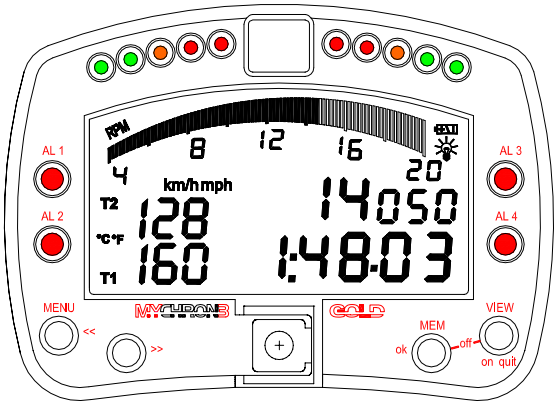


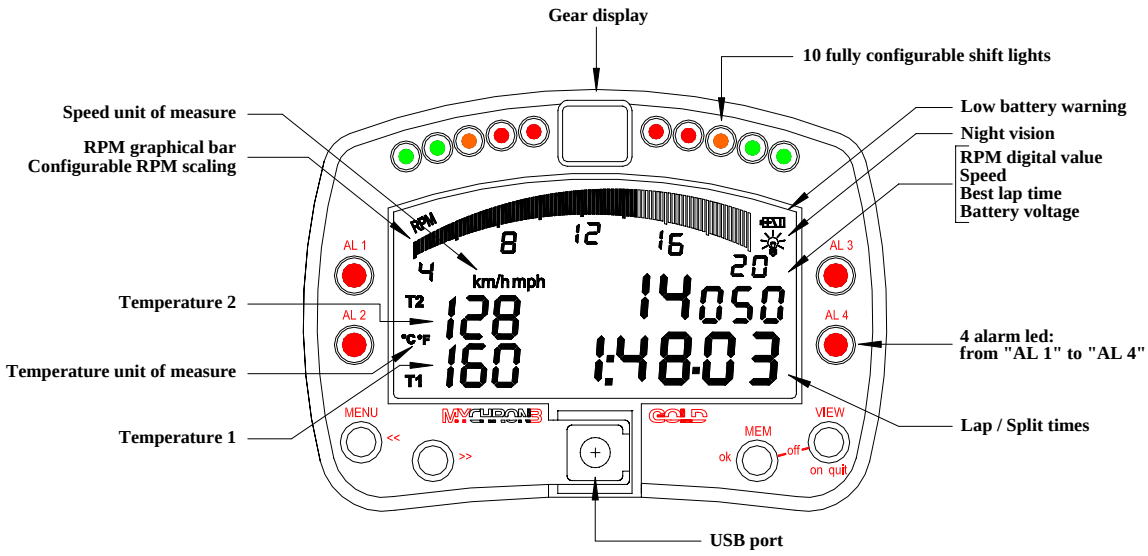
Introduction

MyChron 3 Plus/Gold KART represents the new generation of Aim data acquisition systems,that provides the karter with a sophisticated and easy to read display,normally reserved for premium sport cars.
MyChron 3 Plus/Gold KART monitors and displays RPM, two separate temperature inputs, wheel speed, current gear number and lap (split) times. It also has a backlight, which can be switched on during night racing.
Your **MyChron 3 Plus/Gold KART** is supplied with an external Junction Box, connected to the display unit through a 1000 mm long cable; the user will have to plug all the sensors in this Junction Box.

The logger records the following parameters:

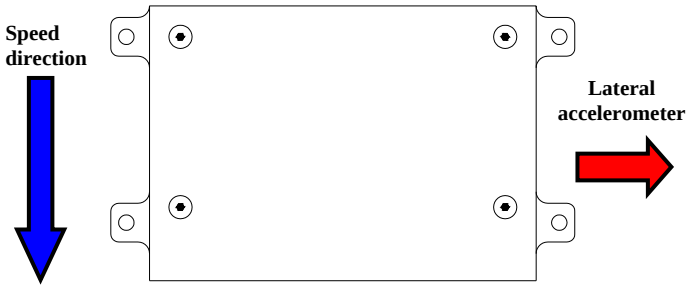
- 2 temperature inputs (cooling water, cylinder head or exhaust gas);
- engine's RPM;
- lap and split times;
- current gear number;
- 1 speed input;
- lateral acceleration, mounted inside the Junction box (**MyChron 3 Gold** only);
- logger battery voltage;
- logger temperature;

Data is stored in a huge internal flash memory (512 kbyte for **Plus** version and 8 Mbyte for **Gold** one) and is downloaded to a PC through an USB cable (optional for **Plus** version).



Installation notes

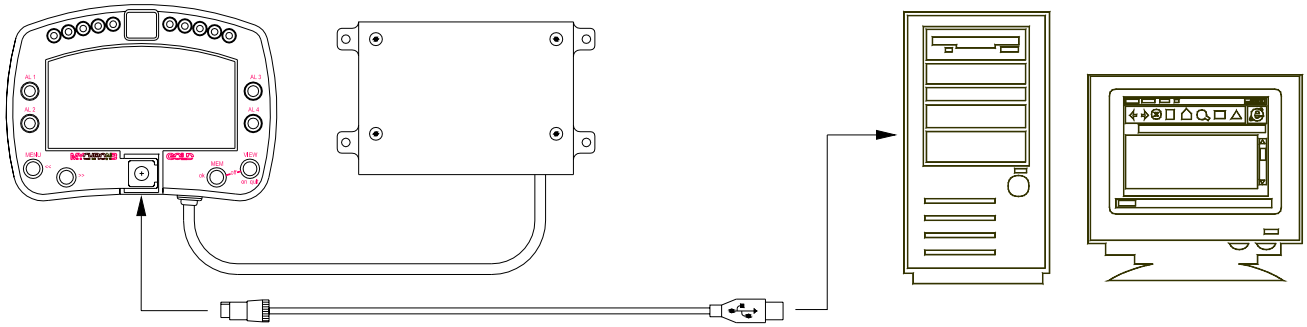
- Most of steering wheels have existing holes in the 3 central arms, that will accommodate your **MyChron 3 Plus/Gold KART** display unit;
- if the steering arms are solid, mark the point where the hole is to be drilled and then indent a drill reference point with a large nail or hole punch, to minimize drill wander;
- do not over-tighten the locknut: over-tightening the nut may seriously damage the display unit chassis;
- it is suggested to use plastic washers, furnished as equipment, to keep separate your **MyChron 3 Plus/Gold KART** from the steering wheel;
- once the display unit has been installed, it is possible to install the Junction box under the number plate. Avoid rigid connections between the Junction Box and the chassis: in case you want to install the Junction box on the kart's platform, please use antivibration mountings;
- once the gauge has been correctly installed, please plug the sensors in the connectors on the Junction Box's front panel.



In order to correctly measure the lateral g-force using the internal accelerometer (**Gold** versions only), we suggest You to install the gauge with the Junction box's front panel perpendicular to the vehicle's speed.

How to connect MyChron 3 Plus / Gold KART to the PC

In order to connect your **MyChron 3 Plus/Gold KART** to the PC, please use the USB data download cable and plug it both in the gauge's USB port and in the PC's USB port, as explained in the following drawing.



Software

Once the data logger has been installed and the sensors have been plugged in it, the data logger has to be configured in order to acquire consistent and correct information. For a correct configuration, please use **Race Studio 2**, the software properly developed by Aim to configure its instruments and to analyze stored data.

Race Studio 2

In **Race Studio 2** main window, below, You can choose the data logger. Please select it and press "System manager".

Data logger configuration

Once reached "System manager" main window, please press "Configuration" to set RPM maximum value, temperature measure unit, RPM factor, split numbers etc… The following screenshot appears.

To configure your **MyChron 3 Plus/Gold KART** is necessary to set all the parameters below reported:

- **Speed box** (top left): *pulses per wheel revolution*: this option sets the number of electrical pulses captured by the speed sensor per wheel revolution; this value, together with the following one, is fundamental to acquire the correct kart speed; *wheel circumference*: this value is used to correlate the wheel rotational speed with the kart's speed.
- **Display language box** (top central): the user may choose to display messages in 6 different languages: Italian, English, German, French, Spanish and Slovenian.
- **Shift light box** (top central): this option allows the user to set the five RPM values, each one corresponds to a coloured led. The five led progressively switch on in order to indicate the pilot to change gear.
- **RPM box** (top right) *Multiply factor*: this option sets the number of spark signals per engine revolution; for A 2-stroke, one cylinder engine, the correct value is "x1"; *Maximum RPM value*: this function sets the maximum scale for the graphical RPM displayed by Your MyChron 3. You may choose among 7 values: 8000, 10000, 12000, 16000, 20000, 22000 and 25000 RPM.
- **Alarm boxes** (lateral) The thresholds temperature for the thermocouple sensors that trigger the 2 maximum/minimum alarms when a dangerous temperature has been reached.
- **Lap box** (bottom right): *obscuring time*: this option sets the time during which the lap receiver (optic or magnetic) is "obscured" and is not able to capture lap markers. This option is useful if you do not wish to capture split times on a track where more than one beacon transmitter (or magnetic strip) is positioned: in this case, please set the obscuring time to a value of about 5 second lower than the track best lap time. Otherwise, if you wish to capture split times, please set this parameters to a low value: the minimum value accepted by the instrument is 3 seconds, the maximum value suggested is 8 seconds; *Number of splits*: this function sets in how many split times you wish to divide your track; this option is available only on tracks with multiple magnetic strips or with more than one beacon transmitter. Please, remember to fill this box with the number of splits and not with the number of magnetic strips (or beacon transmitters).
- **Measure unit box** (bottom left): Temperature and speed can be set in °C or °F and km/h or Mph.

Once these values have been set, is necessary to transmit the configuration to the instrument pressing "Transmit" button.

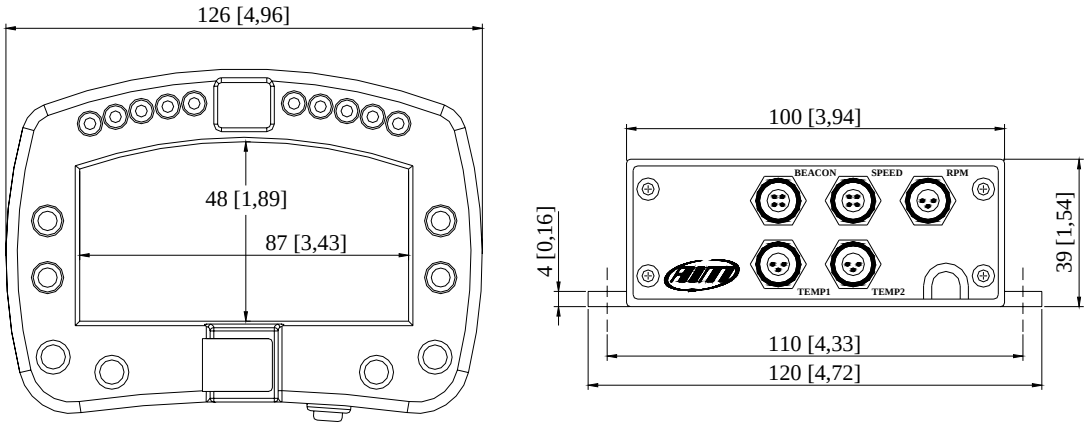
Autocalibrating the g-sensor

The internal lateral g-sensor (**Gold** version only) needs to be autocalibrated. Please press "Calibrate" button and follow these instructions:

- To autocalibrate the g-sensor, click "Start autocalibration" button;

Once the autocalibration has finished, is absolutely necessary to re-transmit the configuration to your data logger pressing "Transmit" button.

Dimensions



Dimensions in millimetres [inches]

Connector details (Beacon channel)

Pin	Function	Pin	Function
1	Magnetic lap	3	V battery
2	GND	4	Optic lap

Female binder connectors pinout (external view): 4 pins (left) and 3 pins (right)

Connector details (Speed channel)

Pin	Function	Pin	Function
1	Speed signal	3	V battery
2	GND	4	n.c.

Connector details (RPM channel)

Pin	Function	Pin	Function
1	RPM: spark plug	3	RPM: 12 V square wave
2	GND		

Connector details (Temp 1/2 channels)

Pin	Function	Pin	Function
1	Thermocouple	3	Thermoresistance
2	GND		

Specifications

General characteristics	Value
Input channels	5
Internal battery	6 AAA 1.5 V, alkaline
Working time	About 40 hours of use
Internal memory (Plus)	512 kbyte flash EPROM
Internal memory (Gold)	8 Mbyte flash EPROM
PC interface	300 kbyte/sec USB port
Sampling frequency	10 Hz
Internal g-sensor (Gold)	±5 g

Other characteristics	Value
MyChron 3 PG dimensions	126x92x24 mm
Junction Box (JB) dimensions	100x39x71 mm
Display dimensions	85x50 mm
Environmental	IP 65
JB-Display unit cable	1000 mm