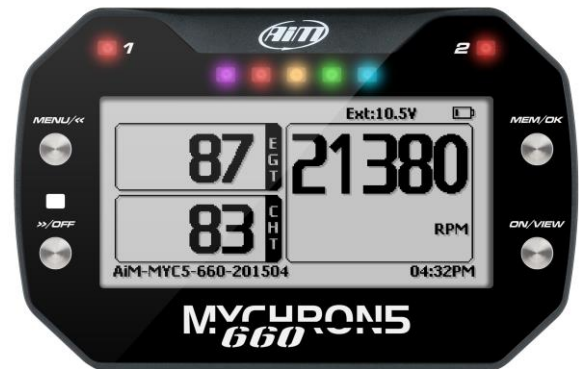


# User Manual

## MyChron5 660 – 660

Release 1.00





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## 1 – MyChron5 660 in a few words

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MyChron5 660 is the new AiM system properly designed and developed for dragsters with integrated GPS Module. It features:

- 1 speed input
- 2 temperature inputs for cylinder head and exhaust gas thermocouple
- 2 configurable alarm LEDs
- 5 RGB LEDs configurable as shift lights or alarm
- 4 Gb internal memory
- Lithium rechargeable battery

### **Is MyChron5 660 an expandable logger?**

Yes, MyChron 5 660 can be connected to AiM LCU-One CAN and no configuration is needed. MyChron5 660 detects it at the only condition that the connection is made before switching the logger on.

### **Which data does MyChron5 660 samples and records?**

MyChron5 660 samples and records 50 times per second (50 Hz) Engine RPM, wheel speed in MPH (calculated by jackshaft, RPS and final jackshaft RPM). All data can be downloaded to a PC and analysed through Race Studio Analysis software, freely downloadable from [www.aim-sportline.com](http://www.aim-sportline.com) sw/fw download section.



## 2 – What is in the kit

---

MyChron5 660 kit includes:

- MyChron5 660 (1)
- CAN Extension Module (2)
- Dragster split cable (3)
- Phonic wheel kit (4) made up of Teflon and composed of two parts: an internal ring that includes 4 magnets and an external bushing that protects the internal ring. The external bushing is fixed to the internal ring using two hex screws.
- Magnetic wheel speed sensor with nuts (5) composed of a sensing end inside the brass threaded cylinder and a 250mm (10") long cable
- Cylinder head thermocouple (6)
- Exhaust gas thermocouple (7)
- USB Cable (8)
- Battery charger with cable (9)

### PHOTO OF THE KIT

Each item can be bought separately as spare part with the following part numbers:

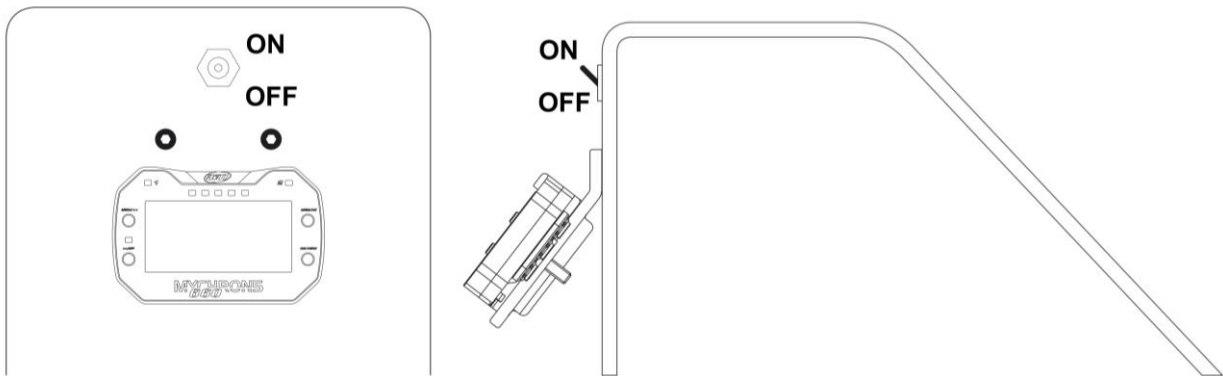
- |   |                        |
|---|------------------------|
| • CAN Extension Module  | <b>X08EXCAN00</b>      |
| • Dragster split cable  | <b>V05CCB04MDR</b>     |
| • Phonic wheel kit for dragster                                   | <b>DNKTRF660</b>       |
| • Magnetic wheel speed sensor                                     | <b>XSMSNVB301</b>      |
| • Cylinder head thermocouple                                      | <b>X05SOT14A4516MS</b> |
| • Exhaust gas thermocouple  | <b>3CVGAS807</b>       |
| • USB Cable   | <b>X90TMPC000</b>      |
| • Battery charger with cable available with four different plugs: |                        |
| ○ European plug   | <b>X06AHB068</b>       |
| ○ UK plug   | <b>X06AHB069</b>       |
| ○ USA plug  | <b>X06AHB070</b>       |
| ○ Australian plug   | <b>X06AHB071</b>       |

## 3 – Installation, connections and powering

Each item of the kit needs to be carefully installed, MyChron5 660 first. Incorrect installation may result in system malfunction.

### 3.1 – Installing MyChron5 660

MyChron5 660 allows the mechanics to set up the engine carburetion immediately before the race. For this reason it is important to install it in a place where the mechanics can see its display while working on the dragster engine. A commonly used position is the metal bulkhead which separates the racer's seat from the engine. AiM recommends to install MyChron5 660 under the engine ON/OFF switch.



As shown here above on the right the logger needs a bracket. Use an aluminium or steel self-made bracket a 0.1" (2.5 mm) thickness so to resist the vibration when the engine is on. Firmly fix the bracket to the vertical bulkhead and then fix MyChron5 660 to the bracket. Please be careful not to overtighten the mounting nut; this can cause damage to the display unit case.

### 3.2 – Installing the RPM wire

RPM wire needs to be connected to the dragster ON/OFF switch. The switch is in most cases a 2 poles (some switches only are a 1 pole). The two poles are RPM and coil. RPM wire should be going to the coil side of the kill switch. Running it to the grounded side of the switch causes RPM signal to drop in and out and sometimes not to work at all. Being the ON/OFF switch opposite of the bulkhead drill a 0.2" (5mm) hole inside the bulkhead and remember to insert the rubber wire-holder in the hole to protect RPM wire from tears and cuts.

**AiM recommends to keep RPM wire as far as possible from temperature ones while connecting the first to MyChron5 660. If RPM and temperature wires are wrapped together temperature channels might be noisy.**

### 3.3 – Installing Exhaust Gas thermocouple

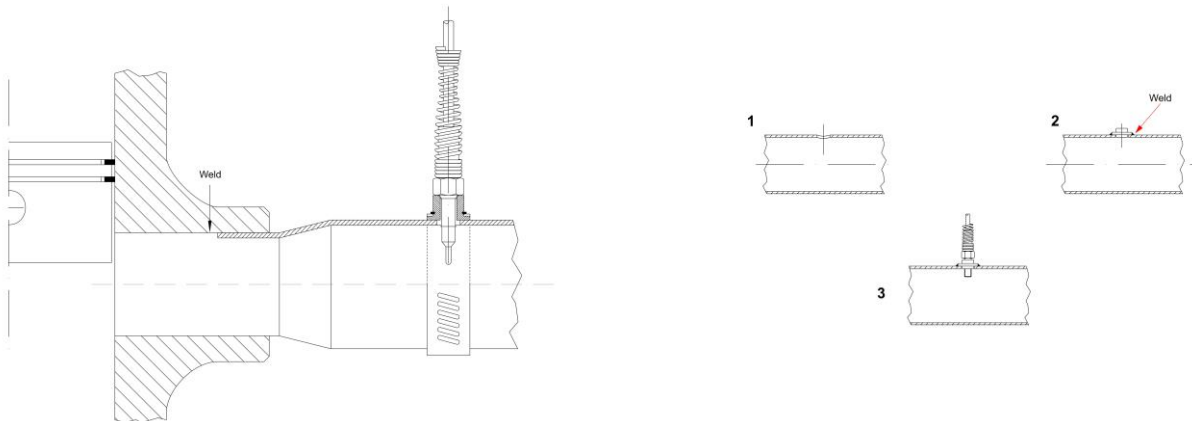
Install EGT (Exhaust Gas Thermocouple) inside the exhaust header pipe at a distance of approximately 5.9" (150 mm) from the exhaust port and between 25% and 50% inside the exhaust gas header. For a correct installation follow these steps:

- drill a 0.2" (5mm) hole inside the exhaust header
- fix the metal wrapper to the exhaust header pipe in the hole you have drilled; please remember: pipe hole and wrapper threaded must be coaxial
- screw EGT thermocouple in the wrapper nut and firmly fix it. Plug the thermocouple male Mignon connector to the EGT input wire of the "dragster split cable"

EGT thermocouple can also be installed using a steel adapter to be welded to the exhaust header following these steps:

- drill a 0.4" hole inside the exhaust header (1)
- weld EGT adapter inside the hole (2)
- screw the EGT thermocouple inside the EGT adapter (3)
- plug the EGT thermocouple male Mignon connector to the EGT input wire of the 2 temperatures split cable (part number **V02CCB04MDR**).

Here below is an EGT thermocouple installed on the right and an installation with steel adapter on the right.

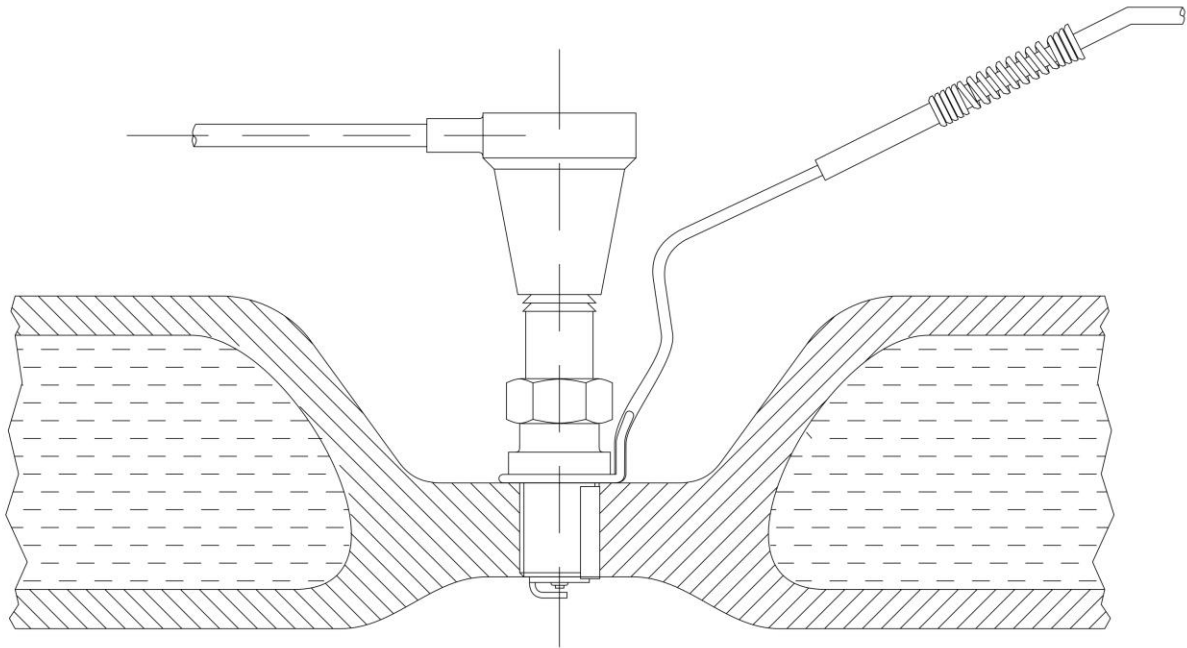


### 3.4 – Installing the Cylinder Heat Thermocouple

To install the cylinder head thermocouple:

- remove the spark plug washer
- insert the sensor
- tighten the sensor but be careful to minimise movement in order to avoid damage.
- plug the thermocouple male Mignon connector to the sensor 2 temperatures split cable (part number **V02CCB04MDR**).

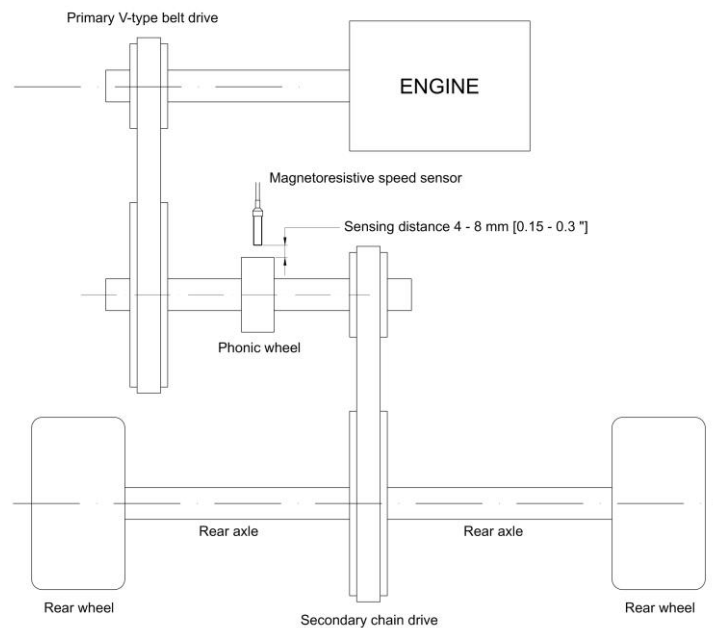
The image here below shows a cylinder head thermocouple correctly installed.



### 3.5 – Installing the speed sensor

To sample the dragster speed a magneto-resistive speed sensor (part number **XSMSNVB301**) is to be installed at a 4-8 mm distance from the phonic wheel (part number **DNKTRF660**) that is to be installed on the jackshaft (3/4" diameter) moved by the clutch. The movement of jackshaft and wheel are related to the crown/pinion ratio.

The scheme below shows the layout of the installation.



To correctly install the speed kit, follow these steps:

- remove the pinion and insert the phonic wheel (internal diameter 3/4") on the jackshaft.
- fix the phonic wheel to the jackshaft screwing the nut.
- install the magneto-resistive speed sensor on a self-made bracket; please remember that sensing distance – the distance between the sensor and the phonic wheel – is to be 4-8mm (0.15"-0.3")
- plug the speed sensor male connector in the 4 pins Binder 712 female connector rear of MyChron5 660 highlighted here below.





### 3.6 – Connecting MyChron5 660 to sensors and LCU-One CAN expansion

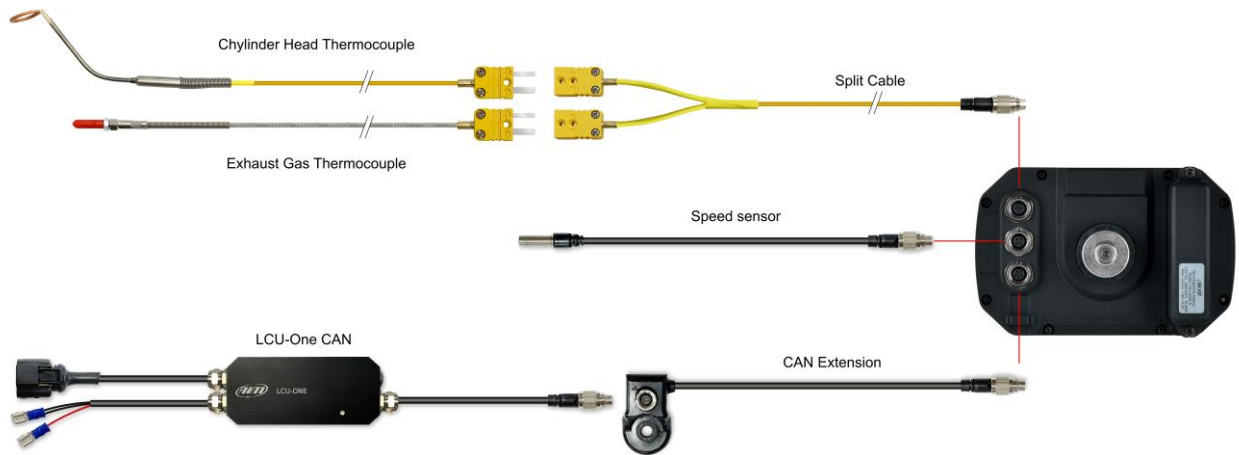
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To connect MyChron5 660 to the temperature sensors included in the kit:

- connect the 5 pins Binder 712 male connector of the dragster split cable to the 7 pins Binder 712 female connector placed top rear of the logger.
- connect exhaust gas temperature thermocouple mignon male connector to one of the two mignon female connector of the dragster split cable.
- connect cylinder head temperature thermocouple mignon male connector to the other mignon female connector of the temperature split cable.
- connect the 4 pins Binder 712 male connector of the speed sensor to the 4 pins Binder 712 female connector placed central rear of the logger.
- connect 5 pins Binder 712 male connector of CAN Extension Module to 5 pins Binder 712 female connector placed bottom rear of MyChron5 660.
- connect 5 pins Binder 712 male connector of LCU-One CAN to 5 pins Binder 712 female connector of CAN Extension.

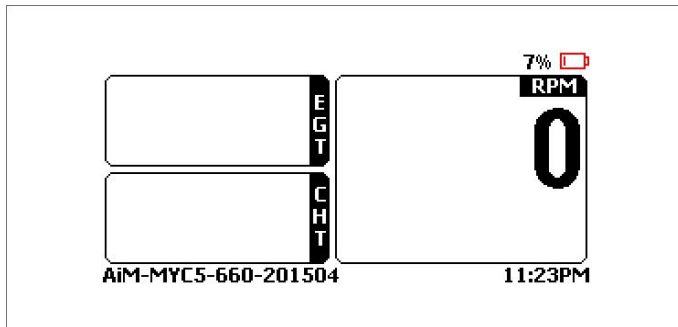
**Please remember to always keep RPM wire well separated from thermocouples cables in order to minimize interferences.**

Here below is a complete connection schematic.



### 3.7 – Powering MyChron5 660

MyChron5 660 is powered by a rechargeable lithium battery. When the battery level is low the corresponding icon blinks on the display (left image below) Disregarding this blinking can cause logger shut down during the race. Before shutting down a warning message appears on the display.

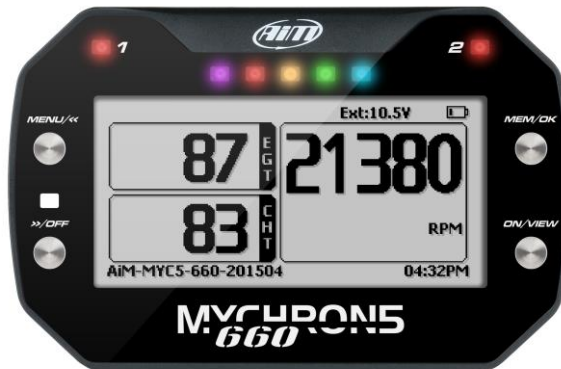


To recharge the battery remove it from the logger unscrewing the screws highlighted here above on the right, place it on the charger shown here below on the left. The charger has a green LED on the bottom (right image below) that blinks while charging the battery. When the battery is charged it becomes steady.



## 4 – MyChron5 660 keyboard and configuration

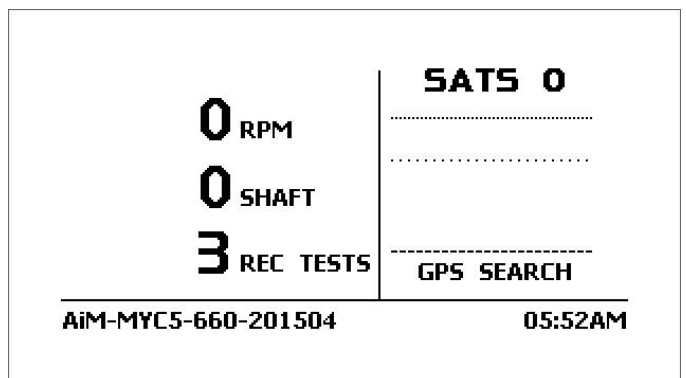
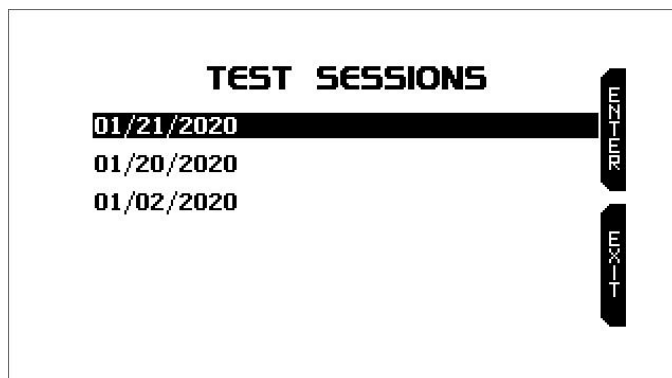
MyChron5 660 has 4 metal pushbuttons.



The pushbuttons are used to

- MENU/←:
  - enter configuration menu.
  - scroll to the previous option.
- >>/OFF:
  - scroll to the next option.
  - switch MyChron5 660 off
- MEM/OK:
  - recall sampled data (left image below)
  - confirm a choice.
- ON/VIEW:
  - switch MyChron5 660 on
  - check that all sensors and expansions are connected and work properly as well as to know the number of recorded tests; it also shows MyChron5 660 serial number bottom left of the page (right image below).

**Please note:** MyChron5 660 has an auto power off features that switches it off after 10 minutes of inactivity.



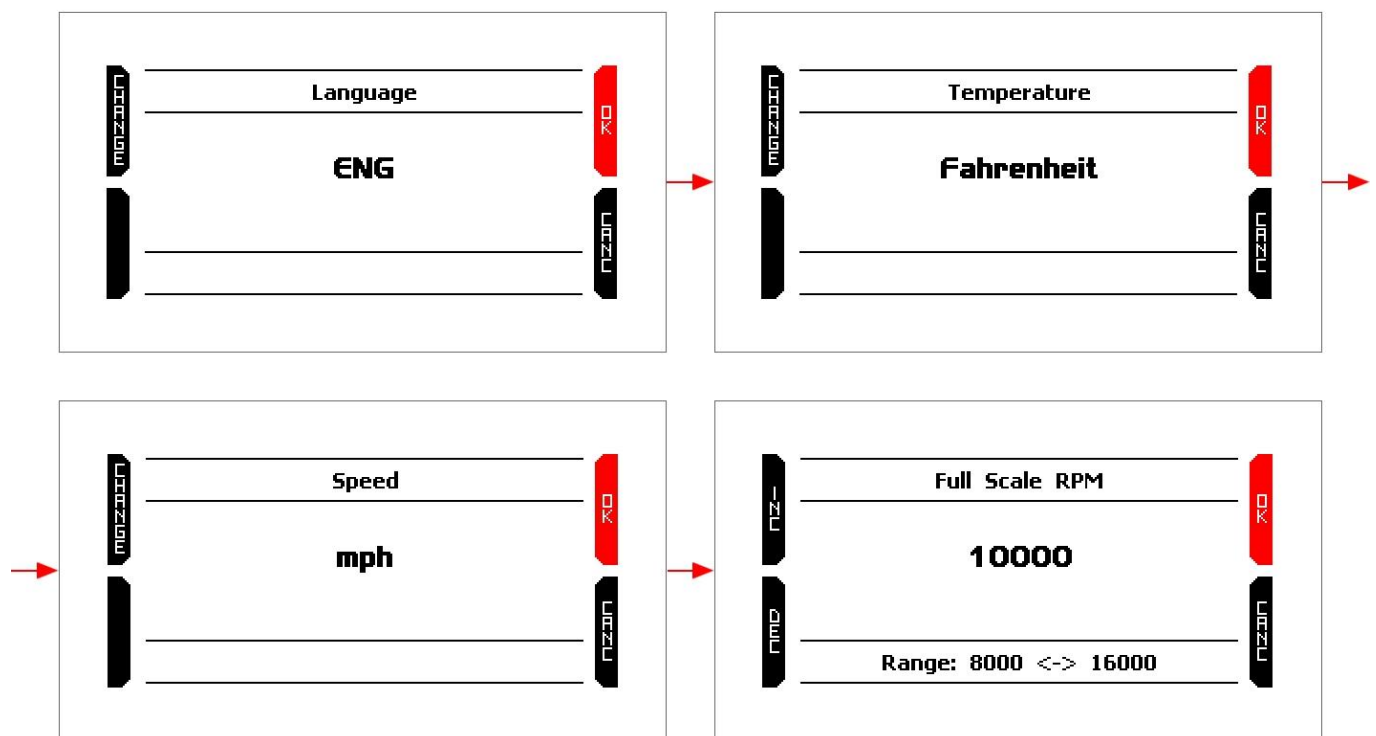


## 4.1 – Configuration Wizard

MyChron 5 660 has a very useful configuration wizard that automatically activates when switching MyChron5 660 for the very first time. It allows to quickly configure language, temperature and speed measure unit as well as RPM scale.

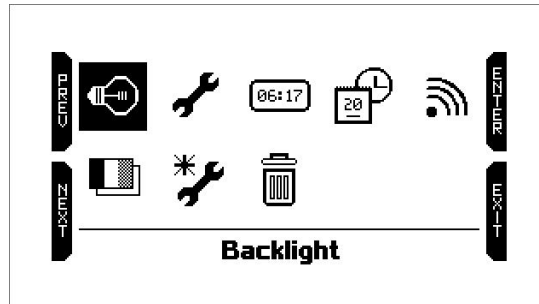
**Please note:** it will start each time MyChron5 660 is switched on until it is completed at least once. On the contrary once completed it is possible to restart it scrolling the icons in "MENU" page and selecting the icon shown here above. Images here below show the sequence.

Use "CHANGE" button to select the options and "OK" button to switch from the steps. Please refer to the single paragraphs to know which options are available for each function.

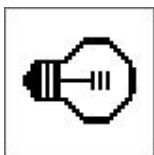


## 4.2 – Configuration Menu

All MyChron5 660 configuration option can be set via keyboard. Press "MENU/<<" to enter the Menu and this page shows up.



The icons are for:



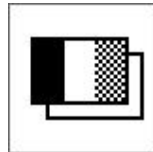
Setting MyChron5 660 backlight



Setting MyChron5 660 Wi-Fi



Enter MyChron5 660 "System setting" menu



Setting MyChron5 660 language



Setting MyChron5 660 Engine pass counters



Enter MyChron5 660 Configuration Wizard (see paragraph 4.1)



Set MyChron5 660 Date and Time

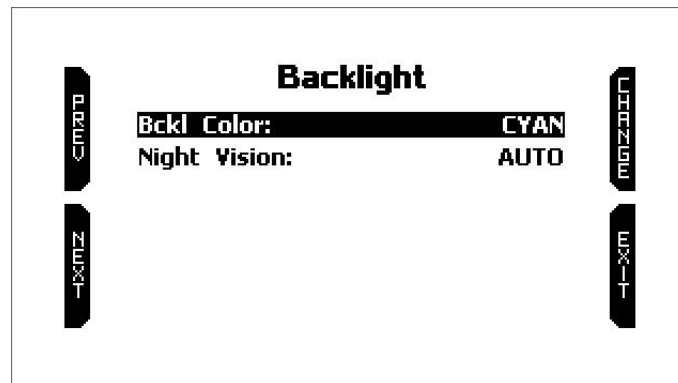


Clear MyChron5 660 memory



## 4.2 – Backlight

To set MyChron5 660 backlight select the icon shown here above in “MENU” page and press “ENTER”.



Here it is possible to set:

- backlight colour; available options are:
  - cyan
  - white
  - purple
  - red
  - green
  - yellow
  - blue
  - magenta
- night vision:
  - ON
  - AUTO: the ambient light sensor placed central left of MyChron5 660 switches the backlight ON/OFF according to the ambient light conditions
  - OFF

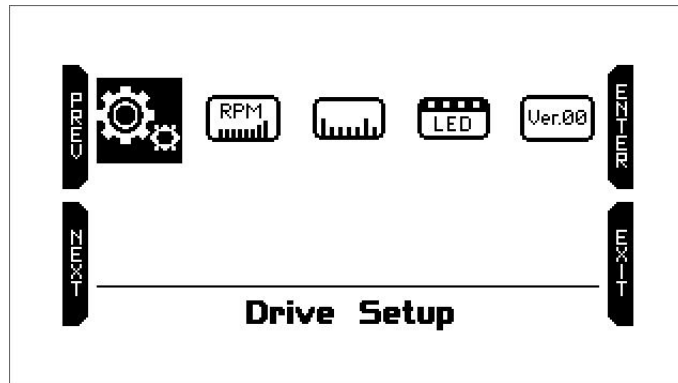
Use:

- “CHANGE” button to change the setting
- “PREV”/“NEXT” buttons to scroll the options
- “EXIT” to quit and save

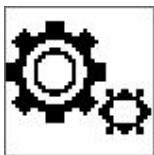
### 4.3 – System Settings



To set MyChron5 660 select the icon shown here above in "MENU" page and press "ENTER".



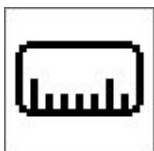
This menu allows to set the main functions of MyChron5 660 as well as to see the information of your MyChron5 660.



Drive Setup



RPM Setup



Unit of measure



LED Steup



System Info





### 4.3.1 – Drive Setup

To set MyChron5 660 Drive select the icon shown here above in “System Setting” page and press “ENTER”. This page allows to setup the following parameters:

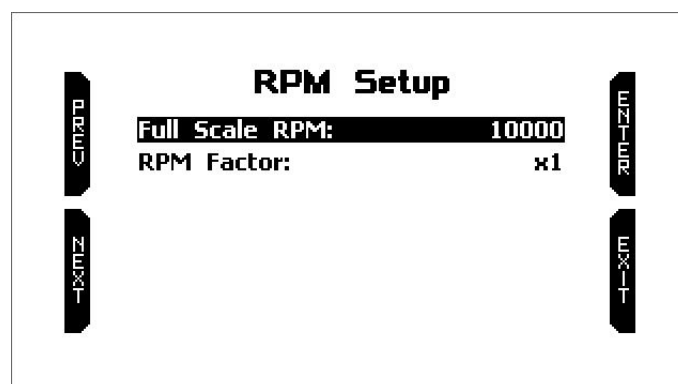
- Tire Rollout or wheel circumference (range 10.00-120.00 inches): this parameter is fundamental to correlate wheel angular speed and dragster speed.
- Drive gear (pinion) teeth number (range 5-49)
- Driven Gear (crown) teeth number (5-199)
- Recording time: Standard or extended (minimum shaft standard 3500; minimum shaft extended 1500); with tall gearing in high index classes, extended recording time will assure that data at the beginning of the pass are not clipped.



### 4.3.2 – RPM Setup

To set MyChron5 660 RPM select the icon shown here above in “System Setting” page and press “ENTER”. This page allows to setup the following parameters:

- Full scale RPM: range value: 8.000-16.000
- RPM Factor, available options:
  - x1
  - x2
  - /2



### 4.3.3 – Unit of measure



To set MyChron5 660 RPM select the icon shown here above in “System Setting” page and press “ENTER”. This page allows to setup the temperature Unit of measure. Available options are: Fahrenheit and Celsius.

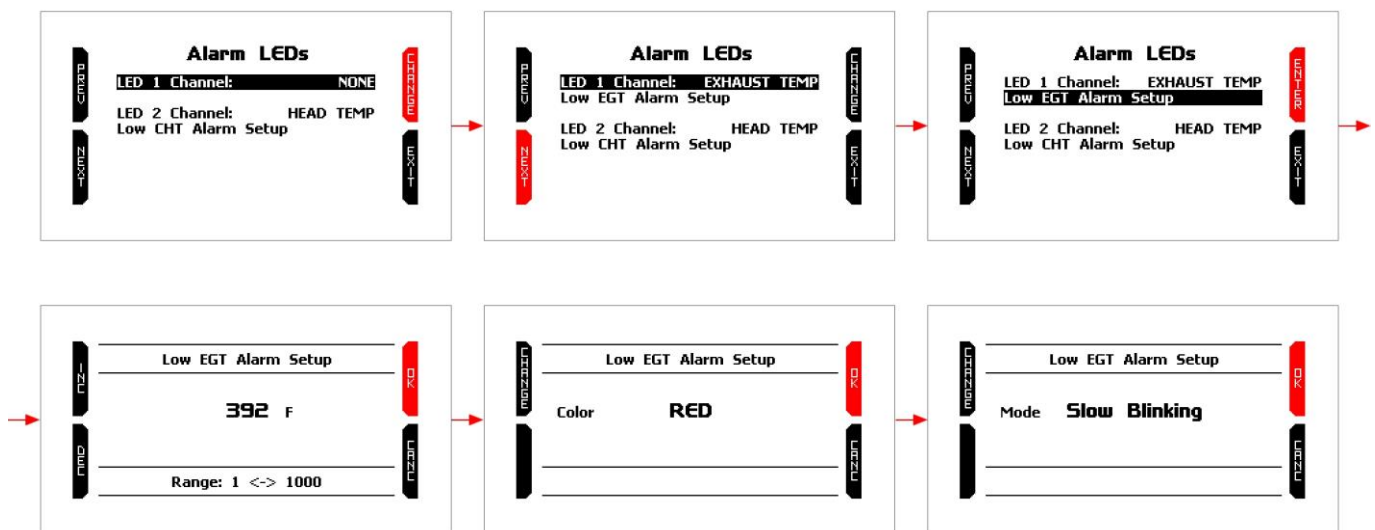
### 4.3.4 – LED Setup



To set MyChron5 660 LED select the icon shown here above in “System Setting” page and press “ENTER”. MyChron5 660 top LEDs can work as temperature alarm. To set them follow these steps:

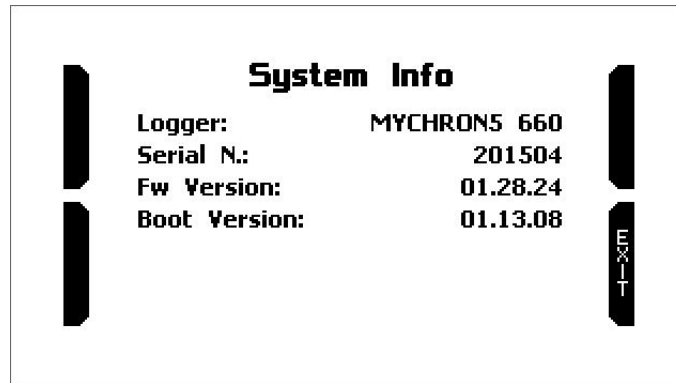
- select the icon here above and press “ENTER”.
- Default setting of LED 1 is NONE: press “CHANGE”.
- The LED links to Exhaust Temp: press “NEXT”
- Low EGT Alarm Setup selects: press “ENTER”
- First setting in alarm threshold (range 1-1000 °F / 1-550° C)
- Second setting is LED Colour: available options are:
  - Red (as in the example)
  - Green
  - Yellow
  - Blue
  - Magenta
  - Cyan
  - White
- Select the desired option and press “OK”
- Third Setting is blinking frequency; available options are:
  - slow blinking (as in the example)
  - fast blinking
  - continuously
- Select the desired option and press “OK”.
- Repeat the operation for LED 2.

The image below shows the sequence of the pages as they are shown by MyChron5 660.



### 4.3.5 – System Info

To see MyChron5 660 information select the icon shown here above in “System Setting” page and press “ENTER”.

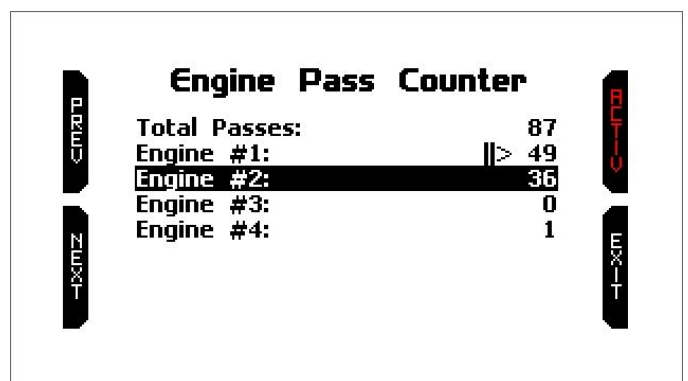
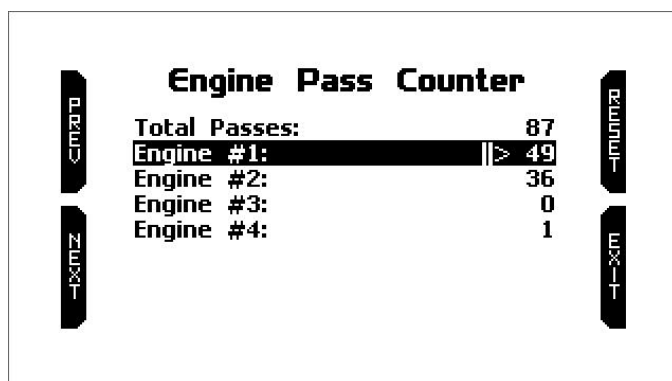


### 4.4 – Engine Pass Counters

MyChron5 660 is equipped with 4 engine pass counters. To activate/reset any of them press the icon above in “MENU” page and the related page shows up.

The Engine pass counter active is indicated by an arrow (“Engine #1:.... 49” here below on the left). Press “RESET” to reset it. To activate another engine pass counter:

- press “NEXT” and scroll all counters to reach the desired one.
- press “ACTIV” to activate it.

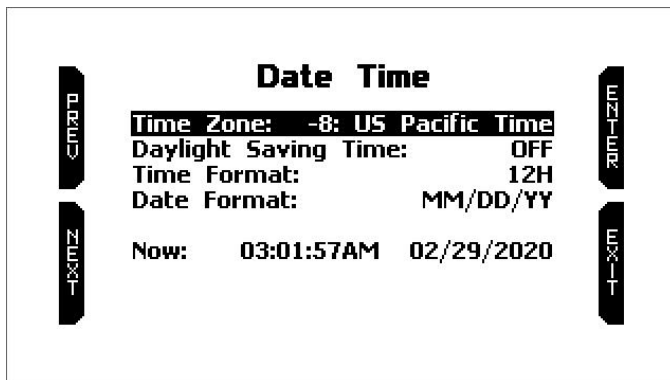




## 4.5 – Date time

To set MyChron 5 660 Date and time select the icon shown here above in “MENU” page and press “ENTER”. Here you can:

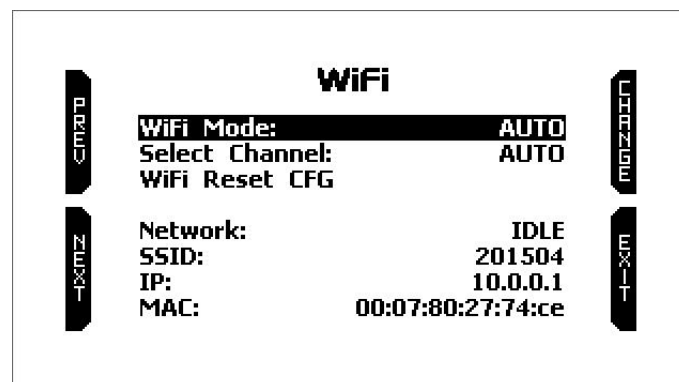
- set Time zone: press “ENTER” to enter time zone page and select the desired time zone (left image below)
- enable/disable daylight saving time: press “CHANGE” to switch among the options.
- set time format: 12H or 24H: press “CHANGE” to switch among the options.
- set Date Format: MM/DD/YY or DD/MM/YY or YY/MM/DD: press “CHANGE” to switch among the options.
- press “EXIT” to quit and save.



## 4.6 – Wi-Fi



To set MyChron 5 660 Wi-Fi select the icon shown here above in “MENU” page and press “ENTER”. Here you can manage Wi-Fi as well as reset its configuration.



**Wi-Fi modes** are:

- Auto: switches Wi-Fi on when the vehicle is stopped and automatically switches it off when MyChron5 660 starts recording
- ON: Wi-Fi always on
- OFF: Wi-Fi always off

“**Wi-Fi Reset CFG**” allows you to reset Wi-Fi configuration and is very useful if you do not remember the Wi-Fi password.



## 4.7 – Language

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To set MyChron 5 660 Language select the icon shown here above in “MENU” page and press “ENTER”. At present available languages are (in this order):

- English
- Italian
- Deutsch
- Spanish
- French
- Dutch
- Dansk
- Portuguese
- Japanese
- Czech

Use “CHANGE” button to scroll the options and “EXIT” button to quit and save.

## 4.8 – Configuration Wizard (see paragraph 4.1)

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This function is the first one that activates when switching on MyChron5 660 for the very first time. See paragraph 4.1 to know how it works.



## 4.9 – Clear memory

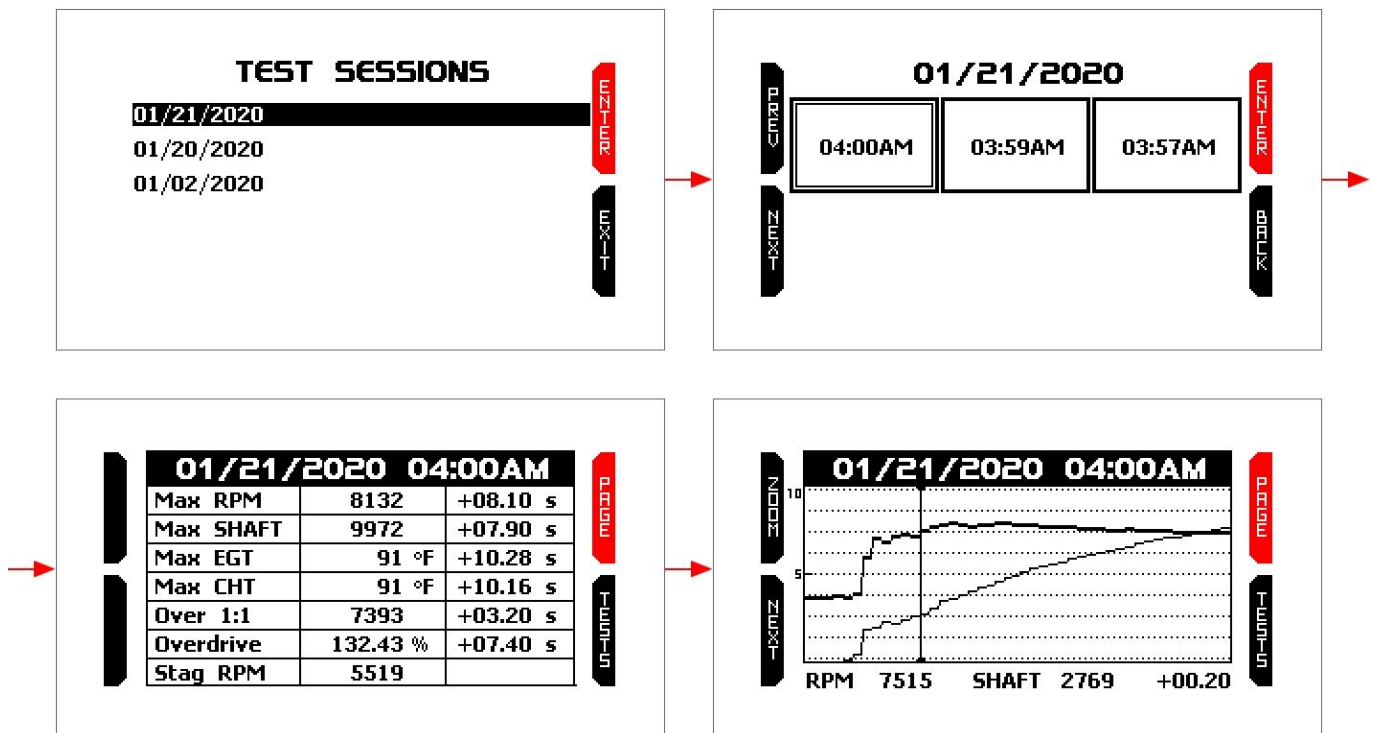
---

To clear all MyChron 5 660 memory select the icon shown here above in “MENU” page and press “ENTER”. The system asks for confirmation.

## 5 – Data Recall

After a test session it is possible to recall sampled data pressing “MEM/OK” button. Data recall is made up of four pages shown here below:

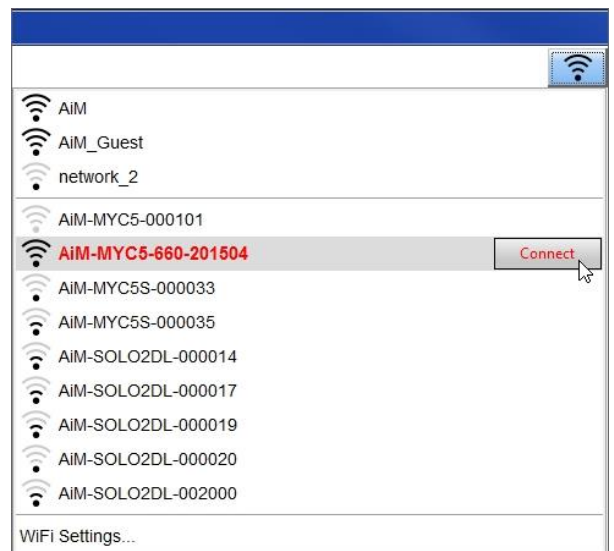
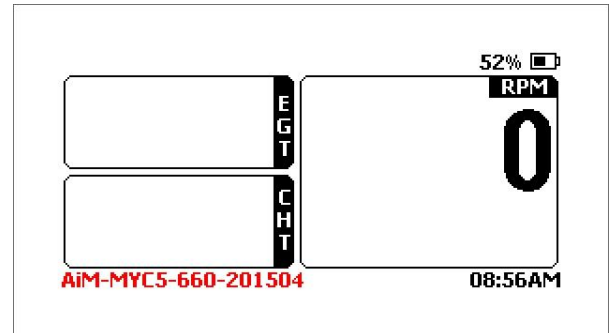
- Test Sessions (top left):
  - press ENTER to enter test summary.
  - press “EXIT” to quit data recall.
- Test Summary (top right):
  - use “PREV” and “NEXT” button to scroll the tests.
  - press “ENTER” to see the values sampled during the selected test.
  - press “BACK” to come back to test sessions summary page.
- Selected test values (bottom left):
  - press “PAGE” to see the graph of the test.
  - press “TESTS” to go back to test summary page.
- Selected test graph (bottom right):
  - press “ZOOM” to zoom the graph.
  - press “NEXT” to move the cursor.
  - press “PAGE” to switch among selected test values and this page.
  - press “TESTS” to come back to test summary.




## 6 – Connection to the PC

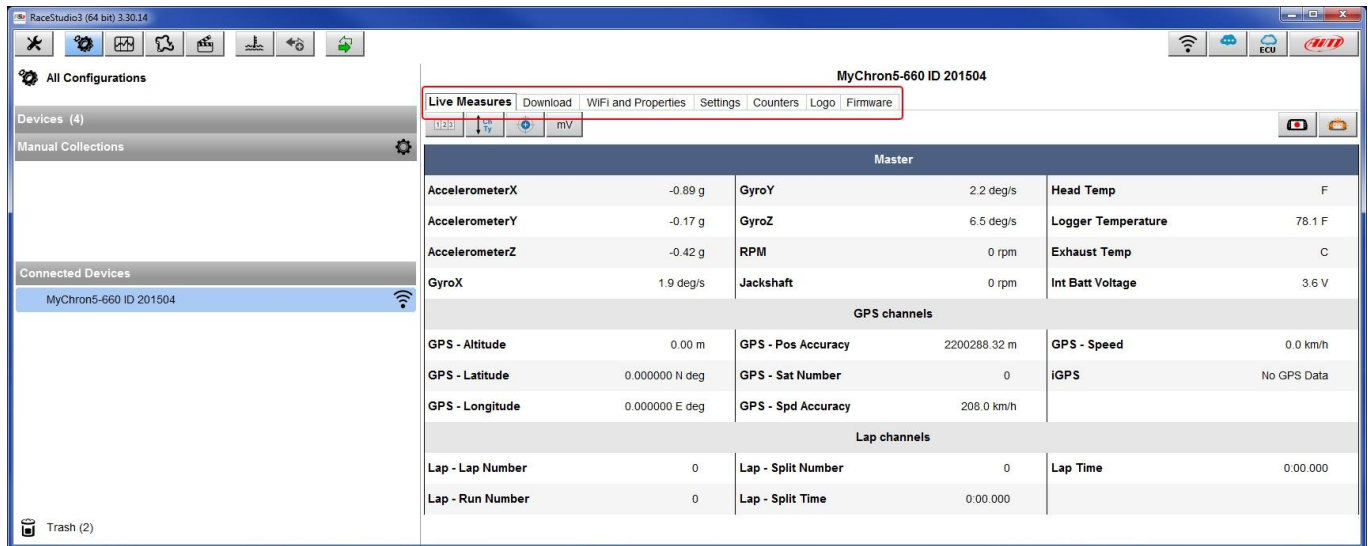
You can connect MyChron5 660 to a PC **only** via Wi-Fi. To do it:

- check that MyChron5 660 Wi-Fi is set on “AUTO” (paragraph 4.6) or on “ON”.
- read your MyChron5 660 name – bottom of MyChron5 660 home page – or look for it in “System Information” page.
- click RaceStudio3 Wi-Fi icon and select your MyChron5 660. After a few moments the connection is established.



Once connected to RaceStudio3 it is possible to enter the software device window. To do so:

- click on “Configurations” icon (  ) left of the software top keyboard then
- click MyChron5 660 that appears bottom left of the software window under “Connected devices” label.



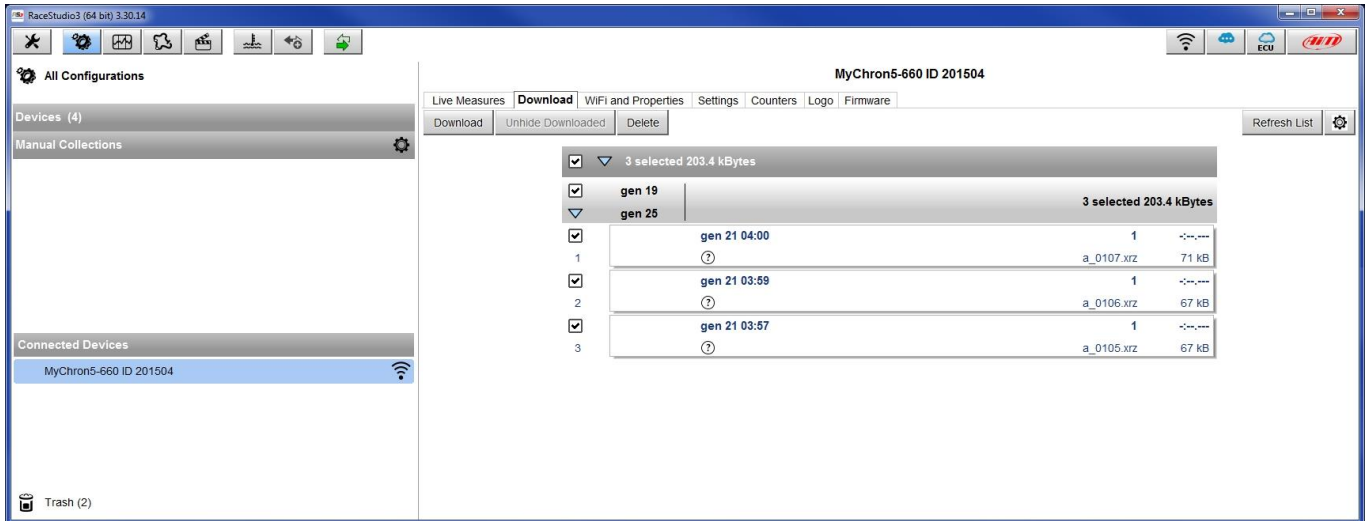
Device Window (shown here above) is made up of five layers:

- **Live Measures:** to check all MyChron5 660 channels.
- **Download:** to download data, see chapter 7.
- **Wi-Fi and Properties:** to manage the Wi-Fi configuration – see chapter 8.
- **Settings** to:
  - set date format.
  - enable/disable daylight time.
  - set time format and time zone.
  - set backlight colour.
  - enable/disable night vision.
- **Counters:** to reset the four engine pass counters as well as name them; to name a counter double click on “Engine #x” and the cell becomes editable
- **Logo:** transmit/receive the logo that shows up when switching MyChron5 660 on; supported image format are JPEG or BMP; always use the most recent Windows versions (Windows8 or Windows10) whose graphic libraries are more updated
- **Firmware:** to see connected expansions and check or update MyChron5 660 firmware version.



## 7 – Data download and Analysis

Once MyChron5 660-PC connection is established activate “Download” tab to download sampled data.



This page shows all the files stored in the system available for download. Select one or more files and press “Download” to download and analyse them.

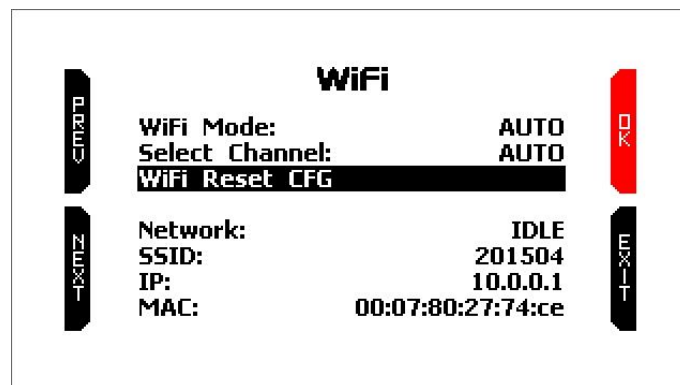
## 8 – W-Fi Configuration

Here you can manage Wi-Fi as well as reset its configuration.

As said in paragraph 4.6 available Wi-Fi modes are:

- ON: Wi-Fi always on
- AUTO: switches Wi-Fi on when the kart is stopped and automatically switches it off when the kart starts recording (RPM value higher than 850).
- OFF: Wi-Fi is always OFF

“**Wi-Fi Reset CFG**” option allows to reset Wi-Fi configurations and is very useful if Wi-Fi password is missed.



MyChron5 660 Wi-Fi configuration can be made only using RaceStudio3 software. Two possible Wi-Fi modes are available:

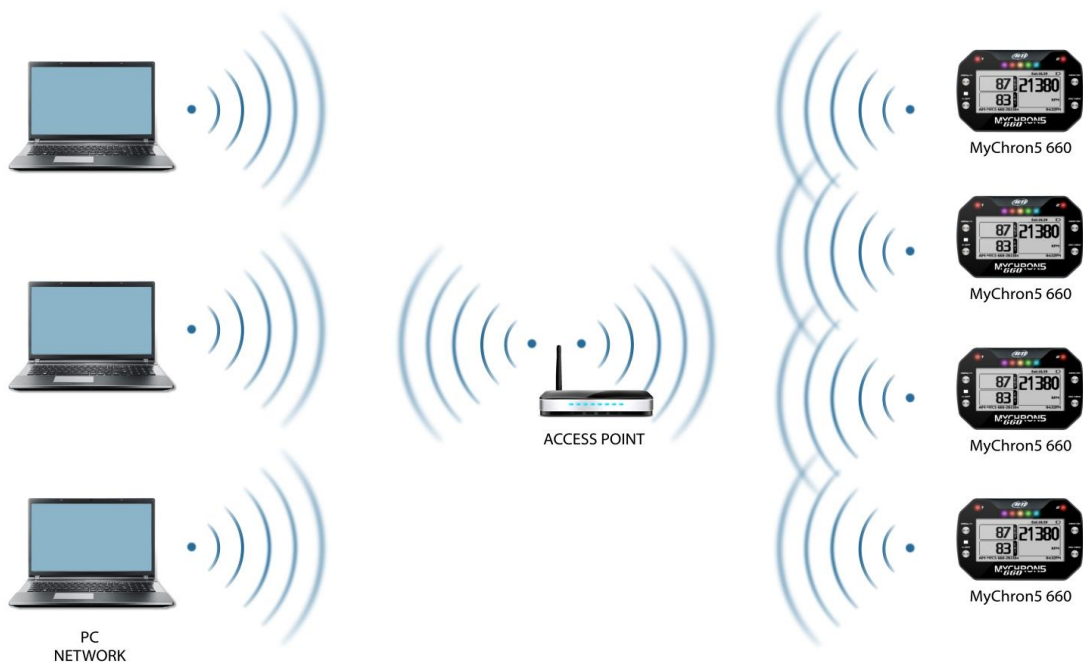
**1 – As an Access Point (AP – default setting)**

This is the ideal configuration if you have one only device and one only computer. In this situation, your MyChron5 660 creates a Wi-Fi network and works as an Access Point you can connect your PC to.



**2 – Existing network (to connect to an existing Wi-Fi network – WLAN)**

This mode is more complex and implies an external access point (AP) but is also more flexible and powerful because allows the communication among more than one device and more than one computer in the same network. MyChron5 660 and the PC must connect to an existing Wi-Fi network made by a device that works as an external Access Point.



When working in WLAN mode MyChron5 660 has two available security levels:

- network authentication: network password
- device authentication: MyChron5 660 password

Both levels allow you to use different strategies. A PC in WLAN, for example, can see several AiM devices but can communicate only with those he knows the password of.



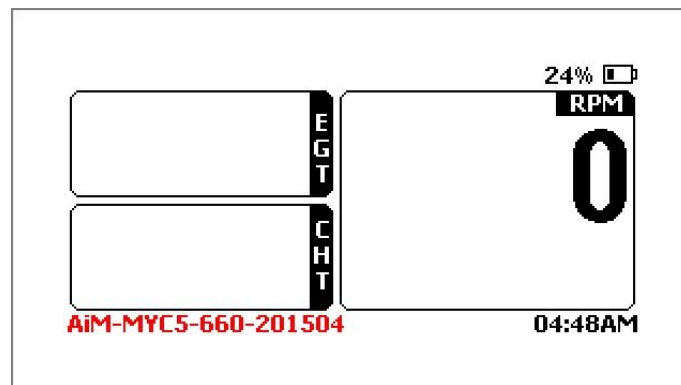
If you forget the password, you can reset Wi-Fi configuration from MyChron5 660 menu as explained at the beginning of this chapter.

## 8.1 – Configuring MyChron5 660 as an Access Point (AP)

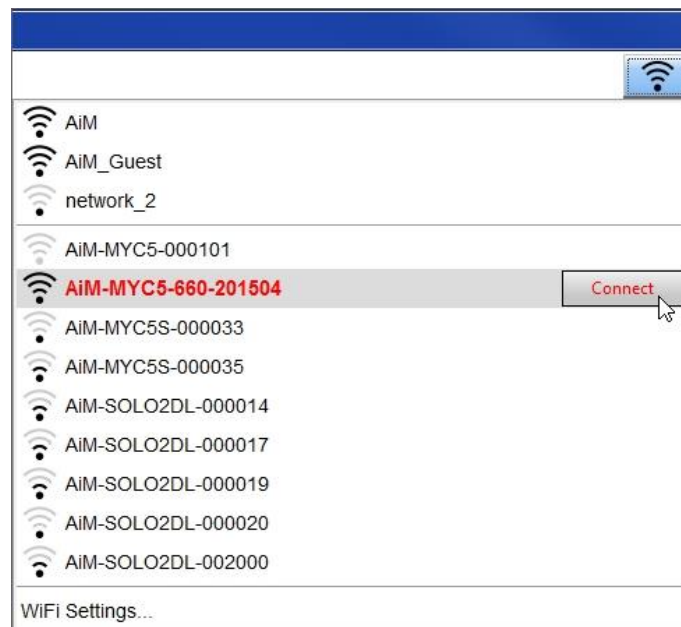
This is MyChron5 660 default configuration and is the easiest and most direct connection mode, ideal if you want to communicate with one MyChron5 660 using one PC. It is free and so completely accessible by anyone. Please set an access password as soon as possible.

To establish a Wi-Fi connection:

- ensure that Wi-Fi is enabled.
- read your MyChron5 660 name in the bottom line of the display main page (AiM-MYC5-660-20154 in the image below).



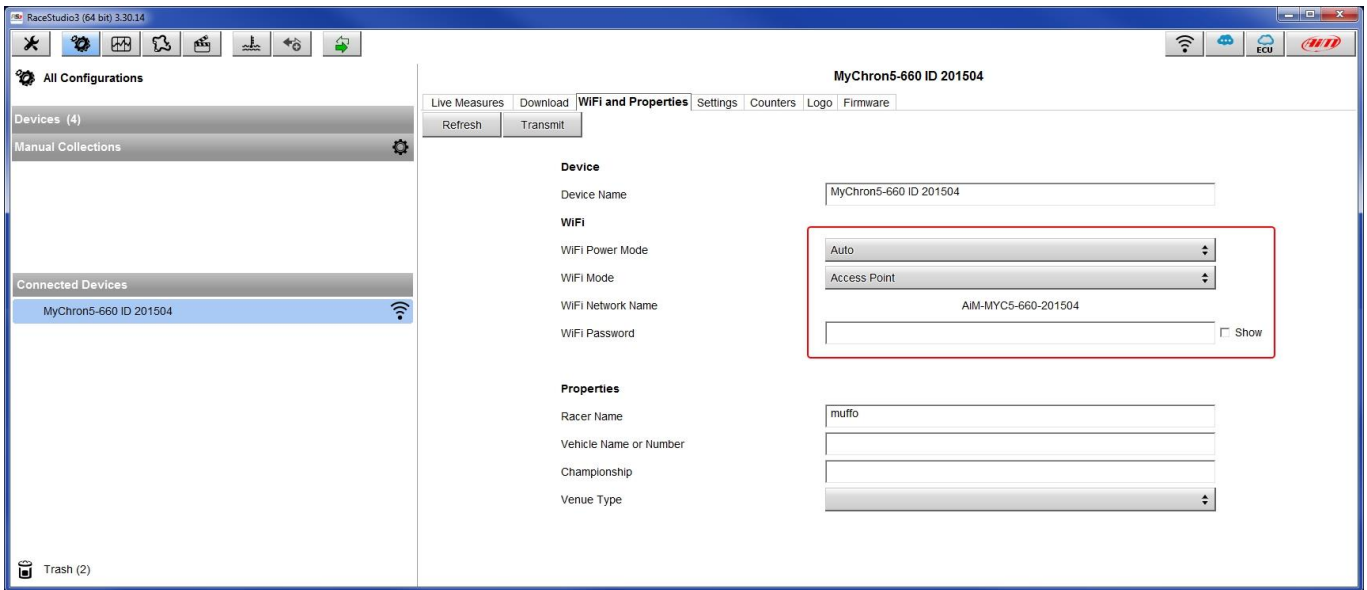
- run RaceStudio3.
- click Wi-Fi icon and select your device.
- in a few seconds, the connection is established.



To set other parameters create a unique password to protect your device/your network. With a password, the communication is safe and encrypted using WPA2-PSK standard.

Characters allowed in the password are all letters, also capital, all digits and these characters: '+- \_ 0 1 2 3 4 5 6 7 8 9 ! ? ^ # @ \* \ \ " = ~ : ; / % "

"Space" type can be used if it is not the first one because this could cause incomprehension in some Windows versions.



This AP or SSID name is unique for your device.

An example of name is: **"AiM-MYC5-660-201504"** where:

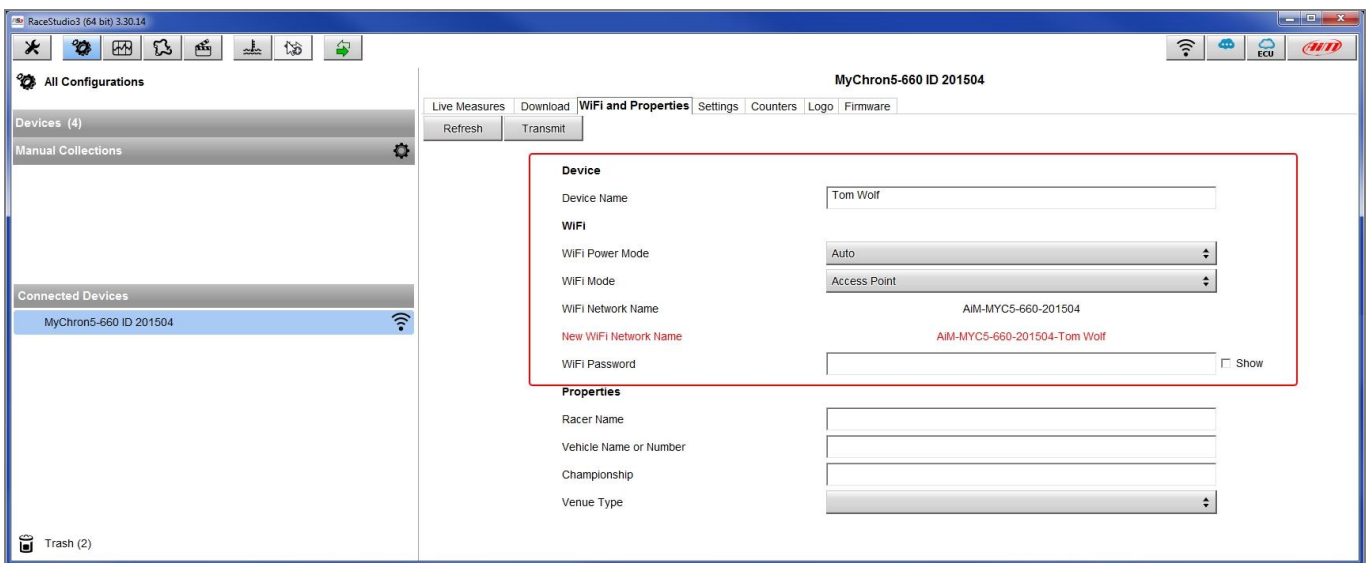
- "AiM" is the prefix of all AiM devices.
- "MYC5-660" is the device identifier.
- "201504" is your device serial number assigned by the factory.

To make your device more recognizable you can add a name to the SSID. with the limit of eight characters. Allowed characters are all letters, capital too, all digits and these characters: ' + - \_ ( ) [ ] { } !.

"Space" type can be used provided that it is not the first one because it can cause incomprehension in some Windows versions.

If, for example, you add the driver's name, Tom Wolf, the network name (SSID) becomes: **"AiM-MYC5-660-201504-Tom Wolf"**.

Once all parameters set click "Transmit". MyChron5 660 reboots and is configured with the new parameters. If MyChron5 660 is protected by a password, as recommended, RaceStudio3 will ask that password to authenticate.



**Please Note:** the same Wi-Fi connection can be created with the operative system tool.



Once the device has been authenticated in the Wi-Fi network you can communicate with it using RaceStudio3.

## 8.2 – Adding MyChron5 660 to an existing network.

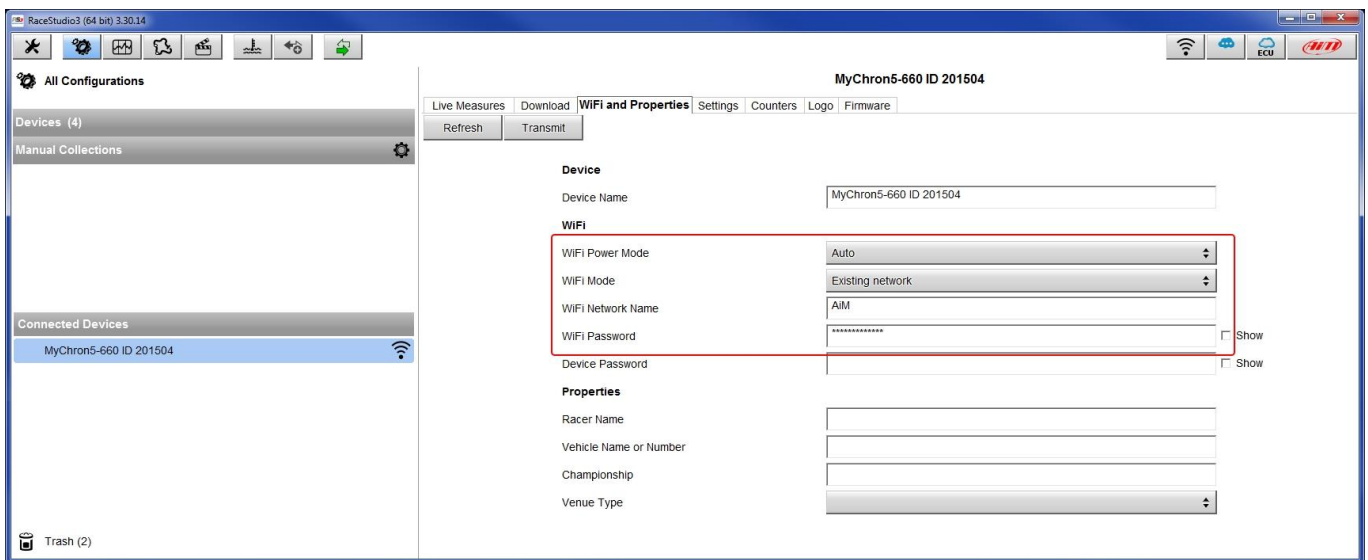
This situation is ideal for a team with multiple drivers and staff members and allows the communication among more AiM devices using the same PC network. Each MyChron5 660 can have its password that adds another security and privacy level to the network.

Enter “Wi-Fi and properties” tab and set it on “Existing Network”; fill in network name, network password and device password.

Transmit the network settings to your device clicking “Transmit”: your device reboots and joins that network.

**Please note:** the only admitted password are those following WPA2-PSK standard.

To complete this procedure use RaceStudio3 software as here explained.



Here above you see a device “MyChron5 660 ID 201504” that is switching from AP to WLAN (“Existing Network”) mode.

Network name is “AiM” and does not work with free access because is protected by a password.

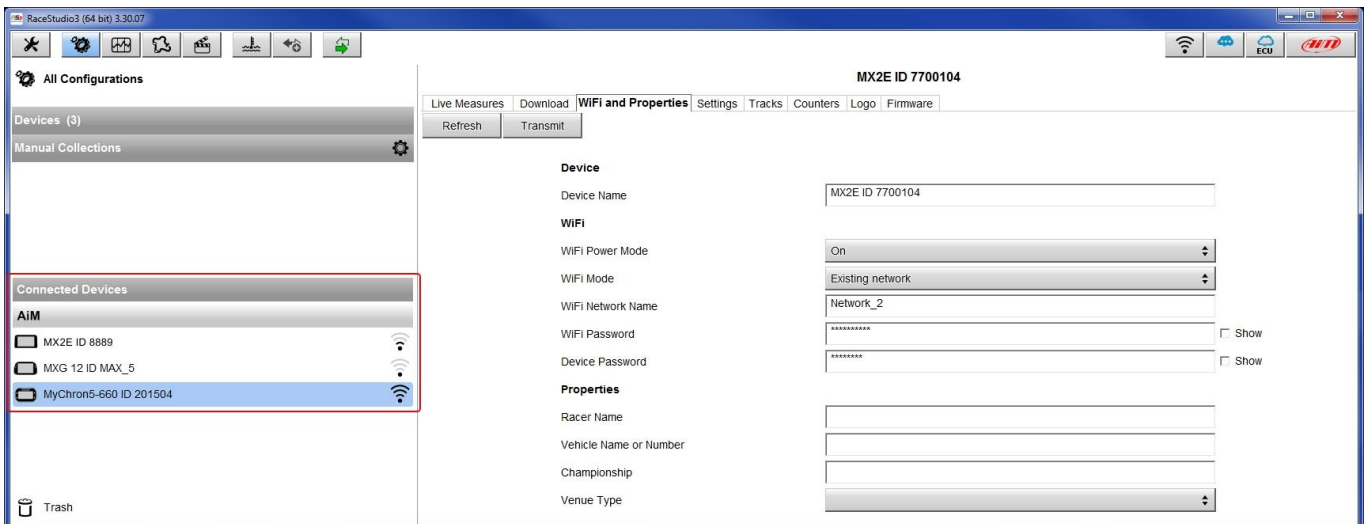




To obtain connectivity on the device the PC has to be authenticated to the same network as shown here below.



When the PC is authenticated to the network called "AiM" it can see all devices you configured to access the same network. In the image below three AiM devices are connected to the same "AiM" WLAN.



### 8.3 – Wi-Fi network settings

In this chapter is a short description of how to configure a WLAN including AiM devices and a PC. Here below is an example of configuration.

#### ROUTER SETTINGS

Use this section to configure the internal network settings of your router. The IP Address that is configured here is the IP Address that you use to access the Web-based management interface. If you change the IP Address here, you may need to adjust your PC's network settings to access the network again.

**Router IP Address :**

**Subnet Mask :**

**Device Name :**

**Local Domain Name :**  (optional)

**Enable DNS Relay :**

#### DHCP SERVER SETTINGS

Use this section to configure the built-in DHCP Server to assign IP addresses to the computers on your network.

**Enable DHCP Server :**

**DHCP IP Address Range :**  to

**DHCP Lease Time :**  (minutes)

**Always Broadcast :**  (compatibility for some DHCP Clients)

**NetBIOS announcement :**

**Learn NetBIOS from WAN :**

**NetBIOS Scope :**  (optional)

**NetBIOS node type :**

- Broadcast only (use when no WINS servers configured)
- Point-to-Point (no broadcast)
- Mixed-mode (Broadcast then Point-to-Point)
- Hybrid (Point-to-Point then Broadcast)

**Primary WINS IP Address :**

**Secondary WINS IP Address :**

For better network performances we suggest the use of a network device equipped with a DHCP server and using 3x3 MIMO technology like, for example a Linksys AS3200.

To maximize the bandwidth the Internet should not be allowed on this WLAN; this means that the DHCP server should be configured without any DNS address nor gateway by default.



The parameters for the device network configuration are:

- **Wireless network name: AiM**  
It means that the WLAN network name is "AiM." A PC must be authenticated in this network to interact with any AiM device of this network.
- **Gateway address: 192.168.0.1**  
primary DNS server: 0.0.0.0  
secondary DNS server: 0.0.0.0  
(These settings prevent Internet connectivity on this WLAN.)
- **Subnet mask: 255.255.255.248**  
Enable DHCP server: yes.  
DHCP IP address range: 192.168.0.2 to 192.168.0.6

These settings enable a DHCP server running on this WLAN and provide an IP address in a 2-6 range. This means that this network allows 5 network hosts.

The number of devices on a WLAN network depends on the subnet mask. Here below are typical examples of network masks and IP addresses range.

The configuration in bold is the one we suggest (if a greater number of devices is not needed), being the one that makes it easier and quicker for Race Studio 3 the identification of the devices in the network.

Subnet mask:	IP address range:	Number of devices:
255.255.255.0	192.168.0.1 – 254	254
255.255.255.128	192.168.0.1 – 126	126
255.255.255.192	192.168.0.1 – 62	62
255.255.255.224	192.168.0.1 – 30	30
255.255.255.240	192.168.0.1 – 14	14
<b>255.255.255.248</b>	<b>192.168.0.1 – 6</b>	<b>6</b>

## 8.4 – The Internet connectivity

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For an optimal speed of AiM device(s) it is recommended not to allow the Internet on the same network and to set the WLAN in the same way.

The Internet access can of course be allowed on the network but this would degrade the communication.

This slightly slower speed can be suitable but a second Wi-Fi connection through an additional hardware (NIC) is to be preferred.

This configuration would provide an optimal speed of the data network of your AiM device(s) and at the same time would provide an internet connectivity with the second NIC.

## 8.5 – Connection issues

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It can occur that MyChron5 660 logger is correctly connected to Race Studio 3 via Wi-Fi, but the user interface does not show it. This may be because Wi-Fi port setting is set with a static IP. To switch it to dynamic (DHCP):

- open "Network and sharing centre" in the Windows™ research engine.
- right click on the Wi-Fi connection and a panel shows up.
- select "Properties" option.
- double click on "Internet Protocol version 4 (TCP/IPv4)"
- verify that option "Obtain an IP address" is active.

For further information refer to FAQ section, Wi-Fi of [www.aim-sportline.com](http://www.aim-sportline.com).

## 8.6 – Working on Mac™ with virtualized Windows™

RaceStudio3 only works on Windows™ operative systems; Mac users can use a virtualized Windows™ machine.

The main problem is that the host OS (Mac) must share its Wi-Fi interface with the virtualized operative system (Windows) as Ethernet interface and not as Wi-Fi interface.

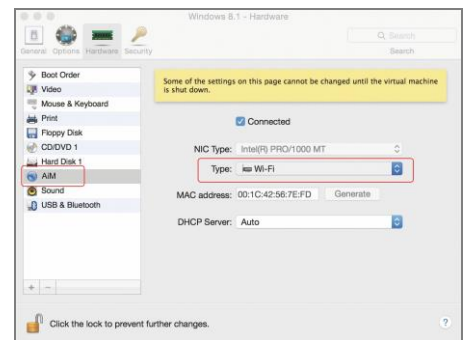
### Configuring Parallels (™)

Select “Menu → Configure...” in Parallels.

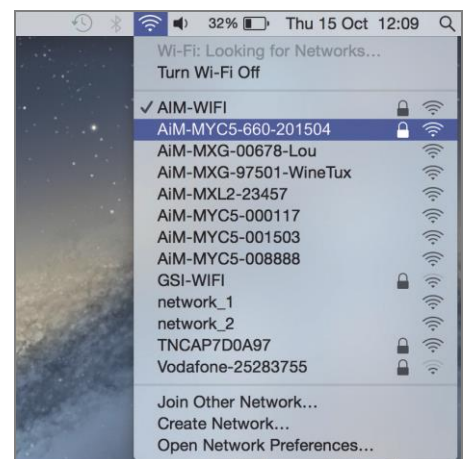


Press “Hardware” – top on the page that shows up – and select “Network” in the drop-down menu on the left.

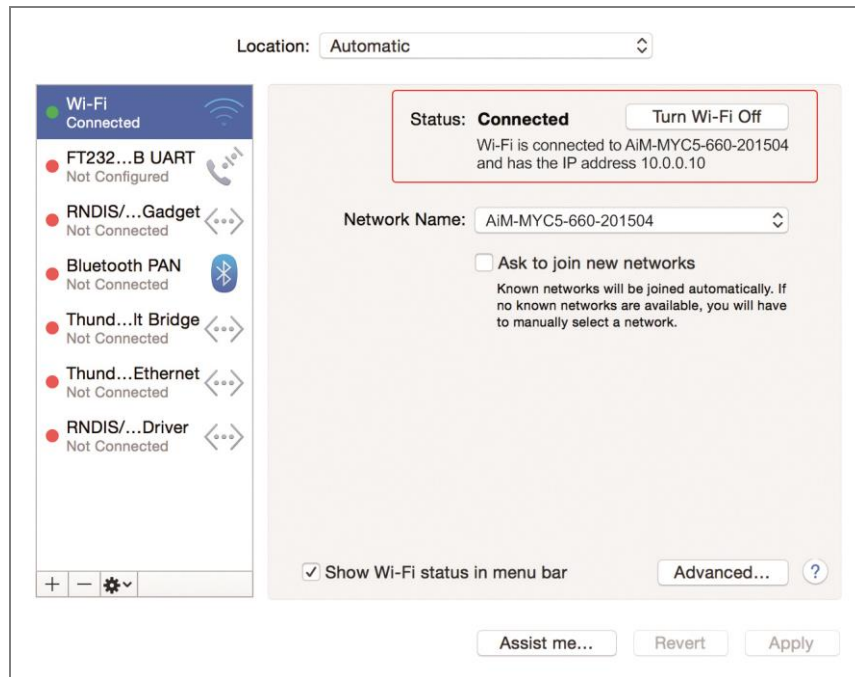
Right on the configuration panel set "Type" field on “Wi-Fi”.



Then select the device to communicate with.

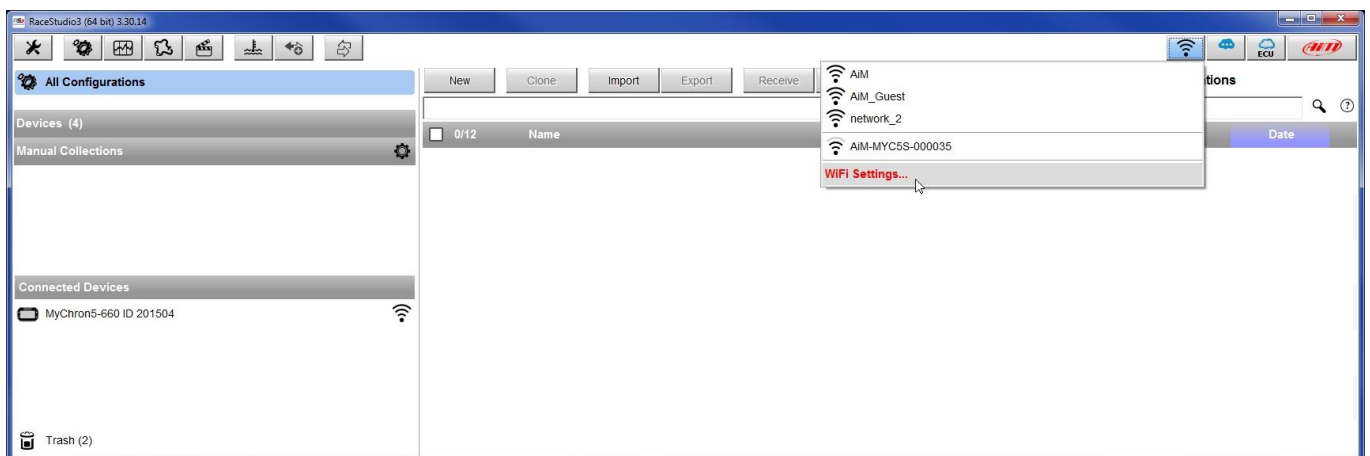


To ensure that the communication works select “Open Network preferences...” menu.  
Verify that the status in the window that shows up is “Connected” and that the IP address associated is, for example, 10.0.0.10 (could be 10.0.0.11, 10.0.0.12, or generically 10.0.0.x).



To enable Race Studio 3 correctly working on a Mac with virtualized Windows:

- press Wi-Fi icon
- select “Wi-Fi Settings” option



- enable the checkbox shown here below.
- click "OK".



## 8.7 – Connected device visualization issues

It may occur that using Race Studio 3 on an iMac with virtualized Windows the device connected via Wi-Fi takes some time to be shown in the network or is not shown at all. This is why we always suggest using an Wi-Fi (WLAN) router.

This router works as an Access Point allowing the connection of more external devices to its network. MyChron5 660 Wi-Fi configuration is to be set on Existing Network as explained before.

## 9 – Firmware and software upgrading



Our technicians and engineers are constantly working to improve both the firmware (the application that manages your device) and the software (the application you install on your PC).

Each time a new firmware and/or software version is available the icon here above appears with an arrow indicating that something is available for download (otherwise the icon only shows the cloud).

Click it and freely download the new applications.

The screenshot shows the RaceStudio3 (64 bit) 3.30.14 interface. The main window displays a list of software and firmware versions. The 'MyChron5-660' firmware version is highlighted with a red box, indicating it is the selected version for download.

Name	On the web	On my PC	Info
<b>Software (Installed version: 'RaceStudio3 (64 bit) 3.30.14')</b>			
<input type="checkbox"/> RaceStudio3 (64 bit)	3.30.14	3.30.14	
<b>Firmware</b>			
<input type="checkbox"/> EVO4S	01.28.20	01.28.20	
<input type="checkbox"/> EVO5	01.28.20	01.28.20	
<input type="checkbox"/> MXG	01.28.20	01.28.20	
<input type="checkbox"/> MXL2	01.28.20	01.28.20	
<input type="checkbox"/> MXS	01.28.20	01.28.20	
<input type="checkbox"/> MXS Strada	01.28.20	01.28.20	
<input checked="" type="checkbox"/> MyChron5-660	01.30.00	01.28.08	
<input type="checkbox"/> SmartyCam HD	01.04.18	01.04.18	
<input type="checkbox"/> MX2E	--	02.32.31	
<input type="checkbox"/> MXG 1.2	02.32.12	02.32.12	
<input type="checkbox"/> MXG 1.2 Strada	02.32.12	02.32.12	
<input type="checkbox"/> MXK10	02.28.01	02.28.01	
<input type="checkbox"/> MXP	02.32.12	02.32.12	
<input type="checkbox"/> MXP Strada	02.32.12	02.32.12	
<input type="checkbox"/> MXS 1.2	02.32.12	02.32.12	
<input type="checkbox"/> MXS 1.2 Strada	02.32.12	02.32.12	
<input type="checkbox"/> MX UTV	02.32.40	02.32.40	
<input type="checkbox"/> MXm	02.30.10	02.30.10	
<input type="checkbox"/> MXsl	02.30.10	02.30.10	
<input type="checkbox"/> Solo 2	02.30.10	02.30.10	
<input type="checkbox"/> Solo 2 DL	02.30.10	02.30.10	

Once the new firmware has been downloaded, connect your device to the PC via Wi-Fi to perform a firmware upgrade press "Update device". In a few seconds, the device is ready.



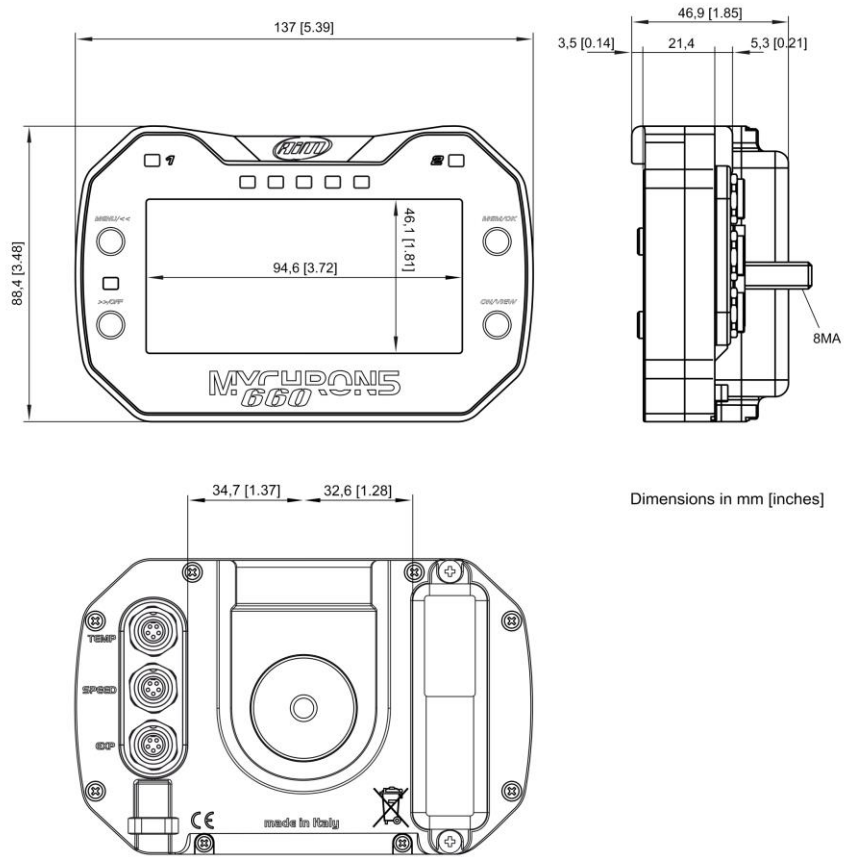
## 10 – Technical specifications and drawings

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- GPS Integrated
- Inertial platform Included
- Wi-Fi connection Included
- Display resolution 268x128 pixel
- Backlight 7 configurable RGB colours
- Ambient light sensor Included
- Multifunction LEDs 5 RGB LEDs
- Alarm LEDs 2 configurable
- RPM sampling frequency 50 Hz
- Body Glass fibre reinforced Nylon
- Pushbuttons Metal
- Battery Rechargeable 2900 mAh Lithium Ion
- Internal memory 4Gb
- Dimensions 137x88,4x47 mm
- Weight 390g battery included
- Waterproof IP67
- Analysis software Race Studio Analysis freely downloadable from [www.aim-sportline.com](http://www.aim-sportline.com)






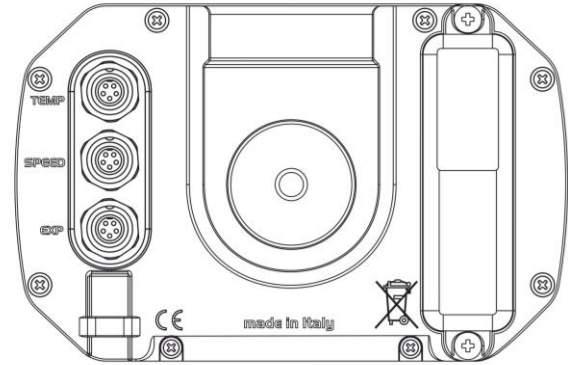
**MyChron5 660 dimensions in mm [inches]**



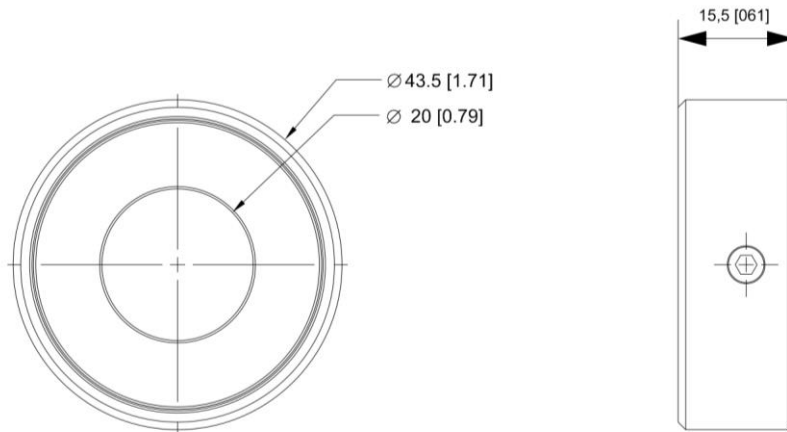
Dimensions in mm [inches]

**MyChron5 660 pinout**

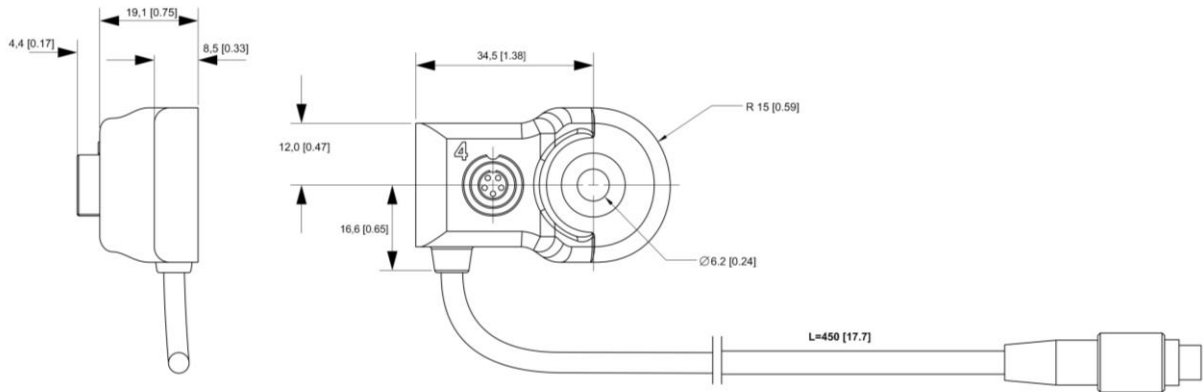
TEMP 7 pins Binder 712 female connector (external view)	SPEED 4 pins Binder 712 female connector (external view)	EXP 5 pins Binder 712 female connector (external view)
		
1 - Thermocouple 1 2 - GND 3 - Thermocouple 2 4 - GND 5 - Thermo resistor 1 6 - GND 7 - Thermo resistor 2	1 - Speed 2 - GND 3 - +Vbattery 4 - Reserved	1 - CAN+ Exp 2 - GND 3 - +Vbout CAN 4 - CAN- Exp 5 - +Vbext CAN



**Phonic wheel dimensions in mm [inches]**



**CAN Extension dimensions in mm [inches]**

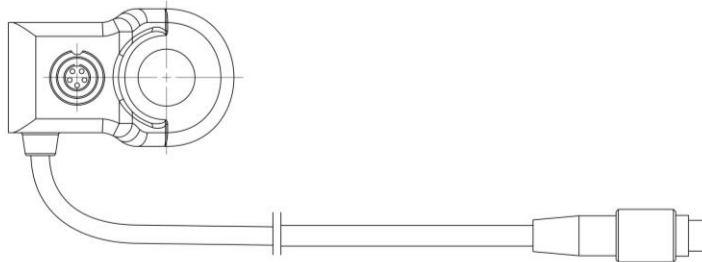


**CAN Extension pinout**

5 pins Binder 712 female connector pinout (external view)



- 1 - CAN+ Exp
- 2 - GND
- 3 - +Vbout CAN
- 4 - CAN- Exp
- 5 - +Vbext CAN



5 pins Binder 712 male connector pinout (external view)



- 1 - CAN+ Exp
- 2 - GND
- 3 - +Vbout CAN
- 4 - CAN- Exp
- 5 - +Vbext CAN