

TECHNICAL DOCUMENTATION	21/04/2004	GAUGE	MyChron 3 660
Notes: MyChron 3 660 technical documentation, dimensions and pinout			

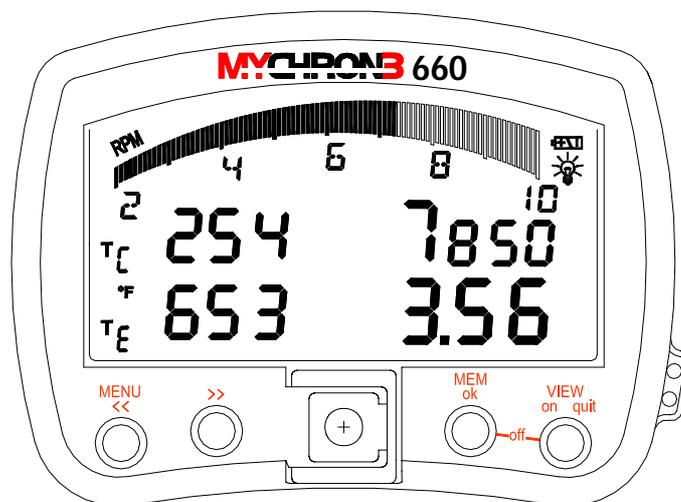


Figure 1: MyChron 3 660

Introduction

MyChron 3 660 is the new data acquisition system that AIM designed and developed only and expressly for Jr Drag Racers; a small, complete and high tech data acquisition system.

MyChron 3 660 stores run and not laps; each run includes a few seconds before your launch, your pass and your coast down.

Its configurable RPM graphic display, the two separate temperature inputs (cylinder head and exhaust gas), the magneto resistive speed sensor, several properly engineered firmware features and **Drag Analyzer**, the completely new data analysis software, make **MyChron 3 660** the best tool to monitor the dragster's engine as well as dragster and driver performances.

MyChron 3 660 records RPM, 2 temperature inputs and speed at a sampling rate of 20 Hertz per channel (20 times per second). This data can be retrieved at a later stage for analysis.

The logger records and displays the following parameters:

- 2 temperature inputs (cylinder head and exhaust gas);
- engine's RPM;
- jackshaft's RPM

Moreover, **MyChron 3 660**, calculates through its software and displays

- wheel speed in Mph;
- CVT;
- overdrive percentage;
- linear acceleration in G-forces;

All these parameters are legal following NHRA rules.

Data is stored in the 192 kbyte internal EEPROM memory that can record up to 50 runs. Stored data are downloadable to a PC through an USB cable You find as stock in the packaging of Your **MyChron 3 660**.

MyChron 3 660 is powered by an internal source, so You need 2 AAA Alkaline batteries to power it.

Installation notes

- We suggest You to install the gauge behind the body cell on the vertical metal bulkhead which separates the driver's seat from the engine. In particular, as shown in **Figure 2**, AIM recommends all **MyChron 3 660** users to install the gauge under the engine's ON/OFF switch.
- The gauge **has to be mounted on a self-made bracket**: **Figure 2** shows an example of mounting bracket.
- The bracket has to be made in aluminum or steel; its thickness must be 2.5 mm (0.1") or more in order to have a high stiffness and not to vibrate when the engine is turned on.
- Please, firmly fix the bracket to the vertical metal bulkhead and, afterwards, fix your **MyChron 3 660** to the bracket.
- **Do not over-tighten the 8 mm nut**. Over-tightening the nut may cause damage to the display unit casing.
- While connecting the RPM wire to your **MyChron 3 660**, please keep this cable as far as possible from temperature ones. In case RPM and temperature wires are wrapped together, temperature channels might be very noisy.

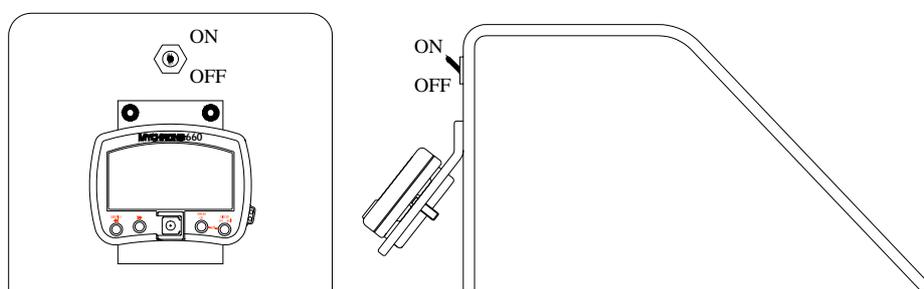


Figure 2: How to install Your **MyChron 3 660** on Your Junior Dragster: front view (on the left) and side view (on the right). Example of self-made bracket on the right.

Display description

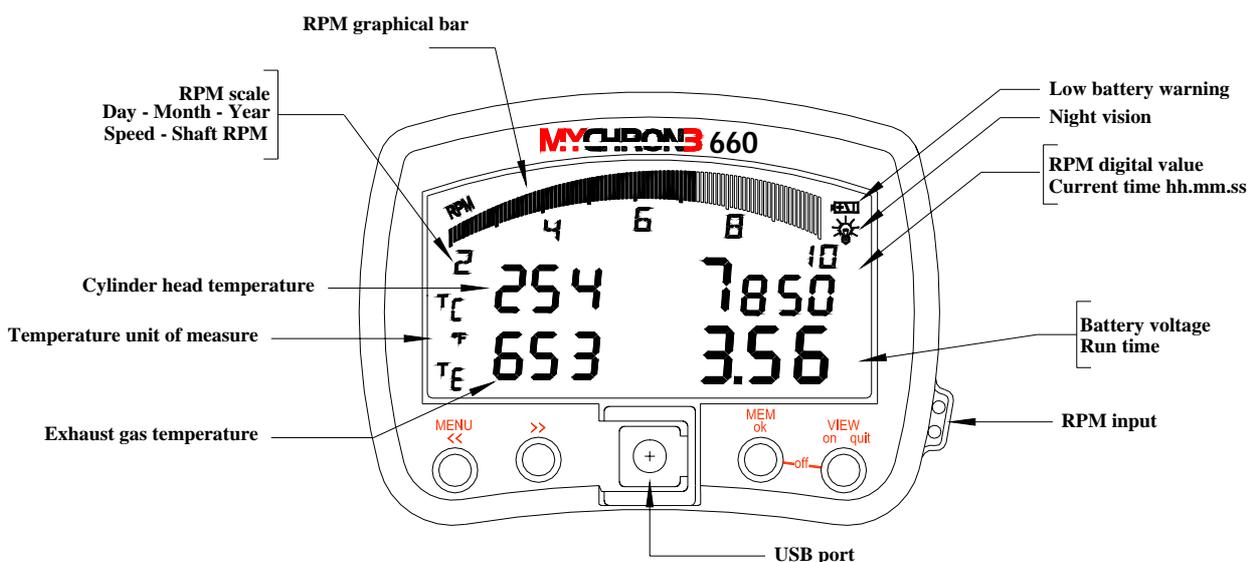


Figure 3: MyChron 3 660 display.

How to connect MyChron 3 660 to the PC

To connect your **MyChron 3 660** to the PC, please use the USB data download cable furnished as equipment and plug it both in the gauge's USB port and in the PC's USB port, as You can see in **Figure 4**.

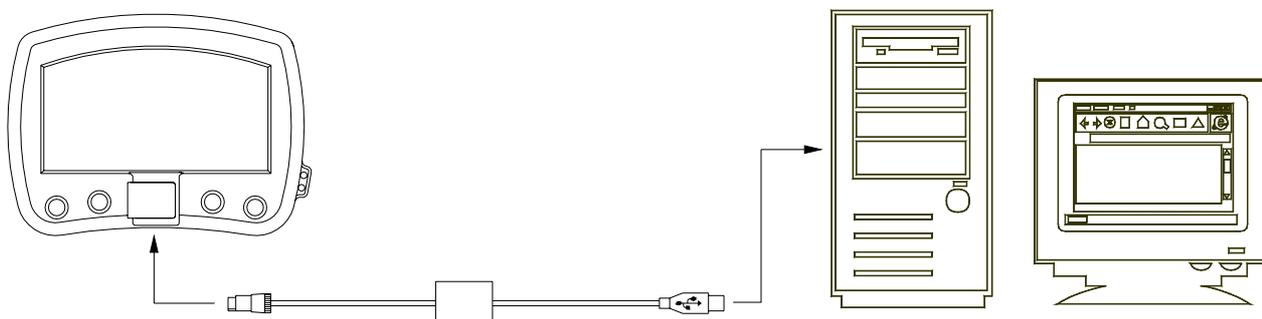


Figure 4: How to connect Your **MyChron 3 660** to the Pc.

Software

Once the data logger has been installed and the sensors plugged in it, the gauge is ready to run. After each run You can download the data connecting it to the Pc USB port through the USB cable furnished as equipment and switching on the gauge.

Although Your **MyChron 3 660** can record up to 50 runs, **we strongly recommend You to download stored data and to clear the memory after each run.**

To analyze stored data AIM gives You **Drag Analyzer**, the new software properly designed and developed for drag racers, whose CD You find in Your **MyChron 3 660** kit.

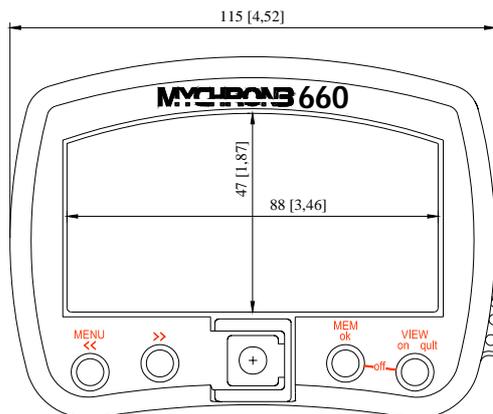
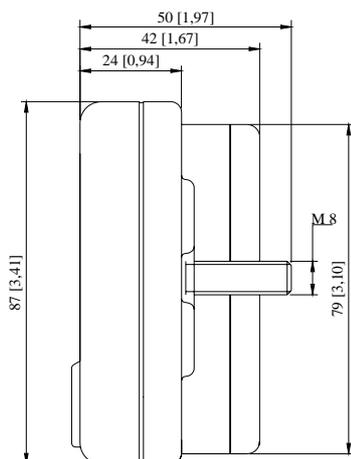
To download data, please connect Your **MyChron 3 660** to the Pc, run **DragAnalyzer** software, then click on “Download” button, in the top toolbar (or click File/Download): download starts automatically.

DragAnalyzer has been properly developed for Jr Drag Racers. This is why it is so friendly use. With it You can

- Save Your runs with name and store them with 5 characteristics (default or custom) that help You when loading a run;
- Load / unload a run;
- Plot any run and change run parameters;
- Customize graph colours, lines, background or plot grid;
- Zoom in and out every graph;
- See all the run together and move inside it through a mobile mask
- Improve Your performances through the “Time Slip”
- Correlate test performances to weather conditions.

For further information concerning **DragAnalyzer**, please refer to **MyChron 3 660** user manual

Dimensions



Dimensions in millimetres [inches]

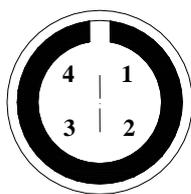
Connector details (Speed channel)

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

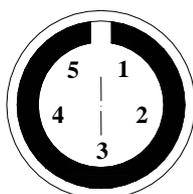
Connector details (Temperature channel)

Pin	Function	Pin	Function
1	+ TC1	4	- TC2
2	- TC1 / - TR1	5	+ TC2
3	+ TR1		

Note: TC = ThermoCouple TR = Thermoresistor



Speed
Female 4-pins connector
pinout (external view)



Temperature
Female 5-pins connector
pinout (external view)

Technical characteristics

General characteristics	Value
Input channels	4: RPM. Speed, 2 temp.
Internal battery	2 AAA 1.5 V, alkaline
Working time	About 40 hours of use
Internal Memory	192 kbytes
PC Interface	USB port
Samp. freq. per channel	20 Hz
Total sampling freq.	80 Hz

Other characteristics	Value
MyChron 3 660 dimensions	115x87x42 mm
Display dimensions	88x47 mm
Environmental	IP 65
Weight	300 g (batteries included)