David** speeds or one of the ECU ones.

Note: TG-Dash is mainly configurable via keyboard; refer to its user manual for further information.



8.6 - How to configure DaVid

Activate "DaVid" layer.

🕌 System manager					
Transmit	Receive				<u>-</u>
Current configuration	Data logge	Ecu	Vehicle name	Available time	Total frequency
DEFAULT	DaVid Star Ione	BOSCH - MS3	DEFAULT	4.11.03 (h.m.s)	276 (Hz)
Select configuration Channels	Display DaVid				
Video Conf. Manager Logos Setup Reset Video Conf. Background Ca Number Of Video	New Object	ualization Draw Grid Video Obj 5 Video Obj Standard NTSC (USA) C PAL	ects On		
	ccelerometer Lap Time T	hrottle Brake All Sensors All Sen	sors All Sensors		
8 9 10 7 × 1000 6 5 4 3 2	Channel BOSCH_RPM	Upper Bound	Measure Unit (rpm)		
			LAP: 001	1	
7 4		90 120 60 150 30 180 0 210 km/h	LAP: 00 00:00.00		-



The figure below shows video configuration window with video objects preview circled in light blue.





8.6.1 – Video Configuration Manager box:



Press "Logos Setup" button and the window here below appears.

Logos Setup			X
		\$	Add Logo
		•	Delete Logo
		Se	t Logo Dimensions
		A state	+
	-	 Image: A set of the set of the	Close

- Using +/- buttons it is possible to resize the logos shown on the video.
- If there are logos shown on the video it is possible to remove them pressing "Delete Logo" button. If there are no logos "Delete Logo" button is disabled (like in the figure above) and pressing "Add Logo" button the window here below appears.

List of logos	X
	Import Logo Bitmap
Ain	- Delete Logo Bitmap
	- Cancel

This window allows to both import and remove bitmap logos.

- Pressing "Import Logo Bitmap" button windows explorer opens and it will be possible to upload logo bitmaps.
- Pressing "Delete Bitmap Logo" button it is possible to delete bitmap logo.

The system allows to import up to 25 bitmaps and in case there are no available logos "Delete bitmap logo" button is disabled.

The logo user is working on is highlighted in yellow in video preview window.



The system supports the following logos:

- Format: bitmap 24 bit and bitmap 32 bit
- **Dimensions**: 64x64; 64x128; 128x128;128x64

In case format or dimensions of the Logo Bitmap to import are not supported, the system shows one of the following messages.



New Object / Delete object:

Select configuration Chann	els Display DaVid	
Video Conf. Manager		Visualization
Logos Setup	New Object	🗖 Draw Grid 🔽 Video Objects On
Reset Video Conf.	Delete Object	1.5 v Enlarge
Background	Carbon	TV Standard
Number Of Video	10	NTSC(USA) C PAL
Engine Lap Time Throttle	e Brake Shift Light Speed	d Accelerometer
	Channel	Upper Bound Measure Unit
	Acc_1	▼ 100 (g)
	Channel	Upper Bound Measure Unit
	Acc_2	▼ 100 (g)

Video objects preview window can be modified adding or removing objects.

To add an object:

- press "New object";
- use the slider red circled in the figure above, to select that object layout;
- configure the parameters that appear beside the slider;
- a new video object appears in the bottom part of the window; it is possible to displace it using the mouse; pay attention not to over impose more video objects;
- each new object adds a layer to the central part of the layer. In the figure above is circled "Engine" layer.

To **delete** an object select the layer corresponding to the object to delete and press "Delete object" layer.

To **modify** an object select its layer, use the slider to select its layout and modify the related fields.



8.6.2 – Video objects limits

The number of objects that can be visualized depends on the type of objects.

For all objects whose video refreshing frequency is 50Hz (typically RPM and speed, these with the pointer) the max. allowed number of objects is two.

Some objects, like the accelerometer, Lap Time box, etc. are considered as one only objects but are made up of more active parts.

The accelerometer, for instance, is considered as one object but is made up of two active parts, that allow to see lateral and longitudinal acceleration.

Lap Time box, shown here below, is considered as one only object but is made up of six active parts.



- Lap Number (1)
- Lap Time (2)
- Split Number (3)
- Split Time (4)
- Best lap number (5)
- Best lap time (6)

The total number of objects and active parts that can be shown is 16.

This information is written in "Video Configuration Manager" box shown here below and is labelled as "Number of video obj." (red circled).



In case the maximum allowed number of objects is overcome, the related digit turns into red.



It is possible to create up to 22 video objects in the same configuration before the warning message shown here below appears.

It is anyway necessary that the number of object/active parts included in a configuration is not higher than 16. If higher, the system shows again this message and does not transmit the configuration.

🗖 RaceStudioConf 💦 🔀		
1	To many video objects	
	ОК	

8.6.3 – Visualization box:

-Visualization	
🔲 Draw Grid	🔽 Video Objects On
1.5 💌	Enlarge

This box allows to modify the window that shows video objects preview (the one circled in light blue at the end of paragraph 8.5).

- "Draw Grid": shows a grid in the preview window to help positioning the objects.
- "Video Objects On": enabled or disabled shows or hides the video objects preview.
- "**Zoom**": sets the dimensions of the video objects preview. Available options are: from 1 (real dimensions) to 4.



Warning: these functionalities only influence the layout of the configuration shown by Race Studio 2 and not that of the real Video.



8.6.4 – TV Standard box:

TV Standard		
• NTSC(USA)	PAL	

This box allows to set the video TV standard.

To know the TV standard of the camera connected to the Video system refer to that object user manual.

In general, anyway, NTSC television standard is mainly used in the USA while PAL television standard is mainly used in Europe.

8.6.5 – Possible graphical visualization problems.

The PC monitor may show the grey scale non homogeneous (exactly like in the figure below).



A possible solution to this problem is working on the video board properties, "OpenGL" settings.

- Close Race Studio 2 and follow this path: "Start / Settings/ Control Panel / Display / Settings / Advanced".
- Video board properties panel appears. Its layout depends on the type of board.
- Open GL settings can be on a dedicated layer, in 3D layer of that panel on PC that do not have a specific "OpenGL" layer or on a layer labelled with the name of the video board pressing graphic settings button.
- It is necessary to increase 3D quality in "OpenGL" settings. This operation can sometimes solve the problem.

It is also suggested to check if video board driver is the last available from the manufacturer. If not, pls. update it.



8.6.6 – Sampling frequency

With reference to system manager window – Channel layer – it is reminded that from that window it is possible to set each channel sampling frequency.

As far as RPM and shown speed channels it is suggested to set them on 50 Hz because this is the refreshing frequency of the image on the video.

8.7 – Transmitting the configuration

To transmit the configuration the logger has to be switched on and connected to the PC USB port through the proper cable. Press "Transmit" button in system manager window and the system automatically will transmit the configuration to the logger. See paragraph 4.4 for further information.

7.8 – Sensors calibration and auto-calibration

When the configuration has been transmitted it is necessary to perform calibration procedure, to say auto-calibrate the accelerometer, the gyroscope and the distance potentiometer and calibrate the gear sensor, the mid zero potentiometer and the zero based potentiometer installed on the vehicle. The procedure is the same explained for MyChron3 Car/Bike Plus/Gold/Extreme (paragraph 5.6).

Warning: if potentiometers, gyroscope and accelerometers have not been correctly calibrated it will not be possible to sample correct data nor the engaged gear or create the track map. Pls. pay particular attention to sensors calibration/auto-calibration procedures.

8.9 – Gear calculation

Gear calculation procedure is the same for all AIM loggers (paragraph 5.7). To restart this procedure, **DaVid** needs that "Restart gear calibration" checkbox left of the central keyboard of "Select Configuration" layer is enabled and the configuration is transmitted to the logger.



8.10 - Online

When the calibration is over and the configuration has been transmitted to the logger it is suggested to enter "Online" pressing the corresponding button on the menu bar, in System Manager window or on the left vertical keyboard to check that all works properly. Ensure that the logger is switched on and correctly connected to the PC. The window below appears. See paragraph 5.8 for further information.

Tipo sis	tema:		Versione del firmware:	Frequen	za totale:	
MXL P	ISTA		14.86.0	296 (Ha	2)	91191 Mostra conteggi
N	ID	Nome canale	Sensore usato	Unità	Misura 🔼	Mostra mV
1	RPM	Engine	Giri motore	rpm	0	
2	SPD_1	Speed_1	Velocità	km/h .1	0.0	Batteria
3	CH_1	Channel_1	Generico lineare 0-5 V	V .1	0.2	13.705
4	CH_2	Channel_2	Generico lineare 0-5 V	V.1	2.6	13.705
5	CH_3	Channel_3	Generico lineare 0-5 V	V .1	0.0	
6	CH_4	Channel_4	Generico lineare 0-5 V	V.1	0.0	Memoria
7	CH_5	Channel_5	Generico lineare 0-5 V	V.1	0.0	1 %
8	CH_6	Channel_6	Generico lineare 0-5 V	V .1	0.0	Memorizzazione ATTIVA
9	CH_7	Channel_7	Generico lineare 0-5 V	V.1	0.0	
10	CH_8	Channel_8	Generico lineare 0-5 V	V .1	0.0	Ricevitore traguardo
11	CALC_GEAR	Calculated_Gea	Marce calcolate	#	0	0.00.000
12	ACC_1	LatAcc	Accelerometro trasversale	g .01	-0.75	In attesa - Ultimo giro nr. 0
13	LOG_TMP	Datalogger_Tem	Giunto freddo	°C	27	
14	BATT	Battery	Batteria	V .1	13.7	Collegamento logger-pc
15	ECU_1	BOSCH_RPM	Sensore giri motore	rpm	4096	
16	ECU_2	BOSCH_SPEED1	Velocità Bosch	km/h .1	64.0	
17	ECU_3	BOSCH_SPEED2	Velocità	km/h	ERR.	
18	ECU_4	BOSCH_OIL_PRES	Sensore pressione	bar .1	ERR.	Stato della configurazione
19	ECU_5	BOSCH_FUEL_PRE	Sensore pressione	bar .1	ERR.	Configurazione: OK.
20	ECU_6	BOSCH_ATM_PRES	Sensore pressione	mbar	ERR.	
21	ECU_7	BOSCH_FUEL_TEM	Sensore temperatura	°C	ERR.	
22	ECU_8	BOSCH_OIL_TEMP	Sensore temperatura	°C	ERR.	
23	ECU_9	BOSCH_ENGINE_T	Sensore temperatura	°C	ERR.	Esci
24	ECU 10	BOSCH ATR TEMP	Sensore temperatura	۰ <i>۲</i>	FRR	



Chapter 9 – How to configure EVO3 Pro/Pista

To correctly configure **EVO3 Pro/Pista** (from here onward **EVO3**), use a PC and **Race Studio 2** software. This logger can only be configured via software.

Before starting the configuration, install **Race Studio 2** and the USB driver as explained in chapter 2.

Run the software, clicking on **Race Studio 2** icon and the window here below appears.



In the title bar – white on a blue background in the figure – you can see the **Race Studio 2** version installed on the PC.

Immediately under there is the menu bar, shown in a more intuitive way on the left thanks to the graphic buttons: Go to Analysis (this button runs Race Studio Analysis software), Data download, AIM system manager, AIM system identification, Online, AIM system calibration, Custom sensors management, Select language.

From this window it is possible to perform all needed operations to manage all AIM systems.



To enter configuration menu press "AIM system manager" button; a panel showing all systems managed through **Race Studio 2** software appears: double click on "**EVO3**" or select it and click on " \checkmark Go to".



Race Studio 2 system manager window appears.



9.1 – System manager window



Using the keyboard and the layers, circled in the figure, it is possible to perform all operations necessary to manage an AIM system.

The top keyboard, shown here below, is made up of four buttons:



- **Transmit**: transmits a configuration to the logger and is active with any layer; it needs the logger to be switched on and connected to the PC.
- **Receive**: reads and saves the configuration of the logger and is active only in "Select Configuration" layer.
- CAN-Net Info: identifies the CAN network connected to the PC, that means the logger and its peripherals. Pressing it a waiting window appears and – when the connection has been established - "CAN-Net info" window, shown here below, appears. It shows all the CAN Network components. In the example below the CAN network includes an EVO3 Pro Master and four expansions: DaVid, LCU-ONE, GPS and MemoryKey.

V	Category of Logger	Type of Logger	Expansion Name	Logger ID	ID Date	Firmware	Firmware Date
	MASTER	EVO3 PRO	Master	12345	16/01/2008	28.07.11	21/12/2007
2	CAN EXPANSION	DaVid		47111881	18/01/2008	22.03	09/11/2007
3	CAN EXPANSION	LCU-ONE	LC	111111	13/12/2007	25.09	19/11/2007
4	CAN EXPANSION	GPS		902499	14/01/2008	35.13	17/12/2007
5	CAN EXPANSION	MEMORY KEY		7613105	17/12/2007	37.05	18/12/2007



Set acquisition system time: makes the logger time matching the PC one. Pressing it "Acquisition system time" window, below on the left, appears with PC clock on the left and **EVO3** one on the right. Pressing the central button, PC and **EVO3** will have the same time. This operation does not modify data sampled by the logger nor influence its peripherals. In case the window on the right appears it means that PC-logger connection is wrong. Check it and try again.

PC Time]	Acquisition system time	PC Time		Acquisition system time
12/03/2008 10.59.56	Set acquisition system time	08/12/2002 4.55.26	12/03/2008 11.00.25	Set acquisition system time	Impossible to read time

Current Configuration Table, immediately under the keyboard, shows the main information concerning the configuration user is working on.

Current configuration		Ecu	Vehicle name	Available time	Time with GPS	Total frequency	Master frequency	Expansions freq	Tot. Expansions
DEFAULT	EVO3 PRO	None - None	DEFAULT	11.29.05 (h.m.s)	6.24.31 (h.m.s)	202 (Hz)	171 (Hz)	31 (Hz)	1

Again, under this table are five layers:

Scegli configurazione | Canali | Configurazione sistema | Visore | Configuratore espansioni via CAN |

- Select configuration: allows the user to select the configuration to work on; it is always active.
- **Channels**: allows to set **EVO3** channels. It is active only if there are configurations in "Select configuration" layer.
- **System configuration**: allows to set or modify **EVO3** configuration. It is active only if there are configurations in "Select configuration" layer.
- **Display**: allows to set the configuration of **EVO3** display. It is active only if there are configurations in "select configuration" layer.
- **CAN-expansions configurator**: allows to configure the expansions connected through the CAN bus to **EVO3**, DaVid Slave video system included. It is active only if there are configurations in "Select configuration" layer; if not, it doesn't even appear.



9.1.1 – Select configuration layer

The "Select configuration" layer – shown here below – is made of:

¢	New	Delet	e	2	Clo	ne 🗗 Imp	po	ort 🛃	Đ	kport							
N	Installation name	Logger		ECU Manufacturer		ECU Model	Τ	Vehicle name	Obs	Spli	Speed	Temp		Created	Vi	Tot	Tot
1	DEFAULT	EVO3 PRO	-	None	•	None	1	DEFAULT	8	1	mph 💌	°F	•	November 12	0	0	0
2	LOGGER_CONF	EVO3 PRO	-	BOSCH	•	M53 💌	I	READ	8	1	mph 💌	٩F	•	November 15	0	0	0
3	LOGGER_CONF	EVO3 PRO	-	BOSCH	•	M53 💌	1	READ	8	1	mph 💌	٩F	-	November 16	0	0	0
4	LOGGER_CONF	EVO3 PRO	-	BOSCH	•	M53 💌	1	READ	8	1	mph 💌	°F	-	November 16	•	2	2
5	LOGGER_CONF	EVO3 PRO	-	BOSCH	•	M53 💌	1	READ	8	1	mph 💌	°F	-	November 16	0	0	0
6	LOGGER_CONF	EVO3 PRO	-	BOSCH	•	M53 💌	1	READ	8	1	mph 💌	°F	-	November 16	0	0	0
7	LOGGER_CONF	EVO3 PISTA	-	None	•	None	1	READ	8	1	k 💌	°C	-	November 28	0	0	0
8	LOGGER_CONF	EVO3 PISTA	-	None	•	None	1	READ	8	1	k 💌	°C	-	November 28	•	0	0
9	DEFAULT	EVO3 PRO	-	None	•	None	1	DEFAULT	8	1	k 💌	°C	-	January 14,	0	1	2
10	LOGGER_CONF	EVO3 PISTA	-	AIM	-	PROT_CAN	1	READ	8	1	k 💌	°C	-	March 12, 2008	0	0	0

On top is the keyboard made up of five buttons.

- **New**: creates a new configuration;
- **Delete**: deletes a new configuration;
- **Clone**: clones a configuration;
- **Import**: imports a configuration from a file;
- **Export**: exports a configuration to a file.

Central is the available configurations database. To work on one of them click on any of its cell and the entire row is selected (highlighted in yellow).

In case of first configuration central table shows up empty.



9.2 – Creating a new configuration

Pressing "New" button in "Select Configuration" layer this window appears:

New configuration	
Data logger type	EV03PR0
ECU Manufacturer	None
ECU Model	None
New configuration name	DEFAULT
Vehicle name	DEFAULT
Speed measure unit	km/h
Temperature measure unit	°C ▼
Pressure measure unit	bar

Some parameters need to be set:

- **Data logger type**: select the logger to be configured.
- ECU Manufacturer: select the Manufacturer of the ECU installed on the vehicle if supported or none.
- **ECU Model**: select the ECU model.
- New configuration name: fill in the new configuration name.
- Vehicle name: fill in the vehicle name.
- Speeds unit of measure: choose between km/h and mph.
- Temperatures unit of measure: choose between °C and °F.
- **Pressures unit of measure**: choose between Bar and PSI.

Press "OK" to save (or "Cancel" to quit without saving). The system comes back to system manager window.



9.3 – Channels

Activate "Channels" layer.

AIM Sportline Configurations selectionala			asmissione	Lettu		🔗 Infi	ormazioni re	te-CAN	Minposta l'orolog	io del		
Configuration Configuration Education Nome velocity Tempo disponibity Tempo con CPS Frequenza itabite	Racing Data Power	123		5 2		1			🤊 sistema d'acquis	izione		
Avoia Analisi DEFAULT EVO None DEFAULT 11 29 05 (h.m.s) 62 43 1 (h.m.s) 202 (Hz) 171 (Hz) 31 (Hz) 1 Scatico dati Scatico dati Seed_1 Coordinations sistema Seed_1 Coordinations (mm) 1666 Inculato per dro rusts Implate per dro rusts	rld Leader in Data Acquisition			- 1						1		
Avvia Analisi Scarico dati Scarico dati Gestione sistema AIM AlM Ouline Albitazione sistema AIM AlM Social configuratione sitema AIM AlM Scarico dati Scarico dati Scarico sistema AIM AlM Scarico sistema AIM Scarico sistema AIM <										-		
Scalico dati Scepic ordyzacione tistem Vicen Configuratione expansion i/si CAN Scalico dati Speed_1 Coconferenza nuota (mm) 1666		DEFAULT	EVO	None - None	DEFAULT	11.2	9.05 (n.m.s)	6.24.31 (n.m.s)	202 (HZ)	171 (HZ)	31 (HZ)	1
Scarico dati Speed_1 Speed_1 Speed_1 Speed_1 Correct encas nucls (nm) 1666 Correct encas	Avvia Analisi	1										
Scaico dati Croonferenza ruota (nm) 1666 Croonferenza ruota (nm) 1666 Croonferenza ruota (nm) 1666 Croonferenza ruota (nm) 1666 Impulsi per gio ruota		Scegli configur	azione Canali Cont	igurazione sistema V	fisore Configurato	re espansi	oni via CAN					
Gestione sistema AIM Impulsi per giro ructs Imp		Speed_1		Speed_2								
Gestione sistema AIM Impulsi per giro rusta dentificatione sistema AIM Malman Malman Seed 1 10 Hz Semerico Ineare 0-5 V V V	Scarico dati	Circopferenza	ruota (mm) 166	6 Circonferenzy	a ruota (mm)	1666		za ruota (mm)	1666 Circonfer		(mm) 1666	
Gestione sistema AIM Index per per decay Per per per decay Per p												
ID Abil. Nome canale Field Server usato Unità Initiocala Fondoscial dentificazione sistema AlM SP0_1 MallitATO Sped_1 10 Hz Grindoscia Imite 0 250.0 SP0_1 MallitATO Sped_1 10 Hz Velockà Imite 0.0 250.0 SP0_2 DISABILITATO Sped_2 10 Hz Velockà Imite 0.0 250.0 SP0_4 DISABILITATO Sped_4 10 Hz Velockà Imite 0.0 250.0 SP0_4 DISABILITATO Sped_4 10 Hz Velockà Imite 0.0 250.0 Generico Insere 0-5V V V.1 0.0 5.0 <t< td=""><td></td><td>Impulsi per gir</td><td>ro ruota 1</td><td>Impulsi per gi</td><td>ro ruota 🛛 1</td><td></td><td>Impulsi per (</td><td>giro ruota</td><td>1 Impulsi p</td><td>er giro ruota</td><td>1</td><td></td></t<>		Impulsi per gir	ro ruota 1	Impulsi per gi	ro ruota 🛛 1		Impulsi per (giro ruota	1 Impulsi p	er giro ruota	1	
ID Abil. Nome canale Field Server usato Unità Initiocala Fondoscial dentificazione sistema AlM SP0_1 MallitATO Sped_1 10 Hz Grindoscia Imite 0 250.0 SP0_1 MallitATO Sped_1 10 Hz Velockà Imite 0.0 250.0 SP0_2 DISABILITATO Sped_2 10 Hz Velockà Imite 0.0 250.0 SP0_4 DISABILITATO Sped_4 10 Hz Velockà Imite 0.0 250.0 SP0_4 DISABILITATO Sped_4 10 Hz Velockà Imite 0.0 250.0 Generico Insere 0-5V V V.1 0.0 5.0 <t< td=""><td>Gostiono sistema AIM</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Gostiono sistema AIM											
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dentificazione sistema AIM SP0_2 DISABILITATO Sped_2 10 Hz Velockà v lm/h 0.0 250.0 SP0_2 SP0_3 DISABILITATO Sped_3 10 Hz Velockà v lm/h 0.0 250.0 SP0_4 DISABILITATO Sped_4 10 Hz Velockà v lm/h 0.0 250.0 alibrazione sistema AIM SP0_4 DISABILITATO Sped_4 10 Hz Velockà v lm/h 0.0 250.0 alibrazione sistema AIM Generico Insero 0-5V V V.1 d.0 5.0 Generico Insero 0-5V V V.1 d.0 5.0 Generico Insero 0-5V V V.1 d.0.0 5.0 Generico Insero 0-5V V <td></td> <td>RPM</td> <td>ABILITATO</td> <td>Engine</td> <td></td> <td>10 Hz</td> <td></td> <td></td> <td></td> <td>rpm</td> <td>0</td> <td>20000</td>		RPM	ABILITATO	Engine		10 Hz				rpm	0	20000
Alm SP-2 I blosbalLIATO Speci2 Dife I weoka I min I model 2000 2000 Big D DSABILIATO Speci3 D Hz Velockà I min I 0.0 250.0 Big Spo_3 D DSABILIATO Speci4 D DSABILIATO Speci4 D DSABILIATO Speci4 0.0 250.0 Generico Insere 0-5 V V v.1 d 0.0 5.0 5.0 5.0 5.0 Generico Insere 0-5 V V v.1 d 0.0 5.0 5.0 5.0 5.0 5.0 Generico Insere 0-5 V V v.1 d 0.0 5.0 5.0 5.0 5.0 Generico Insere 0-5 V V v.1 d 0.0 5.0 5.0 5.0 5.0 5.0 5.0 Generico Insere 0-5 V V v.1 d 0.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	dentificazione sistema	SPD_1	ABILITATO	Speed_1		10 Hz	- V	elocità	•	km/h .1	0.0	250.0
Sp0_3 DisAplitAto Sped_3 DisAplitAto Sped_3 DisAplitAto Sped_3 Sped_4		SPD_2	DISABILITATO	Speed_2		10 Hz			· · · · · · · · · · · · · · · · · · ·	km/h .1	0.0	250.0
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Allbrazione sistema AIM CH_5 ✓ ABILITATO Channel_5 10 Hz ✓ Generico Ineare 0-5 V ✓ V.1 ✓ 0.0 5.0 Gestione sensori personalizzati CH_5 ✓ ABILITATO Channel_5 10 Hz ✓ Generico Ineare 0-5 V ✓ V.1 ✓ 0.0 5.0 Gestione sensori personalizzati ✓ ABILITATO Channel_6 10 Hz ✓ Generico Ineare 0-5 V ✓ V.1 ✓ 0.0 5.0 Gestione sensori personalizzati ✓ ABILITATO Channel_7 10 Hz ✓ Generico Ineare 0-5 V ✓ V.1 ✓ 0.0 5.0 CH_9 ✓ ABILITATO Channel_10 10 Hz ✓ Generico Ineare 0-5 V ✓ V.1 ✓ 0.0 5.0 CH_11 ✓ ABILITATO Channel_10 10 Hz ✓ Generico Ineare 0-5 V ✓ V.1 ✓ 0.0 5.0 CH_11 ✓ ABILITATO Channel_11 10 Hz ✓ Generico Ineare 0-5 V ✓ V.1 ✓ 0.0 5.0 CH_2 Ø ABILITATO Channel_12 10 Hz ✓ Marce aciolate ✓ 0 9 CH_2 Ø ABILITATO Calunto Trice </td <td></td> <td></td> <td></td> <td></td> <td></td> <td>_</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						_						
Ch_5 M ABILITATO Channel_5 10 Hz Cenerco insere 0.5 V V 1.1 2.0.0 5.0 Gestione sensori personalizzati Ch_7 V ABILITATO Channel_7 10 Hz Cenerco insere 0.5 V V V.1.1 2.0.0 5.0 Gestione sensori personalizzati Ch_8 V ABILITATO Channel_3 10 Hz Cenerco insere 0.5 V V V.1.1 2.0.0 5.0 Ch_8 V ABILITATO Channel_10 10 Hz Cenerco insere 0.5 V V V.1.1 2.0.0 5.0 Ch_10 V ABILITATO Channel_10 10 Hz Cenerco insere 0.5 V V V.1.1 2.0.0 5.0 Ch_11 V ABILITATO Channel_11 10 Hz Cenerco insere 0.5 V V V.1.1 2.0.0 5.0 Ch_11 V ABILITATO Channel_11 10 Hz Cenerco insere 0.5 V V V.1.1 2.0.0 5.0 Ch_21 V ABILITATO Channel_12												
Ch_5 M ABILITATO Channel_5 10 Hz Cenerco insere 0.5 V V 1.1 2.0.0 5.0 Gestione sensori personalizzati Ch_7 V ABILITATO Channel_7 10 Hz Cenerco insere 0.5 V V V.1.1 2.0.0 5.0 Gestione sensori personalizzati Ch_8 V ABILITATO Channel_3 10 Hz Cenerco insere 0.5 V V V.1.1 2.0.0 5.0 Ch_8 V ABILITATO Channel_10 10 Hz Cenerco insere 0.5 V V V.1.1 2.0.0 5.0 Ch_10 V ABILITATO Channel_10 10 Hz Cenerco insere 0.5 V V V.1.1 2.0.0 5.0 Ch_11 V ABILITATO Channel_11 10 Hz Cenerco insere 0.5 V V V.1.1 2.0.0 5.0 Ch_11 V ABILITATO Channel_11 10 Hz Cenerco insere 0.5 V V V.1.1 2.0.0 5.0 Ch_21 V ABILITATO Channel_12	alibrazione sistema AIM			-								
Gestione sensori personalizzati CH_B V ABILITATO Channel_B 10 Hz Cenerico Insere 0.5 V V 1 10.0 5.0 Scelta Lingua CH_B V ABILITATO Channel_B 10 Hz Cenerico Insere 0.5 V V 1 4 0.0 5.0 Scelta Lingua CH_B V ABILITATO Channel_10 10 Hz Cenerico Insere 0.5 V V 1 4 0.0 5.0 CH_I V ABILITATO Channel_10 10 Hz Cenerico Insere 0.5 V V 1 4 0.0 5.0 CH_I V ABILITATO Channel_11 10 Hz Cenerico Insere 0.5 V V 1 1 0.0 5.0 CH_I V ABILITATO Channel_12 10 Hz Patercaiconatero # 0 9 CAC_GRA DISABILITATO Cacular Geser 10 Hz Marce caciolate # 0 9 ACC_1 V ABILITATO Acc_2 10 Hz												
Observed setsori CH_9 ✓ ABILITATO Channel_9 10 Hz ✓ Generico Ineare 0-5 V ✓ V.1 ■ 0.0 5.0 Scelta Lingua CH_10 ✓ ABILITATO Channel_10 10 Hz ✓ Generico Ineare 0-5 V ✓ V.1 ■ 0.0 5.0 Scelta Lingua CH_11 ✓ ABILITATO Channel_11 10 Hz ✓ Generico Ineare 0-5 V ✓ V.1 ■ 0.0 5.0 CH_11 ✓ ABILITATO Channel_11 10 Hz ✓ Generico Ineare 0-5 V ✓ V.1 ■ 0.0 5.0 CH_12 ✓ ABILITATO Channel_12 10 Hz ✓ Generico Ineare 0-5 V ✓ V.1 ■ 0.0 5.0 CALC_GEAR DISABILITATO Channel_12 10 Hz ✓ Potencionetro marce # 0 9 ACC_1 ✓ ABILITATO Acc1 10 Hz ✓ Accelerometro Inserversale ✓ g.01 -3.00 3.00 LOG_TMP ✓ ABILITATO Datalogger_Temp 10 Hz ✓ Gunto freddo ~ ✓ >0 50												
Scelta Lingua CH_10 V ABILITATO Channel_10 10 Hz Generico Insere 0-5 V V I 0.0 5.0 Scelta Lingua CH_11 V ABILITATO Channel_11 10 Hz Generico Insere 0-5 V V I 0.0 5.0 CH_11 V ABILITATO Channel_12 10 Hz Cenerico Insere 0-5 V V I 0.0 5.0 CALC_GEAR DISABILITATO Calculated_Gear 10 Hz Potenzionetro marce # 0 9 ACC_1 V ABILITATO Accl_1 10 Hz Accelerometro trasversale g 0.01 -3.00 3.00 ACC_2 V ABILITATO Acc_2 10 Hz Accelerometro longitudinale g 0.01 -3.00 3.00 UG_5TMP ABILITATO Datalogger_Temp 10 Hz Gundorfodos <												
Scelta Lingua CH_11 V ABILITATO Channel_11 10 Hz Genericolneare 0-5 V V V 1 0.0 5.0 Scelta Lingua CH_12 Mathina Abilitation Channel_12 10 Hz Potenziometro marce # 0 5.0 CALC_GEAR Dissalutation Calculated_Gear 10 Hz Marce calcolate # 0 9.00 ACC_1 V Abilitation Acc_1 10 Hz Accelerometro trasversale g .01 -3.00 3.00 ACC_2 V Abilitation Datalogger_Temp 10 Hz Guinto freddo °C 0 50	personalizzati	-										
Scelta Lingua GL_12 IDHz Potenzionetro marce # 0 5 CAL_GEAR DISABILITATO Cakuladed_Gear 10 Hz Marce cakulate # 0 9 ACC_1 V Asslititation Acc_1 10 Hz Accelerometro trasversale g .01 -3.00 3.00 ACC_2 V Asslititation Accelerometro indistudinale g .01 -3.00 3.00 Log_TMP Asslititation Datalogger_temp 10 Hz Guinto freddo °C 0 50		2.1										
Scena Lingua CALC_GEAR DISABILITATO Calculated_Gear 10 Hz Marce calculate # 0 9 ACC_1 V ABLITATO Acc_1 10 Hz Marce calculate # 0 9 ACC_1 V Asculated_Gear 10 Hz Marce calculate # 0 9 ACC_1 V Asculated_Gear 10 Hz Marce calculate g.01 -3.00 3.00 ACC_2 V ABUITATO Acc_2 10 Hz Marcelerometro longitudinale g.01 -3.00 3.00 LOG_TMP M BuilitATO Datalogger_Temp 10 Hz Gundo freddo *C I 0 50												
ACC_1 V ABILITATO Acc_1 10 Hz Accelerometro trasversale g 0.11 -3.00 3.00 ACC_2 V ABILITATO Acc_2 10 Hz Accelerometro longitudinale g 0.11 -3.00 3.00 LOG_TMP V ABILITATO Datalogger_Temp 10 Hz Gunto freddo °C 0 50	Scelta Lingua		-	-								
ACC_2 Image: Water and the state and the stat				_					ercale 🗸			
LOG_TMP IF ABILITATO Detalogger_Temp 10 Hz I Gunto freddo °C I 0 50		-		-								
				-				-				
		2				1.1.1	_ 0				0.0	1010
aim-sportline.com												

This layer allows to set all channels sampled by the logger and its layout depends on **EVO3** version.



In case of an EVO3 Pista configuration this window appears.

	Transmit	ł	Receive	*	CAN-Net	info	Set acquis ti	ition sy me	vstem				
urrent configura	ation												
Installation na	. Data logger t	Ecu	Vehicle name	Available time	Time with GPS	S Total frequen	Master frequ	Expan	sions f 🕚	Video s	system	Tot. Lambda	Tot. Expansio
LOGGER_CO	EVO3 PISTA	None - None	READ	8.48.56 (h.m	3.58.06 (h.m	131 (Hz)	131 (Hz)	0 (Hz)	٢	res		0	0
	eel revolution	1666											
Channel ide	Enabled/disabled	Channel nam	e	Sar	npling frequ	Sensor type		-	Measure u	nit L	.ow scale	e High	n scale
RPM	Enabled	Engine											
		Lingine		101		Engine revolution sp	peed		rpm	0)	200	00
-	🔽 Enabled	Speed		10	Hz 🗾	Speed	peed		km/h .1	C).0	250	
SPD_1 CH_1	Enabled	Speed Channel_1		10	Hz 💽	Speed Thermocouple	peed	-	km/h.1 °⊂	c c).0	250. 5	
сн_1 сн_2	Enabled Enabled Enabled Enabled	Speed Channel_1 Channel_2		10 10 10	Hz 🗾 Hz I	Speed Thermocouple Thermocouple		•	km/h .1 ℃	0 • 0).0))	250 5 5	
сн_1 сн_2 сн_3	Enabled Enabled Enabled Enabled Enabled Enabled	Speed Channel_1 Channel_2 Channel_3		10 10 10 10	+z •	Speed Thermocouple Thermocouple Thermoresistance P	T100	•	km/h .1 ℃ ℃).0)))	250 5 5 5	
CH_1 CH_2 CH_3 CH_4	Image: Constraint of the second se	Speed Channel_1 Channel_2 Channel_3 Channel_4		10 10 10 10 10 10	+z • +z • +z • +z • +z •	Speed Thermocouple Thermocouple Thermoresistance P Thermoresistance P	YT100 YT100	•	km/h .1 ℃ ℃).0)))	250. 5 5 5 5	
CH_1 CH_2 CH_3 CH_4 CH_5	Image: Enabled	Speed Channel_1 Channel_2 Channel_3 Channel_4 Channel_5		10 10 10 10 10 10 10		Speed Thermocouple Thermocouple Thermoresistance P Thermoresistance P Thermoresistance P	17100 17100 17100	•	km/h .1 ℃ ℃ ℃).0))))	250. 5 5 5 5 5 5	
CH_1 CH_2 CH_3 CH_4 CH_5 CH_6	Image: Constraint of the second se	Speed Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6		10 10 10 10 10 10 10	+z •	Speed Thermocouple Thermocouple Thermoresistance P Thermoresistance P Thermoresistance P	T100 T100 T100 T100	• • • • • • •	km/h .1 °C °C °C °C °C).0)))))	250. 5 5 5 5 5 5 5 5	
CH_1 CH_2 CH_3 CH_3 CH_4 CH_5 CH_6 CH_7	Image: Enabled	Speed Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Channel_7		10 10 10 10 10 10 10 10	+z +	Speed Thermocouple Thermoresistance P Thermoresistance P Thermoresistance P Thermoresistance P Generic linear 0-5 V	T100 T100 T100 T100	• • • • • • •	km/h .1 °C °C °C °C °C °C V .1).0)))))).0	250. 5 5 5 5 5 5 5 5 5.0	
CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 CH_6 CH_7 CH_8	Image: Enabled	Speed Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Channel_7 Channel_8		10 10 10 10 10 10 10 10	+z +	Speed Thermocouple Thermoresistance P Thermoresistance P Thermoresistance P Thermoresistance P Generic linear 0-5 V Gear potentiometer	T100 T100 T100 T100	• • • • • • •	km/h .1 °C °C °C °C °C °C °C V .1 #).0))))))).0	250. 5 5 5 5 5 5 5 5.0 5.0 5	
CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 CH_7 CH_8 CALC_GEAR	Image: Enabled	Speed Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Channel_7 Channel_8 Calculated_6	iea	101 101 101 101 101 101 101 101 101 101	+12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 +	Speed Thermocouple Thermoresistance P Thermoresistance P Thermoresistance P Thermoresistance P Generic linear 0-5 V Gear potentiometer Calculated Gear	T100 T100 T100 T100 T100		km/h .1 °C °C °C °C °C °C °C V .1 # #).0))))))).0))	250. 5 5 5 5 5 5 5.0 5.0 5 9	.0
CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 CH_7 CH_8 CALC_GEAR ACC_1	▼ Enabled	Speed Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Channel_7 Channel_8 Calculated_G Acc_1	iea	101 101 101 101 101 101 101 101 101 101	+2 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 +	Speed Thermocouple Thermoresistance P Thermoresistance P Thermoresistance P Thermoresistance P Generic linear 0-5 V Gear potentiometer Calculated Gear Lateral acceleromet	7100 7100 7100 7100 7		km/h .1 °C °C °C °C °C °C V .1 # # g .01).0))))))))))))))))))	250. 5 5 5 5 5 5 5.0 5 9 3.00	.0
CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 CH_7 CH_8 CALC_GEAR ACC_1 ACC_2	▼ Enabled	Speed Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Channel_7 Channel_8 Calculated_G Acc_1 Acc_2		101 101 101 101 101 101 101 101 101 101	+12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 +	Speed Thermocouple Thermocouple Thermoresistance P Thermoresistance P Thermoresistance P Generic linear 0-5 V Gear potentiometer Calculated Gear Lateral acceleromet Longitudinal acceler	7100 7100 7100 7100 7		km/h .1 °C °C °C °C °C V .1 # g .01 g .01).0))))))))))))))))))	250. 5 5 5 5 5 5 5.0 5 9 3.00 3.00 3.00	.0
CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 CH_7 CH_8 CALC_GEAR ACC_1	▼ Enabled	Speed Channel_1 Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Channel_7 Channel_8 Calculated_G Acc_1		101 101 101 101 101 101 101 101 101 101	+12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 + +12 +	Speed Thermocouple Thermoresistance P Thermoresistance P Thermoresistance P Generic linear 0-5 V Gear potentiometer Calculated Gear Lateral acceleromet	7100 7100 7100 7100 7		km/h .1 °C °C °C °C °C °C V .1 # # g .01).0))))))))))))))))))	250. 5 5 5 5 5 5 5.0 5 9 3.00	.0

In case of an EVO3 Pro configuration this window appears.

System ma	inager						
Tra	asmissione	Lettura	µ Informazioni i	rete-CAN	o del izione		
onfigurazione se	elezionata						
Nome installazio	one Tipo centralina	Ecu Nome veicolo	Tempo disponibil	e Tempo con GPS Frequenza totale	Frequenza master	Frequenza espa	Tot. Espansioni
DEFAULT	EV03 PRO	None - None DEFAULT	10.56.35 (h.m.s)) 6.14.10 (h.m.s) 212 (Hz)	181 (Hz)	31 (Hz)	1
Scegli configura	azione Canali Confi	gurazione sistema 🛛 Visore 🗍 Configuratore	e espansioni via CAN	1			
Speed_1							
		_ _					
Circonferenza	ruota (mm) 166	6 Circonferenza ruota (mm) 1	666 Circonfere	enza ruota (mm) 1666 Circonfer	enza ruota (mm)	1666	
Impulsi per gir	o ruota 1	Impulsi per giro ruota	Impulsi pe	er giro ruota 1 Impulsi pe	er giro ruota	1	
mit and bot du.	J-		- Inpusipe		, gi e i e e e e e e e e e e e e e e e e		
ID	Abil.	Nome canale	Freg.	Sensore usato	Unità Ini	zioscala Fo	ndoscala
RPM	ABILITATO	Engine	10 Hz 🗾	Giri motore	rpm 0	20	000
SPD_1	ABILITATO	Speed_1	10 Hz 💽	Velocità 💌	km/h .1 0.0) 25	0.0
SPD_2	DISABILITATO	Speed_2	10 Hz 💽	Velocità 💌	km/h .1 0.0) 25	0.0
SPD_3	ABILITATO	Speed_3	10 Hz 💌	Velocità 🔹	km/h .1 0.0) 25	0.0
SPD_4	DISABILITATO	Speed_4	10 Hz 💌	Velocità 🔹	km/h .1 0.0) 25	0.0
CH_1	ABILITATO	Channel_1	10 Hz 🗾	Generico lineare 0-5 V	V.1 💌 0.0	5.0)
CH_2	ABILITATO	Channel_2	10 Hz 🗾	Generico lineare 0-5 V	V.1 🗾 0.0	5.0)
CH_3	ABILITATO	Channel_3	10 Hz 🗾	Generico lineare 0-5 V	V.1 🗾 0.0	5.0)
CH_4	ABILITATO	Channel_4	10 Hz 🗾	Generico lineare 0-5 V	V.1 🗾 0.0) 5.0)
CH_5	ABILITATO	Channel_5	10 Hz 🗾	Generico lineare 0-5 V	V.1 🗾 0.0) 5.0)
CH_6	ABILITATO	Channel_6	10 Hz 💽		V.1 💌 0.0) 5.0)
CH_7	ABILITATO	Channel_7			V.1 💌 0.0)
CH_8	ABILITATO	Channel_8	10 Hz 🗾		V.1 💽 0.0)
CH_9	ABILITATO	Channel_9	10 Hz 💌		V.1 💌 0.0)
CH_10	ABILITATO	Channel_10			V.1 🗾 0.0		
CH_11	ABILITATO	Channel_11			V.1 🗾 0.0)
CU1 40	MILITATO	Channel_12		Potenziometro marce	# 0	5	
CH_12	DISABILITATO	Calculated_Gear		Marce calcolate	# 0	9	
CALC_GEAR) DIDMDILITATO				g .01 -3.	00 3.0	10
CALC_GEAR ACC_1	ABILITATO	Acc_1			-		
CALC_GEAR		Acc_1 Acc_2 Datalogger_Temp	10 Hz 💌		g.01 -3. g.01 -3. ℃ ▼ 0		00



9.3.1 – Speed panels

On top of Channels layer can be from one to four panels (depending on **EVO3** version) labelled "Speed". It is possible to enable/disable them through the channel table below. To enable a Speed channel just enable the checkbox in the corresponding row of channel table.

The figure below shows two Speed channels enabled and two of them disabled: so are the related panels.

Select configurat	tion Channels Syst	tem configuration Display CAN-Expansio	on config	gurator			
Speed_1				Speed_3		4	
Wheel circumfer	rence (mm) 1666	5 Wheel circumference (mm) 16	666	Wheel circumference (mm) 166	6 Wheel o	ircumference (m	m) 1666
Pulses per whee	el revolution 1	Pulses per wheel revolution 1		Pulses per wheel revolution 1	Pulses p	er wheel revolutio	n 1
Channel de	Enabled/disabled	Channel name	Sampli	ng rrequ Sensor type		Measure unit	Low scale
RPM		Engine	10 Hz			rpm	0
SPD_1	🔽 Enabled	Speed_1	10 Hz	Speed	ľ	🚽 km/h .1	0.0
SPD_2		opeed_2	10 Hz	🗾 Speed	·····	🛨 km/h .1	0.0
SPD_3	 Inabled 	Speed_9	10 Hz	🗾 Speed	1	🚽 km/h .1	0.0
SPD_4	Disbled	Speed_4	10 Hz	🗾 Speed	· · · · · · · · · · · · · · · · · · ·	🛨 km/h .1	0.0
CH_1	Enabled	Channel_1	10 Hz	Potentiometer distance	ſ	• mm .1 💽	0.0

When a panel is enabled it is necessary to set its parameters.

Speed_1	
Wheel circumference (mm)	1666
Pulses per wheel revolution	1

Fill in:

- wheel circumference of the vehicle;
- number of pulses for wheel revolution (that corresponds to the number of magnets installed on the wheel).



9.3.2 – Channel Table

Current configura									
Installation name			Vehicle name	Available time	ime with GPS	Total frequency	Master frequency		
DEFAULT	EV03 PRO	None - None	DEFAULT	10.56.35 (h.m.	s) 6.14.10 (h.m.s)	212 (Hz)	181 (Hz)	31 (Hz)	1
Select configur	ation Channels Sy	stem configuration Dis	play CAN-Expansi	ions configurator					
Speed_1	I	Speed_2		Speed_:	3				
· –	erence (mm) 16	66 Utilis and sime series		666 Wheel c			sumference (mm)	1666	
wheel circumn	erence (mm) 10	wheel circume	rence (mm) 1	wheeld	ircumference (mm)	Wheel cir	cumerence (mm)	1000	
Pulses per whe	eel revolution 1	Pulses per whe	el revolution 1	Pulses p	er wheel revolution	Pulses pe	r wheel revolution	1	
					,				
Channel ide	Enabled/disabled	Channel name		Sampling frequ	Sensor type		Measure unit L	ow scale H	ligh scale
RPM	🔽 Enabled	Engine			Engine revolution spee	d	rpm 0	2	0000
SPD_1	Finabled	Speed_1		10 Hz _	Speed		km/h.1 0	.0 2	50.0
SPD_2	Disabled	Speed_2		10 Hz 🔄	Speed	<u> </u>	km/h .1 0	.0 2	50.0
SPD_3	Enabled	Speed_3		10 Hz	Speed	-	km/h .1 0	.0 2	50.0
SPD_4	Disabled	Speed_4		10 Hz	Speed	-	km/h .1 0	.0 2	50.0
CH_1	Enabled	Channel_1		10 Hz 💽	Distance potentiomete	r <u> </u>	mm .1 📃 0.	.0 5	.0
CH_2	Enabled	Channel_2		10 Hz 💽	Generic linear 0-5 V	-	V.1 💌 0.	.0 5	.0
CH_3	Enabled	Channel_3		10 Hz	Generic linear 0-5 V	-	V.1 💌 0.	.0 5	.0
CH_4	Enabled	Channel_4		10 Hz	Generic linear 0-5 V	-	V.1 💌 0.	.0 5	.0
CH_5	Enabled	Channel_5			Generic linear 0-5 V		V.1 💌 0	.0 5	.0
CH_6	Enabled	Channel_6			Generic linear 0-5 V		V.1 💌 0		.0
CH_7	Enabled	Channel_7			Generic linear 0-5 V		V.1 💌 0		
CH_8	Enabled	Channel_8			Generic linear 0-5 V		V.1 🗾 0.		
CH_9	Enabled	Channel_9			Generic linear 0-5 V		V.1 🗾 0.		
CH_10	Enabled	Channel_10			Generic linear 0-5 V		V.1 🗾 0.		
CH_11	Enabled	Channel_11			Generic linear 0-5 V	•	V.1 💌 0.		
CH_12	Enabled	Channel_12			Calculated Gear		# 0		
CALC_GEAR	Enabled	Calculated_Gear			Calculated Gear		# 0	-	
ACC_1	Enabled	Acc_1			Lateral accelerometer				.00
ACC_2	Enabled	Acc_2			Longitudinal accelerom	eter <u> </u>	-		.00
LOG_TMP	Enabled	Datalogger_Temp			Cold joint		°C 🔽 0		
BATT	🕅 Enabled	Battery		1 Hz	Battery		V.1 5	.0 1	5.0

It shows all logger channels with the related characteristics

- **Channel identifier**: shows the channel label. Channels labelled "ECU_X" are the ones received from the ECU.
- Enabled/disabled: shows channel status (enabled or disabled). The status can be modified double clicking on the cell except for RPM, Speed and CH_12; RPM and CH_12 needs to be set through "System Configuration" panel, while Speed one is to be set as explained before.
- **Channel name**: allows to name the channel.
- **Sampling frequency**: allows to set each channel sampling frequency. This last one influences the total available time, highlighted by a blue box in the figure below, because the memory fills up faster.
- **Sensor type**: shows the type of sensor installed on that channel; it is selected through the drop down menu that appears clicking on the cell. See the following page for further information.
- **Measure unit**: shows the unit of measure selected for each channel; to change it double click on the cell.
- Low/High scale: shows high/low scale values of the sensor and allows to change it double clicking on the cell.



	Temperatures	Pressures	Potentiometers	Lambda Probe	Gyroscope	Accelerometer
EVO3 P	ista					
Ch_1	Х	Х	Х	Х		
Ch_2	Х	Х	Х	Х		
Ch_3	X	Х	Х	Х		
Ch_4	Х	Х	Х	Х	Х	Х
Ch_5	Х	Х	Х	Х	Х	Х
Ch_6	Х	Х	Х	Х	Х	Х
Ch_7	Х	Х	Х	Х	Х	Х
Ch_8 ⁶	Х	Х	Х	Х	Х	Х
EVO3 P	ro					
Ch_1	Х	Х	Х	Х		
Ch_2	Х	Х	Х	Х		
Ch_3	Х	Х	Х	Х		
Ch_4	Х	Х	Х	Х		
Ch_5	Х	Х	Х	Х		
Ch_6	Х	Х	Х	Х		
Ch_7	Х	Х	Х	Х		
Ch_8	Х	Х	Х	Х	Х	Х
Ch_9	Х	Х	Х	Х	Х	Х
Ch_10	Х	X	Х	X	Χ	Х
Ch_11	Х	Х	Х	Х	Х	Х
Ch_12 ⁶	Х	Х	Х	Х	Х	Х

⁶ Channels CH_8 (**EVO3 Pista**) and CH_12 (**EVO3 Pro**) are gear channels and if system configuration layer (paragraph 9.4) sets them on "Potentiometer CH_8" (**EVO3 Pista**), "Potentiometer CH_12" (**EVO3 Pro**) or on "Calculated + Neutral Signal" channel CH_8 or CH_12 sets on calculated gear and it is only possible to set Channel name, Sampling frequency and High/Low scale. If not they work as shown in the table above but need to be enabled.



Setting some sensors on some channels that support them, a configuration panel appears bottom left of Channels layer. The figure below shows distance potentiometer configuration panel.

urrent configuration	ismit	Receive	M CAN-N	et info	iet acquisition system time				
nstallation name	Data logger type	Ecu	Vehicle name	Available time	Time with GPS	Total frequency	Master frequend	y Expansions frequ	ency Tot. Expansions
DEFAULT	EV03 PRO	None - None	DEFAULT	10.56.35 (h.m.s)	6.14.10 (h.m.s)	212 (Hz)	181 (Hz)	31 (Hz)	1
Select configuration Speed_1 Wheel circumferen	ce (mm) 1666	figuration Display CAN-E Speed_2 Wheel circumference (mm	Speed	circumference (mm) 16					
Pulses per wheel re	evolution 1	Pulses per wheel revolution	1 Pulses	per wheel revolution 1	Pulses per wheel re	volution 1			
Channel identifier	Enabled/disabled	Channel name		Sampling frequency	Sensor type		Measure unit	Low scale	High scale
RPM	Enabled	Engine		10 Hz 💌	Engine revolution speed		rpm	0	20000
SPD_1	Finabled	Speed_1			Speed		💌 km/h .1	0.0	250.0
SPD_2	C Disabled	Speed_2		10 Hz 💌	Speed		✓ km/h .1	0.0	250.0
SPD_3	Enabled	Speed_3		10 Hz 💌	Speed		💌 km/h .1	0.0	250.0
SPD_4	C Disabled	Speed_4		10 Hz 💌	Sneed		🛃 km/h .1	0.0	250.0
CH_1	Enabled	Channel_1		10 Hz	Distance potentiometer		1 mm _1	• 0.0	5.0
CH_2	🔽 Enabled	Channel_2		10 Hz	Generic linear 0-5 V	-	🤳 V .1	0.0	5.0
СН_З	🔽 Enabled	Channel_3		10 Hz 💌	Generic linear 0-5 V		▼ V .1	0.0	5.0
CH_4	🔽 Enabled	Channel_4		10 Hz 👱	Generic linear 0.5 V		💌 V .1	1 0.0	5.0
CH_5	Enabled	Channel_5		10 Hz 👱	Generic linear 0-5 V		💌 V .1	1 0.0	5.0
CH_6	Enabled	Channel_6		10 Hz 👱	Generic linear 0-5 V		💌 V .1	1 0.0	5.0
CH_7	🔽 Enabled	Channel_7		10 Hz 🎾	Generic linear 0-5 V		💌 V .1	0.0	5.0
CH_8	🔽 Enabled	Channel_8		10 Hz 💌	Generic linear 0-5 V		💌 V .1	0.0	5.0
CH_9	🔽 Enabled	Channel_9			Generic linear 0-5 V		💌 V .1	0.0	5.0
CH_10	🔽 Enabled	Channel_10		10 Hz 💌	Generic linear 0-5 V		💌 V .1	0.0	5.0
CH_11	🔽 Enabled	Channel_11		10 Hz 👱	Generic linear 0-5 V		💌 V .1	0.0	5.0
CH_12	🕅 Enabled	Channel_12			Calculated Gear		#	0	5
CALC_GEAR	🕅 Enabled	Calculated_Gear			Calculated Gear		#	0	9
ACC_1	Frabled	Acc_1			Lateral accelerometer		🗾 g .01	-3.00	3.00
ACC_2	🔽 Enabled	Acc_2			Longitudinal accelerometer		🗾 g .01	-3.00	3.00
LOG_TMP	🕅 Enabled	Datalogger_Temp			Cold joint		°C	D 0	50
BATT	🕅 Enabled	Battery		1 Hz 💌	Battery		V .1	5.0	15.0



9.4 – Creating a custom sensor

This function allows to configure a "custom" sensor setting the proper curve. It is very useful when the sensor installed (pressure, temperature or other) is not included in the available sensors list.

Please note: "Custom Sensor" option is intended for expert users only.

Press "Custom sensors manager" button in the menu bar or in the left vertical keyboard.

	📓 System ma	nager							
CEED Kaleng Balls Planet	2	Fransmit	Receive	20 00	W-Net info	quisition system time			
AIM Sportline World Leader In Data Acquisition	Current configura	tion							
wond ceases in Data Acquittion	Installation nam	e Data logger typ	e Ecu Vehicle na	ne Avalatie	time Time with OPS Total h	requency Master trop	ancy Expension	s freq. Tot. Expa	ntion
Go to Analysis		EVO3 PRO ation Charvels \$	BOSCH - MS3 DEFAULT		da]		40 (Hz)	2	
Download data		erence (mm) 16 eel revolution 1	66 Wheel chould entropy	1566	nent_) heet decuniterence (nen) 1866 decuneren wheet revolution 1	Speed, 4 Wheel or conference Polest per of real rando			
AIM system manager	Chappelide	Enabled/disabled	Channel name	Sampling fr	regu Sensor type	Measure uni	Low scale	High scale	_
All and a second se	RPM	F Enabled	Engine	10 Hz	T Engine revolution speed	rom	0	20000	
1	SPD_1	F Enabled	Speed_1	10 Hz	· Speed	• km/h .1	0.0	250.0	
AIM system identification	SPD_2	C Disabled	Speed 2	10 Hz	• Speed	· imh .t	0.0	250.0	
state and the state of the stat	5PD_3	T Disabled	Speed_3	10 Hz	· Speed	· km/h .1	0.0	250.0	
	SPD_4	Disabled	Speed_4	10 Hz	speed	≥ km/h .1	0.0	250.0	
	011	I Enabled	Channel_1	10 Hg	Generic linear 0-5 V	* V .t	.0.0	5.0	
Online	012	IF Enabled	Channel_2	10 Hg	Generic Inear 0-5 V	× Y .1	• 0.0	5.0	
	01.3	F Enabled	Channel_3	10 Hz	Generic linear 0-5 V	- 14.4	. 0.0	5.0	
	01.4	F Enabled	Channel_4	10 Hz	Generic linear 0-5 V		- 0.0	5.0	
	01.5	P Enabled	Channel_S	10 Hz	Generic linear 0-5 V		- 0.0	5.0	
AIM system calibration	OLS	₩ Enabled	Channel_6	10 Hz	Generic linear D-5 V		1 0.0	5.0	
	01.7	Frabled	Channel 7	10 Hz	Generic Inear 0-5 V	- V .1	- 0.0	5.0	
	CH.8	Frabled	Channel 8	10 Hz	Generic linear 0-5 V		. 0.0	5.0	
Custom sensors manager	01.9					- 4.	- 0.0		
encompleten her here a		I Enabled I finabled	Channel_9	10 Hz	Generic linear 0-5 V Generic linear 0-5 V			5.0	
	01_10		Channel_10	10 H2			• 0.0	5.0	
1	01_11	F Enabled	Channel_11	10 Hz	Generic Inder 0-5 V	- Y .1	• 0.0	5.0	_
Select Language	CH_12	T Disabled	Channel_12	10 Hz	Generic linear 0-5 V Calculated Gear	- V .1	.0.0	5.0	
	CALC_GEAR	C Disabled	Calculated_Gear	10 Hz	and the second s		0		
	ACC_1	P Enabled	Act_1	10 HZ	Lateral accelerometer	± 0.01	-3.00	3.00	
	ACC_2	F Enabled	Acc_2	10 Hz	Longitudinal accelerometer	- g .01	-3.00	3.00	
	LOG_TMP	Enabled	Datalogger_Temp	10 Hz	Cold joint		• 0	50	
	BATT	F Enabled	Dattery	1 Hz	Dattery	1. Y	5.0	15.0	_
	ECU_1	☐ Disabled	BOSCH_RFM	10 Hz	 Engine speed sensor 	rpm	0	18000	
	ECU_2	F Enabled	BOSCH_SPEEDI	10 H2	Bosch speed sensor	ken/h .1	0.0	500.0	
	ECU_3	F Enabled	BOSCH_SPEED2	10 Hz	Speed sensor	kn/h .1	0.0	500.0	
	ECU_4	Enabled	DOSCH_OIL_PRESS	10 Hz	Pressure sensor	ber .1	- 0.0	15.0	
aim-sportline.com	ECU_S	P Enabled	BOSCH_FUEL_PRESS	10 H2	Pressure sensor		.0.0	15.0	
	ECU_6	F Enabled	BOSCH_ATM_PRESS	10 Hz	Pressure sensor	mbar	-10	130	
W AGUT MIN SAL	EQU_7	F Enabled	BOSCH_FUEL_TEMP	5 Hz	Temperature sensor		50	215	
DO SUL NAVILLIO, PLAN + ITALY	ECU_8	F Enabled	BOSCH_OB_TEMP	SHz	Temperature sensor Temperature sensor	*C	50 -1.50	215	

The procedure to create a custom sensor is the same explained for MyChron3 Car/Bike Plus/Gold/Extreme (paragraph 5.3).

9.5 – System configuration

Activate "System Configuration" layer:

Rpm		Gear sensor		
AIM sensor	ECU signal	None	Calculated	Calculated gears are
Multiply factor	/1 •	Potentiometer Channel 12	Calculated with neutral signal: Channel 12	available only when a showing gear display is selected.
MAX value	16000 💌	ECU	Highest gear number 6	
Lap		Reference speed		
Obscuring time	(sec.) 8	Chan S	peed_1	
Lap segments	1		This box is EVO3 Pro S Configurati only	ystem
Output signal on p	in 14 of the 22 pin connect	or		• · · · · · · · · · · · · · · · · · · ·
Signal	Lap (+) (idle status =			



9.5.1 – RPM box

Rpm			Rpm		
AIM sensor	ECU sign	nal	AIM sens	or ECU sig	nal
Multiply factor	/ 1	•	Multiply fact	or J	-
MAX value	16000	•	MAX value	1,000	-
Channel ide E	nabled/disabled	Chann	Channel ide	Endoled/disabled	Chan
	Enabled	Engine	RPM	🔘 Disabled	Engin
5PD_1	Enabled	Speed	SPD_1	Enabled	Speed

- Select "AIM Sensor" to sample this information from an RPM sensor installed on the vehicle. Set Multiply factor and RPM Max value. RPM row in the central table of channels layer enables.
- Select "ECU signal" and set RPM Max value to sample this information from the vehicle ECU. RPM row in the central table of channel layer disables.

9.5.2 – Lap box

-Lap		
Obscuring time	(sec.)	8
Lap segments	1	I-LAP

- **Obscuring time**: it is a time period during which the optical receiver installed on the vehicle, after having recorded a lap signal, is "blind": it does not record signals. This function is useful to manage split times on tracks where more optical receivers are installed: set obscuring time on a low value (min accepted value is 3 seconds) to record splits and set it on a value lower than best lap time and higher than the time elapsed between last split and start/finish line (max accepted value is 255 seconds) not to record splits.
- Lap segments: is the number of segments the track is divided in and corresponds to the number of transmitters installed there.



9.5.3 – Gear sensor box



EVO3Pro/Pista can sample the engaged gear from a gear sensor or from the ECU. It can also calculate it using an algorithm based on RPM and speed. Available options are:

- **None**: there is no gear sensor on the vehicle (or not to see the engaged gear): this option is disabled on the display. Row labelled CH_8/12 (depending on the logger) on central table of channel layer can be enabled with configurable sensor.
- **Potentiometer Channel 8/12**: there is a gear potentiometer installed on channel 8/12; row labelled CH_8/12 (depending on the system) in the central table of channels layer is enabled and set on gear potentiometer.
- ECU: this information is sampled from the ECU (assuming it can transmit it); row labelled CH_8/12 (depending on the system) in the central table of channels layer is disabled and can be enabled with configurable sensor.
- **Calculated**: to calculate the engaged gear with an algorithm based on RPM and speed; fill in "Highest gear number". Row labelled CH_8/12 (depending on the system) in the central table of channels layer can be enabled with configurable sensor.
- Calculated + neutral signal: Channel 8/12 (depending on the system): there is a neutral sensor that can be used to both see neutral gear and calculate the engaged gear. Fill in "Highest gear number". The central table of channel layer shows row labelled CH_8/12 enabled and set on calculated gear.

Note: "Calculated" and "Calculated + neutral signal: Channel 8/12" options are available only if EVO3 Pro/Pista is connected to a display that can show the engaged gear like MyChron3 Dash or Formula Steering Wheel. Moreover refer to paragraph 5.7 for further information on gear calculation.

9.5.4 – Speed reference box



It is possible to select the reference speed used for gear calculation and for some Race Studio Analysis calculation. Available option are the loggers speed(s) (depending on how many have been enabled) and ECU speed(s). In the figure above the logger has two enabled speeds and is connected to a Bosch ECU that transmits two speed channels.



9.5.5 – Output signal on pin 14 of the 22 pin connector



This function allows **EVO3 Pro** – and only **EVO3 Pro** – to send a signal to an external device, typically a display or an ECU. This output signal is connected to pin 14 of 22 pins Deutsch connector of **EVO3 Pro** and has the following characteristics:

- Voltage: Depends on the external pull-up voltage
- **Output duration**: about 0,8 seconds [for Lap (-) and Lap (+)only]
- **Type**: can be type "Lap" or type "Alarm".

Available options are:

- **None**: signal disabled.
- Lap (-) (idle status = external pull up voltage): when EVO3 Pro receives a lap signal, the signal emitted decreases from pull-up voltage (idle status) to 0V (lap) for about 0,8 seconds.
- Lap (+) (idle status = ground voltage): when EVO3 Pro receives a lap signal, the signal emitted grows from 0V (idle status) to pull-up (lap) voltage for around 0,8 seconds.
- **Shift lights**: when RPM are over threshold value, the signal emitted grows from 0V (OFF status) to pull-up voltage (ON status) for the time period the threshold value is overcome. This function can be useful to switch on an alarm led on the display.



9.6 – How to configure EVO3 Pro/Pista displays

EVO3 Pro/Pista available displays are: **MyChron3 Dash**, **TG-Dash** and **Formula Steering Wheel**. To configure the display (optional to the logger) activate the related layer:

Select configuration Channels Sys	stem configuration Display CAN-E	Expansions configurator
Available displays	None -]
	None M3-Dash TG-dash	
	Formula Steering Wheel	

The first time the layer shows up empty. Select the proper display through the drop down menu.

9.6.1 – How to configure MyChron3 Dash

Selecting **M3-Dash** display this configuration window appears.

Shift Lights	
Led 1 Led 2 Led 3 Led 4 Led 5	
SHIFT LIGHT	Display Page 1 - Channels and alarms Display page 2 - Channels and alarms
	Field 2 Channel_2 Field 2 Channel_4
0000 30 3000	LED Value LED Value
	HIGH None V 0 HIGH None V 0
	LOW None 🔽 0
2 8 . 68 . 1:20.35 9 4	Field 1 Channel_1 Field 1 Channel_3
	LED Value LED Value
	HIGH None 🔽 0 HIGH None 💌 0
	LOW None V 0 LOW None V 0

To configure this display see paragraph 8.5.1.



__Shift Lights -

9.6.2 – How to configure TG Dash

Selecting **TG-dash** display the related window appears It needs no via software configuration. Just select the display from the drop down menu.



9.6.3 – How to configure Formula Steering Wheel

Selecting "Formula Steering Wheel" display this window appears:

Led 1 Led 2 Led 3 Led 4 Led 5 0 0 0 0 0 0	
SHIFT LIGHT ► 1 2 3 4 5	Display Page 1 - Channels and alarms Display page 2 - Channels and alarms
	Field 2 Channel_2 Field 2 Channel_4
	LED Value LED Value HIGH None 0 HIGH None 0 LOW None 0 LOW None 0
	Field 1 Channel_1 Field 1 Channel_3
LED 2 089 1.20.33 LED 4	LED Value LED Value HIGH None 0 HIGH None 0 LOW None 0 LOW None 0

Display Pages 1 and 2 – Channels and alarm Boxes

–Display I	Page 1 - Channels a	nd alarms —
Field 2	Channel_2	•
	LED	Value
HIGH	None 🔽 0	
	None 🔽 🛛	
LOW		
LOW Field 1	Channel_1	•
		▼ Value
	Channel_1	▼ Value

These boxes allow to set the displayed channels connecting them to one of the four alarm led placed laterally on the display.

To set them:

- select the channel to show from the drop down menu;
- set it as High/Low alarm selecting the led to link it to
- fill in threshold value case.



Shift Light box

Shift Lights –				
Led 1	Led 2	Led 3	Led 4	Led 5
0	0	0	0	0

Sets the 10 led placed on top of the logger display. Led colors: the first two on the left and on the right are green, the central two are orange and the last four are red. The led switch progressively on and when the engine reaches RPM value fixed for led 5 all led start blinking, warning the pilot to shift gear.

If one case is set on "0" the corresponding led is disabled.

9.7 – Configuring CAN expansions

EVO3 Pro/Pista can be connected to different expansions that, communicating with it through the CAN bus, supply it with a lot of additional information without engaging any analog channel of the logger. To select the expansion to configure enable "CAN-Expansions configurator" layer shown here below.

📓 System mana	ger								
Current configuration	nsmit	Receive		CAN-Net in	ío 🚺	Set acquisition time	system		-
Installation name	Data logger type	Ecu	Vehicle name	Available time	Time with GPS	Total frequency	Master frequency	Expansions freq	Tot. Expansions
DEFAULT	EV03 PRO	None - None	DEFAULT	12.49.02 (h.m.s)	6.48.11 (h.m.s)	181 (Hz)	181 (Hz)	0 (Hz)	0
Add Exp	ansion 🖌	m configuration Disp Del. Expansion r expansion nsion" butte	ns		ne.				

In case of first expansion configuration or of very first configuration the layer shows up empty.

CAN expansions configuration procedure is the same for all AIM loggers. Refer to paragraph 7.6 (Configuring the CAN expansions **DaVid** excluded) and 8.6 (How to configure **DaVid**) for further information.

9.8 – Transmitting the configuration

To transmit the configuration the logger has to be switched on and connected to the PC USB port through the proper cable. Press "Transmit" button in system manager window and the system automatically transmits the configuration to the logger. See paragraph 4.4 for further information.



9.9 – Sensors calibration and auto-calibration

When the configuration has been transmitted it is necessary to perform calibration procedure, to say auto-calibrate the accelerometer, the gyroscope and the distance potentiometer and calibrate the gear sensor, the mid zero potentiometer and the zero based potentiometer installed on the vehicle. The procedure is the same explained for MyChron3 Car/Bike Plus/Gold/Extreme (paragraph 5.6).

Warning: if potentiometers, gyroscope and accelerometers have not been correctly calibrated it will not be possible to sample correct data nor the engaged gear or create the track map. Pls. pay particular attention to sensors calibration/auto-calibration procedures.

9.10 – Gear calculation

Gear calculation procedure is the same for all AIM loggers (paragraph 5.7).

9.11 – Online

When the calibration is over and the configuration has been transmitted to the logger it is suggested to enter "Online" pressing the corresponding button on the menu bar, in System Manager window or on the left vertical keyboard to check that all works correctly. Ensure that the logger is switched on and correctly connected to the PC. The window here below appears. See paragraph 5.8 for further information.

ipo sist	ema:		Versione del firmware:	Frequen:	za totale:	£
MXL PI	STA		14.86.0	296 (Hz	2)	91191 Mostra conteggi
N	ID	Nome canale	Sensore usato	Unità	Misura 🔥	Mostra mV
1	RPM	Engine	Giri motore	rpm	0	
2	SPD_1	Speed_1	Velocità	km/h .1	0.0	Batteria
3	CH_1	Channel_1	Generico lineare 0-5 V	V.1	0.2	13.705
4	CH_2	Channel_2	Generico lineare 0-5 V	V.1	2.6	13.705
5	CH_3	Channel_3	Generico lineare 0-5 V	V.1	0.0	
6	CH_4	Channel_4	Generico lineare 0-5 V	V .1	0.0	Memoria
7	CH_5	Channel_5	Generico lineare 0-5 V	V.1	0.0	1%
8	CH_6	Channel_6	Generico lineare 0-5 V	V.1	0.0	Memorizzazione ATTIVA
9	CH_7	Channel_7	Generico lineare 0-5 V	V.1	0.0	
10	CH_8	Channel_8	Generico lineare 0-5 V	V.,1	0.0	Ricevitore traguardo
11	CALC_GEAR	Calculated_Gea	Marce calcolate	#	0	0.00.000
12	ACC_1	LatAcc	Accelerometro trasversale	g .01	-0.75	In attesa - Ultimo giro nr. I
13	LOG_TMP	Datalogger_Tem	Giunto freddo	°C	27	
14	BATT	Battery	Batteria	V.1	13.7	Collegamento logger-pc
15	ECU_1	BOSCH_RPM	Sensore giri motore	rpm	4096	Comunicazione ATTIVA.
16	ECU_2	BOSCH_SPEED1	Velocità Bosch	km/h .1	64.0	
17	ECU_3	BOSCH_SPEED2	Velocità	km/h	ERR.	
18	ECU_4	BOSCH_OIL_PRES	Sensore pressione	bar .1	ERR.	Stato della configurazione
19	ECU_5	BOSCH_FUEL_PRE	Sensore pressione	bar .1	ERR.	Configurazione: OK.
20	ECU_6	BOSCH_ATM_PRES	Sensore pressione	mbar	ERR.	
21	ECU_7	BOSCH_FUEL_TEM	Sensore temperatura	°C	ERR.	
22	ECU_8	BOSCH_OIL_TEMP	Sensore temperatura	°C	ERR.	
23	ECU_9	BOSCH_ENGINE_T	Sensore temperatura	°C	ERR.	Esci Esci
24	ECU 10	BOSCH ATR TEMP	Sensore temperatura	<u>ەر</u>	FRR	Laci



Chapter 10 – How to download data

Once a test session is over it is possible to download data sampled by the logger. The software procedure is slightly different for the different loggers. On the contrary, the mechanical procedure is the same:

- connect the USB cable to the logger and to the PC USB port;
- switch the logger on;
- press "Download data" on the menu bar or on the left vertical keyboard.





10.1 – Download data from MyChron3 (all versions) and DaVid

Pressing download buttons the related window appears.

Warning: default setting is clear logger memory after saving data.

It is possible to disable that checkbox. The figures here below show the two options:

Dowr	nload - MYCHRON3			Down	load - MYCHRON3			
		Operation in progress				Operation in progress		
			11 %					11 %
	lear logger memory after savi	ng data			ear logger memory after s	aving data		
E	Browse C:\Programmi\	AIM\DATA\NEW.DRK			rowse C:\Programm	ni\AIM\DATA\NEW.DRK		
my test	Name (necessary):	NEW		my test	Name (necessary):	NEW		
2	Track:	None	Add / Modify	2	Track:	None	•	Add / Modify
3	Vehicle:	None	Add / Modify	3	Vehicle:	None	•	Add / Modify
	Driver:	None	Add / Modify		Driver:	None	•	Add / Modify
2	Championship:	None	Add / Modify	2	Championship:	None	•	Add / Modify
	Test type:	Generic testing	-		Test type:	Generic testing		•
Ø	Test comments:			4	Test comments:			
		Save	Cancel				Save	Cancel

On top of the window there is a waiting bar that shows download progression in percentage.

Dow	nload - MYCHRON3		$\overline{\mathbf{X}}$
Anterior		Operation in progress	
			100%
	ilear logger memory after savi	ng data	
	Browse C:\Programmi\/	AIM\DATA\NEW.DRK	annen annen annen 11111 annen 11111 annen
m≻ test	Name (necessary):	NEW	
6	Track:	None	Add / Modify
3	Vehicle:	None	Add / Modify
	Driver:	None	Add / Modify
9	Championship:	None	Add / Modify
E	Test type:	Generic testing	•
4	Test comments:		
		Save	Cancel

When download is completed " Save" button – bottom right – enables.



Pressing it without specifying anything the file is saved as "NEW.DRK" in this folder: "X:\Program files\AIM\DATA" (where X is the hard disk where **Race Studio 2** has been installed).

Save As			? 🗙
Save As Save in: Pecent Desktop	DATA	C 👌 🗗 🖽	?×
My Documents	Cartelle Controvse C		
My Network Places	File name: NEW.DRK Save as type: AIM - Race Studio 2 (".drk)		Save

It is also possible to save the file with some specific characteristics and in a desired folder following the procedure here explained.

Saving the file in a specific folder

- Press "Browse".
- "Save as" window appears.
- Browse it and select the desired folder.

Save As					? 🗙
Save in:	DATA		•	+ 🗈 💣 📰 •	
My Recent Documents	DIKE				
Desktop					
My Documents					
My Computer					
S					Weiter and an
My Network Places	File name:	NEW.DRK			Save
	Save as type:	File DRK (.drk)		_	Cancel

- fill in File name case.
- press "Save".



Saving the file with some specific characteristics.

Dow	nload - MYCHRON3			
. _A um		Operation in progress		
				100%
	lear logger memory after savi			
E	Browse C:\Programmi\A	MM\DATA\NEW.DRK		annan 1999 ann an 1999 ann a'
m≻ test	Name (necessary):	NEW		
2	Track:	None	•	Add / Modify
3	Vehicle:	None	•	Add / Modify
	Driver:	None	•	Add / Modify
2	Championship:	None	•	Add / Modify
E	Test type:	Generic testing		•
1	Test comments:			
			<u>S</u> ave	Cancel

Select the desired characteristics through the drop down menus placed beside the different characteristics: Track, Vehicle, Driver, Championship or Test type.

To add new characteristics:

• press lateral "Add/Modify" button and the window here below appears;



• fill in a new name in the top right case of the window;





- "<< Add value to database" button enables;
- press it and the new characteristic are inserted in the database;
- press "✓OK" button to save the new characteristic (or "Cancel" to quit without saving);
- the system comes back to the previous window;
- this new characteristic is now selectable from the drop down menu.

To modify or delete a characteristic

• press "Add/Modify" button and the window here below appears;



- select the characteristic to be deleted/modified
- "<< Modify database value" and "<< Delete database value" buttons enable;
- press the desired one;
- modify the characteristics if this is the selected option;
- press "✓OK" button to save changes (or "Cancel" to quit without saving);
- the system comes back to the previous window.

When all characteristics have been inserted press "✓ Save".



The system asks if the logger memory has to be deleted or not. Press the desired button.



During data download the system can show different warning messages:



The system informs the user that downloaded data have not been saved. Press "No" to save data before quitting.

RaceStu	ıdioConf		×
į		ady exists. odify the name in : new name manua	
	Sì	No	

The system warns that that file name already exists and gives two options:

- using a progressive nomenclature: press "Yes"
- filling in a new name manually: press "NO" and follow the procedure explained before.



10.2 – Downloading data from other systems

Pressing "Download data" button the related window, shown here below, appears.

0 5		ihoos RK F					AIM\DATA\ cle> <day><moi< th=""><th>nth><year (="" th="" yyy<=""><th>yy)>.drk</th><th></th><th></th><th></th><th></th><th></th><th></th></year></th></moi<></day>	nth> <year (="" th="" yyy<=""><th>yy)>.drk</th><th></th><th></th><th></th><th></th><th></th><th></th></year>	yy)>.drk						
Z ii			Se	lect	all		Deselect	t all	н	de runs i	marked as "Hid	den"	Ø	Options	
	Sel.	D.		Hi.		Driver	Vehicle	Date of Ru	n	Laps	Starting T	DR	DRK file name		
		6	÷,	7	t	None	None	February	18, 2008	1	08: 01: 33	2			
	, , , , , , , , , ,	0	1	7	Ţ	None	None	February	17, 2008	1	18: 20: 12	1			
	J	6	1	7	l	None	None	February	17, 2008	1	15: 45: 45	1			
					1.1				17:0000	Share.	40.40.07				
		» (e			l	None	None	February	17, 2008	-1	13: 43: 27	1			
			. 1	Y	l	None	None	February	17, 2008	1	13: 43: 27	1			
				Y		None	None Operation stat		17, 2008		13: 43: 27				

Data download from **MXL** and **EVO3 Pro/Pista** requires an inverted procedure compared to MyChron3 and DaVid one.

While before data were characterised after download, now it is necessary to before characterise the data and after download them.

Starting download procedure the system shows - in the central table - data stored in the logger memory.

This window allows to select which data to download, if showing or hiding and how to group them.



Choose folder button

This button allows the user to select the file destination folder.



As shown here above, the system has a default destination folder, that is on the hard disk where **Race Studio 2** is installed (in this case hard disk "C"). To save the data elsewhere press "Choose folder" button. "Choose folder" window appears:

Choose Folder
Choose DRK folder
🗈 💼 Ahead 🛛 🔼
🕀 🛅 AIM
🖻 🛅 AIM_USB_RIVER_2008
CFG
CFGEV3
COLORS
CONTACT_US
🗀 DASHBOARD
DATA
Folder: DATA
New Folder OK Cancel

Browse it to select the destination folder or create a new one pressing "New folder" button.



DRK File name button

This button allows to save data with a custom name.

(S)	DRK File Name	<pre><priver><vehicle><day><month><year (="")="" yyyy="">.drk</year></month></day></vehicle></priver></pre>
-----	---------------	--

As shown in the figure above, the default name has some specific characteristics that have to be defined.

In case user does not select these characteristics they are automatically set on "None", as shown here below:

0	C	hoose	fold	er	C:\Pro	grammi)/	IM)DATA)							
E)	D	RK Fil	e Nar	ne	Conversion of the second se	r> <vehi< th=""><th>cle><day><m< th=""><th>lonth><year (="" th="" yy<=""><th>yy)>.drk</th><th></th><th></th><th></th><th></th><th></th></year></th></m<></day></th></vehi<>	cle> <day><m< th=""><th>lonth><year (="" th="" yy<=""><th>yy)>.drk</th><th></th><th></th><th></th><th></th><th></th></year></th></m<></day>	lonth> <year (="" th="" yy<=""><th>yy)>.drk</th><th></th><th></th><th></th><th></th><th></th></year>	yy)>.drk					
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		•	1 🔽	l	None		None		17, 2008		18: 20: 12	1	NoneNone17022008_003	.drk
		0	1 🔽	1	None		None		17, 2008		15: 45: 45	1	NoneNone17022008_003	.drk
			1 4	ι	None	-	None	February	17, 2008	1	13: 43: 27	1	NoneNone17022008_003	.drk
					Non Non	eNo eNo	ne1702 ne1702	2008_00 2008_00 2008_00 2008_00	3.drk 3.drk)			
						-					0.9	6		_

To define the characteristics press "DRK file name" button and the window here below appears.

DRK File Name		
Choose name items Driver Vehicle Year Month Day LoggerType Test Number Year (yy) Custom Text Hour Minutes Seconds Custom text	Add to name	Name of DRK file <pre>Coriver><vehicle><day><month><year (="")="" yyyy="">.drk for example MIKESUPERCAR03032008</year></month></day></vehicle></pre>
		Sancel

To fill in each field:

- select it from "Choose name items" case;
- place the pointer in the point where to insert the item;
- press "Add to name";

To insert a custom text in the name, insert it in the related case;

- select the custom text from the left list;
- place the pointer in the point where to insert the new item;
- press "Add to name";

When all name characteristics have been defined press " \checkmark OK" (or "Cancel" to quit without saving) and the new name is saved.



Central keyboard



These buttons allow to decide which data to download.

- Pressing "Select all" button all runs stored in the logger memory are downloaded.
- Pressing "Deselect all" no run is downloaded.
- To **download only some runs**: select them manually in the central table. As shown here below, placing the mouse pointer near to each run the system automatically shows the actual setting of that run. Just change it as needed.



⊠ ≣		Se	lect all	1		
N	Sel.	D	Hi	Driver		
1	1	6	V 1	None		
2	V 1	(6) /	V 1	None		
3		Will not	be do	wnloaded		
4	The.	61	V 1	None		

Pressing "**Option**" button it is possible to decide how to group runs, if showing them or setting them as hidden after download. The figures below show the two options.

🕫 Options	🕫 Options 🔀
Methods to group runs in .DRK file I. One .DRK file for each run 2. One .DRK file for runs with same date 3. One .DRK file for all runs Option of showing runs Check this box if you want runs automatically set as "hidden" after downloading.	Methods to group runs in .DRK file
<mark>√∕ OK C</mark> ancel	V OK Eancel

In case the choice is to set run as hidden after download it is possible to show them in a second time pressing "**Show run marked as hidden**" button on the central keyboard of download window.



Bottom keyboard



Bottom buttons manage data download and memory deletion of the logger.

- "Clear data logger memory": deletes the logger memory without downloading data.
- "Download selected runs, then clear memory": downloads selected runs and then deletes the logger memory.
- "Download selected": downloads selected runs and does not clear logger memory.

Note: each time an operation involving memory deletion is performed the system asks for confirmation showing the related window.

Clear logger mer	nory	×
Â	Please choose what to do with logger memory:	
×	Clear DO NOT	clear

"DO NOT clear memory": quits data download without performing it nor deleting the logger memory.

When data download is set and data characteristics defined, press the desired download button. Download waiting bar starts showing the download progression and at the end the software comes back to **Race Studio 2** main window.

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				5ele	ect a	lle		Desele	act all	н	ide runs i	marked as "Hid	den"	Options.	
N	Sel.		D		Hi.,	. Driver	000	Vehicle	Date of R	un	Laps	Starting T	DR	DRK file name	
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2		1	•	+	•	l None		None	February	17, 2008	1	18: 20: 12	1	NoneNone17022008_003.drk	Т
3	V	1	•	1	•	l None		None	February	17, 2008	1	15: 45: 45	1	NoneNone17022008_003.drk	Т
4		1	•	1	•	l None		None	February	17, 2008	1	13: 43: 27	1	NoneNone17022008_003.drk	T
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				1				Downloading of	data						
-												28	70	(
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