

MyChron Light TG

User Manual



MyChron Light TG, the new AIM lap timer, is the evolution of the well known MyChron Light MCL. This new logger merges all functionalities and good qualities of its forefather with the new graphic display and adds a lot of other useful functions, like the visualisation of sampled data as histograms and the different working and sampling modes.

MyChron Light TG reduced dimensions, moreover, makes it easy to install and use in any situation without problems.

MyChron Light TG is available in two versions: internally and externally powered.

Internally powered thanks to the batteries supplied with the kit, can be used Plug&Play both fixing it with a simple strip of Velcro[®], to be easy displaced and installing it more steadily through the four anti-vibration mounting placed back on the logger. In both cases it is sufficient to switch **MyChron Light TG** on, configure it and its starts sampling.

Externally powered on the contrary, it is to be connected to an external 7-15 V power source and automatic switch off after 20 minutes of inactivity avoids undesired battery exhaustion.

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Chapter 1 – MyChron Light TG: kits and optional

MyChron Light TG is available in four different kits depending if internally or externally powered.

1.1 – MyChron Light TG with internal power kit



MyChron Light TG with internal power basic kit: code **X04MYC40TGST**

- MyChron Light TG with internal power (1)
- Infrared receiver for lap times detection (2)
- User manual (3)

MyChron Light TG with internal power complete kit: **X04MYC40TG**

- MyChron Light TG with internal power (1)
- Infrared receiver for lap times detection (2)
- User manual (3)
- Infrared transmitter with external power cable (4).

1.2 – MyChron Light TG with external power kit



MyChron Light TG with external power basic kit: code **X04MYC40TGLST**

- MyChron Light TG with external power (5)
- Infrared receiver for lap times detection (6)
- User manual (3)

MyChron Light TG with external power complete kit: code **X04MYC40TGL**

- MyChron Light TG with external power (5)
- Infrared receiver for lap times detection (6)
- User manual (3)
- Infrared transmitter with external power cable (4)

Please note: MyChron Light TG with external power has a blue backlight that cannot be disabled.

1.3 – Optional to MyChron Light TG kits

- Data download kit: USB cable (7) + CD including **LightAnalyzer** and **TG Picture Manager** software (8): code **X04MYC40PC00**
- Infrared split transmitter with external power cable (9): code **X02TXSPLIT0**.

Chapter 2 – Installation and powering

MyChron Light TG installation depends on the version.

2.1 – MyChron Light TG with internal power

To install **MyChron Light TG** internally powered stick a strip of bi-adhesive Velcro® on the product rear. This way the logger can be used on more vehicles. It is also possible to use the four anti-vibration mounting placed back on the logger. This last installation needs a flat surface and 4 Silent Block not included in the kit.



MyChron Light TG is powered by two 3 Volts round batteries type CR 2430 included in the infrared receiver. To change the batteries see the chapter concerning **MyChron Light TG** maintenance.

2.2 – MyChron Light TG with external power

MyChron Light TG with external power can be installed exactly as the one internally powered except for the fact that it needs an external power source connection (the vehicle battery).

This **MyChron Light TG** version has two cables out coming from the logger bottom: connect the red cable to the battery positive pole and the black one to the negative pole.

2.3 – How to install and power the infrared receiver

The lap receiver is connected to the logger through a cable. It has to “see” the transmitter installed on the side of the track. Install it with the eye, highlighted here below, looking to the transmitter.



Ensure that the receiver has a straight line towards the transmitter on the right side of the vehicle. The receiver is powered like the system.

2.4 – The lap transmitter: installation, powering, working mode

AIM produces and sells two kind of transmitters: the lap transmitter (image below on the left) and the split transmitter (below on the right). The two devices emits different signals and **MyChron Light TG** can distinguish and manage them.



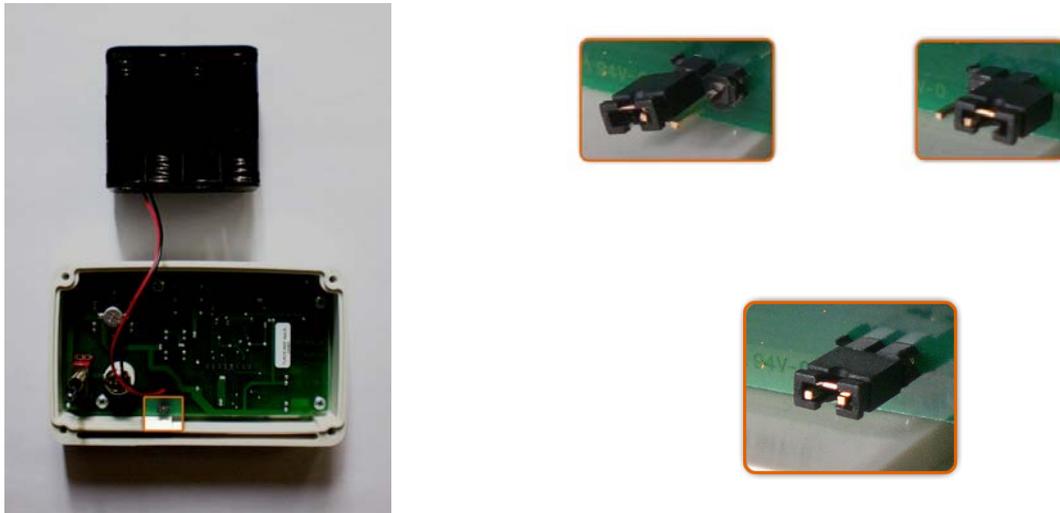
Both can be internally or externally powered:

- internally: with 8 AA batteries (placed in the transmitter case); when the batteries are flat power led starts blinking each second (1 Hz);
- externally: with an external 12V power cable; when the battery is flat the led starts blinking each second.

The transmitter has two working mode:

- low power mode: for circuits less than 10m (30 ft) wide;
- high power mode: for circuit more than 10m (30 ft) wide; in this second case an external 12V power source is needed and both led switches on when the transmitter is powered on.

To enable high/low power mode it is necessary to open the transmitter case as shown here below on the left.



Images here above on the right shows the different working options. The transmitter comes set on low power mode: images top on the right. To set high power mode insert both clips in the jumper: image bottom on the right.

It is suggested to check the number of transmitter installed on the circuit before installing one's own. It is in fact possible that transmitters additional to the one placed on the start/finish line are installed on the track. The simplest way to record correct lap times is to use the same transmitter(s) for all drivers.

Use obscuring time function (paragraph 3.2) to be sure that **MyChron Light TG** reads only the desired transmitter(s).

2.5 – How to change MyChron Light TG batteries

MyChron Light TG batteries are inserted in the receiver case. To change them unscrew the four screws that fasten the two parts of the case and change the batteries.



MyChron Light TG uses two 3V round batteries code CR2430. The code is generally stamped on the batteries.

Chapter 3 – MyChron Light TG quick configuration

MyChron Light TG needs to be configured. Here follows explanation of the steps to be performed for a quick configuration. Other configuration options are deepened after. Here below is **MyChron Light TG** keyboard. Functions associated are shown by the display in correspondence to each button.

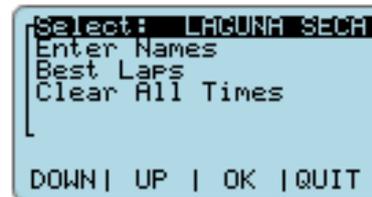


Pressing twice “1” **MyChron Light TG** main menu, shown here below is activated.



3.1 – Track name

From the main menu select “Track”. The related menu is shown here below.



The track name to be set can be chosen among these stored (“Select”) or inserting a new one (“Enter names”). In both cases the system enters available tracks list, shown here below on the left (in case no tracks are stored all names are set on “NONAME #X”).



If the track is stored in the logger memory (“Select”) just select it, if not (“Enter Names”) place the slider on an empty position (or the system overwrites the one stored) and press “OK”. “Enter track name” page opens. Once the name composed press “OK”. The system asks for confirmation, press “Yes”. The system can store up to 50 circuits.

3.2 – Session mode

From the main menu select “Session mode”. The related menu is shown here below.



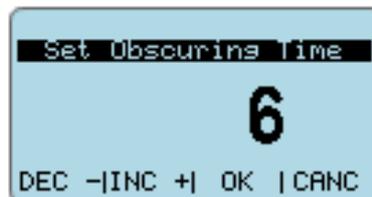
Available options are:

- Lap Counter: the lap timer is set as lap counter;
- Qualify: fill in the session duration in minutes (range from 5 to 60);
- Race: fill in the “race distance” to say the number of laps (range from 3 to 2000).

3.3 – Obscuring time

Obscuring time is a time period during which the lap receiver installed on the vehicle, after having stored a lap signal is “blind” (does not record signals). This function is to be used to manage split times on circuits where more optical transmitter are set: to record split times set obscuring time on a low value; not to record split times set obscuring time on a value lower than best lap time and higher than the time elapsed between the last split and start/finish line. Accepted range is: 3-180.

From the main menu select “Obscuring Time”. Its menu is shown here below.



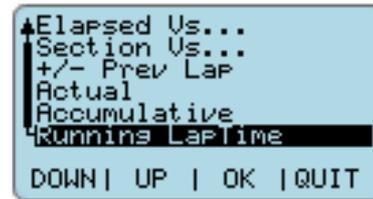
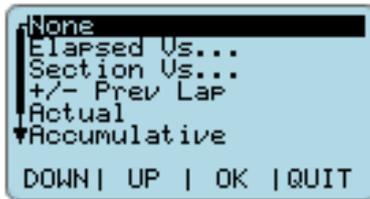
Use “DEC-“ and “INC+” to set obscuring time and press “OK”.

3.4 – Split times visualisation

From the main menu select “Configuration”. The related page is shown here below.



Select “Split”. The related under menu shows all possible split visualisation modes.

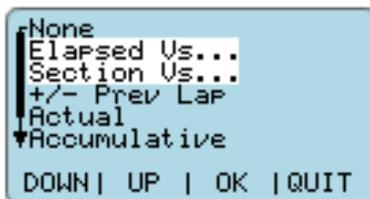


MyChron Light TG offers eight different split visualisation modes:

- **None:** records splits but do not show them;
- **Elapsed Vs...:** see paragraph 3.4.1;
- **Section Vs...:** see paragraph 3.4.1;
- **+/- Previous:** compares actual split time with the same split of the previous lap and shows the gap top right on the display;
- **Actual:** shows the actual split central on the display;
- **Accumulative:** shows the time elapsed from start/finish line central on the display;
- **Running lap time:** shows running lap time top right on the display.

3.4.1 – Elapsed Vs. and SectionVs. mode

The two “Vs” modes compares two times.



In both cases an under menu opens: it is possible to compare lap time with the best lap in the session or with the best lap recorded on that track (Vs Best Lap in memor...). In this second case it is necessary to have previously set the track.

3.4.2 – What shows the display when a lap or a split time is recorded.



No matter what split visualisation mode is set, when the logger records a lap or a split time it shows different data. The table here below shows what appears on the display in the different situations.

Split Mode	Central display row (2)		Display top right row (1)	
	Recorded Split	Recorded Lap	Recorded Split	Recorded Lap
None	Lap time	Lap time	Best Lap	Best Lap
Elapsed Vs...	Split time	Lap time	Lap time	Split time
Section Vs...	Split time	Lap time	Lap time	Split time
+/- Prev. lap	Split time	Lap time	Lap time	Split time
Actual	Split time	Lap time	Lap time	Split time
Accumulative	Split time	Lap time	Lap time	Best Lap
Running lapTime	Lap time	Lap time	Running Lap time	Running Lap time

3.5 – Clear test data

From the main menu select “Clear test data” and confirm. This function clears all data from the logger memory.

Chapter 4 – Other configuration function

Additional to the quick configuration parameters **MyChron Light TG** offers a lot of other configuration function.

From the main menu select “Configure”. This menu appears.



4.1 – Set Time/Date

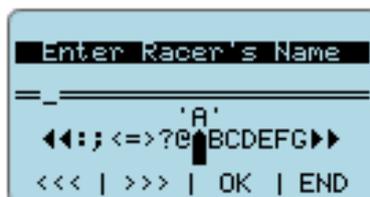
From configuration menu select this voice and the related menu appears.



- **Set Time/Date** sets date and time
- **Time Format:** possible options:
 - 12h;
 - 24h
- **Date Format:** available options:
 - DD/MM/YY;
 - MM/DD/YY;
 - YY/MM/DD.

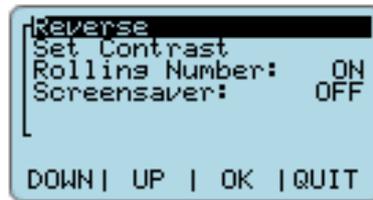
4.2 – Racer

From configuration menu select this voice and “Enter Racer’s Name” page appears.



4.3 – Display setup

From the configuration menu select this voice and the related menu appears.

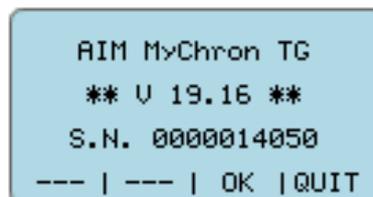


Available options are:

- **Reverse:** reverses display background and texts colours;
- **Set Contrast:** manages the display contrast (range -10/+10);
- **Rolling numbers:** shows rolling digits on the display;
- **Screensaver:** enables a screensaver after 5 minutes inactivity. It shows some demo pages: a custom image can be uploaded and inserted in this sequence using **TG Picture Manager** software freely downloadable from www.aim-sportline.com, download software area. See chapter 7 for further information.

4.4 – System Information

From configuration menu select this voice and the related page appears.



The display shows:

- on top the logger name (AIM MyChron TG);
- central on the display firmware version actually installed on the logger (V 19.16);
- bottom logger serial number (S.N. 0000014050).

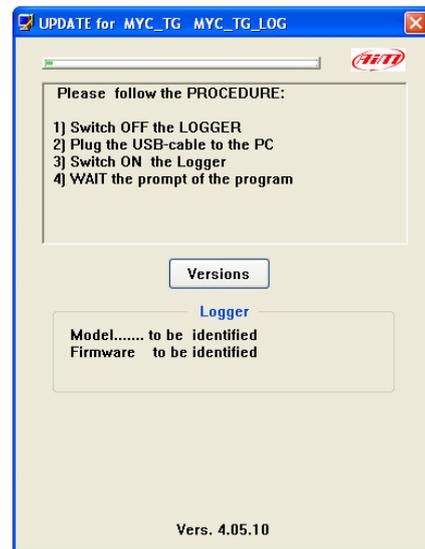
Chapter 5 – How to change MyChron Light TG language

MyChron Light TG can show menus in different languages. To modify the language it is necessary to perform a firmware upgrade. Visit www.aim-sportline.com, download firmware area, download the last available firmware version and run it.

The panel here on the right appears.
Press “Run”.



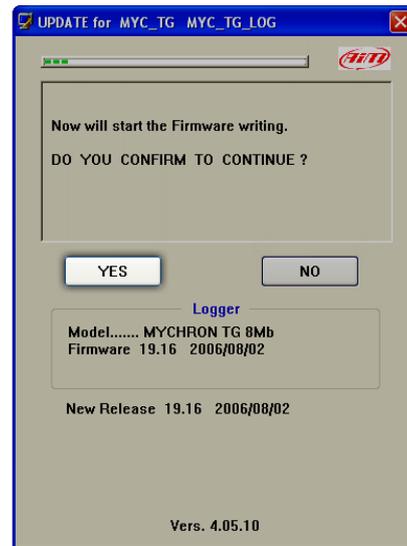
The panel here on the right appears.
Follow the instructions given by the upgrade panel.



Select the desired language and press “OK”.



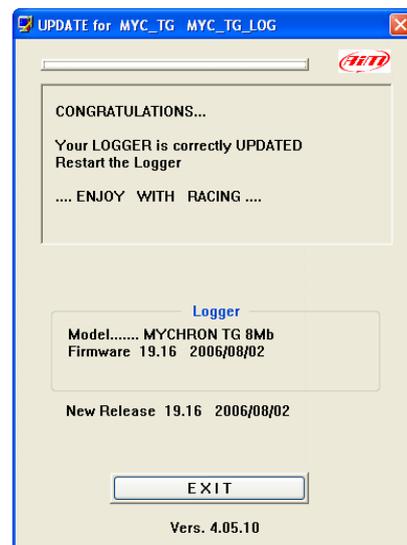
The system starts upgrading the firmware.



In case the logger firmware is already updated the system shows the message here on the right. Since the language can be changed only through this procedure press “Yes”.



Wait until the panel here on the right appears and press “Exit”. The language has been modified.

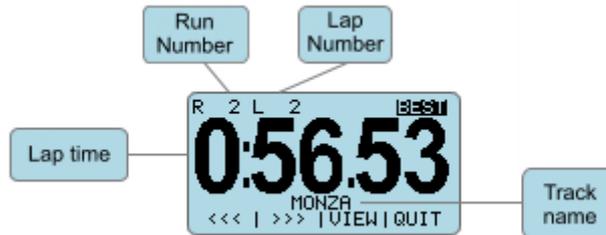


Chapter 6 – The memory and the data recall

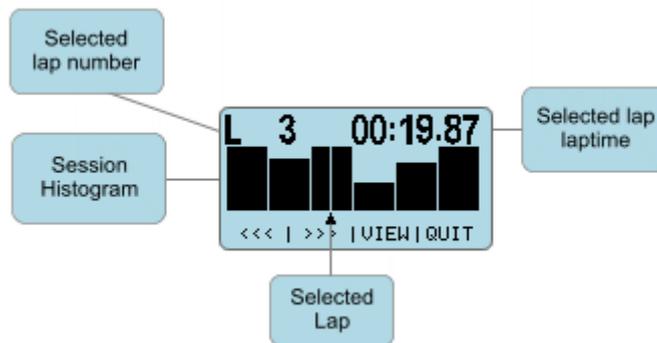
MyChron Light TG can store up to 2000 laps and has a round memory: when lap number 2001 is stored the first one is deleted and so on.

Once the session is over it is possible to recall stored data on **MyChron Light TG** display pressing “MEM” and then in sequence:

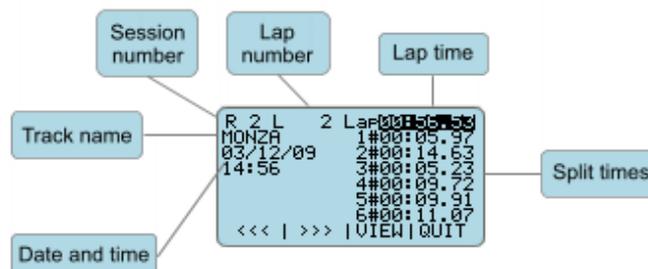
“MEM”



“MEM” ⇒ “VIEW”



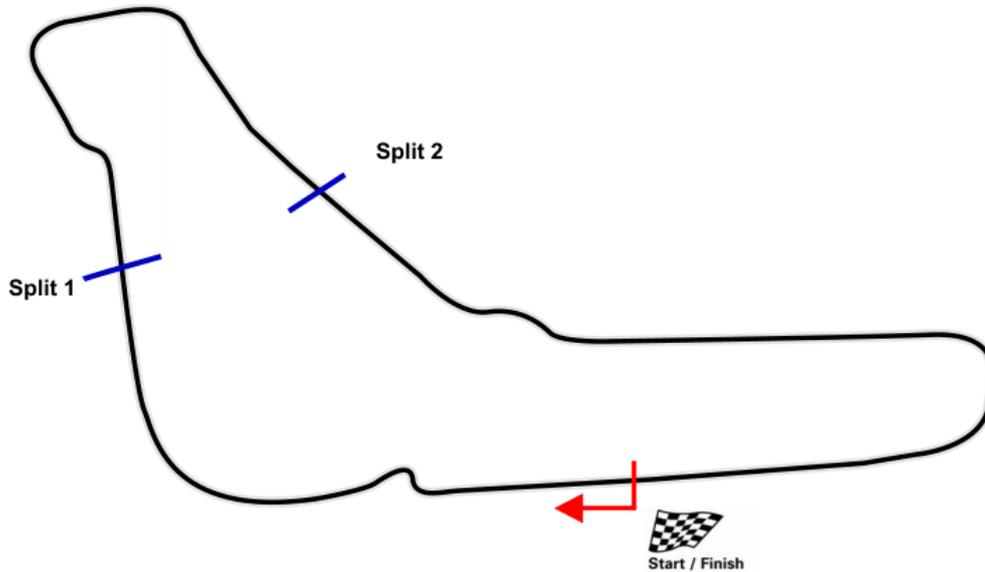
“MEM” ⇒ “VIEW” ⇒ “VIEW”



“MEM” ⇒ “VIEW” ⇒ “VIEW” ⇒ “VIEW”



6.1 – What is “Best Rolling” and “Theoretical best”



Lap Number	Lap Time	Time Start/Finish line-Split 1	Time Split 1-Split 2	Time Split 2-Start/Finish line
1	1'23"	30"	18"	35"
2	1'22"	28"	20"	34"
3	1'21"	26"	19"	36"

“**Theoretical best**” (1'18") is the lap time obtained summing up the best session split times. It's called theoretical because it adds non consecutive splits belonging to different laps. In the table the best theoretical comes adding:

- Lap 3 Start/Finish line-Split 1: **26"**
- Lap 1 Split 1-Split 2: **18"**
- Lap 2 Split 2- Start/Finish line: **34"**
- Theoretical best: **1'18"**

“**Best Rolling**” (1'19") is the lap time obtained adding the best consecutive split times really recorded. It's a “rolling” time because is not calculated within one only lap but is based on the fact that these best splits are consecutive. In the table above the theoretical best comes adding:

- Lap 3 Start/Finish line-Split 1 **1'26"**
- Lap 3 Split 1-Split 2: **19"**
- Lap 2 Split 2-Start/Finish line: **34"**
- Best Rolling: **1'19"**

Capitolo 7 – Software, driver, data download and maintenance

MyChron Light TG connects easily to a PC thanks to the USB cable included in the download kit (optional – code **X04MYC40PC00**). USB input is covered by a rubber cap on the left side of the logger.

Please note: for the PC to see MyChron Light TG it is necessary to have data stored in the logger memory.

The kit includes **Light Analyzer** and **TG Picture manager** software too, to:

- download data stored by **MyChron Light TG** and analyze them (**LightAnalyzer** – refer to the software user manual for further information);
- upload images on **MyChron Light TG** (**TG Picture Manager** – paragraph 7.2);
- make snapshots of **MyChron Light TG** pages and save them on a PC (**TG Picture Manager** – paragraph 7.2).

MyChron Light TG does not need any special maintenance. Once it is handled with care the only suggested maintenance is a periodical software/firmware upgrade.

To update **MyChron Light TG** firmware visit www.aim-sportline.com download firmware area and check if a new firmware version has been released. Download and run it following the instruction that appears on the PC monitor.

To upgrade **LightAnalyzer** and **TG Picture Manager** software visit AIM corporate website at www.aim-sportline.com, download software area and check if new releases have been published. Download and install them.

7.1 – LightAnalyzer software

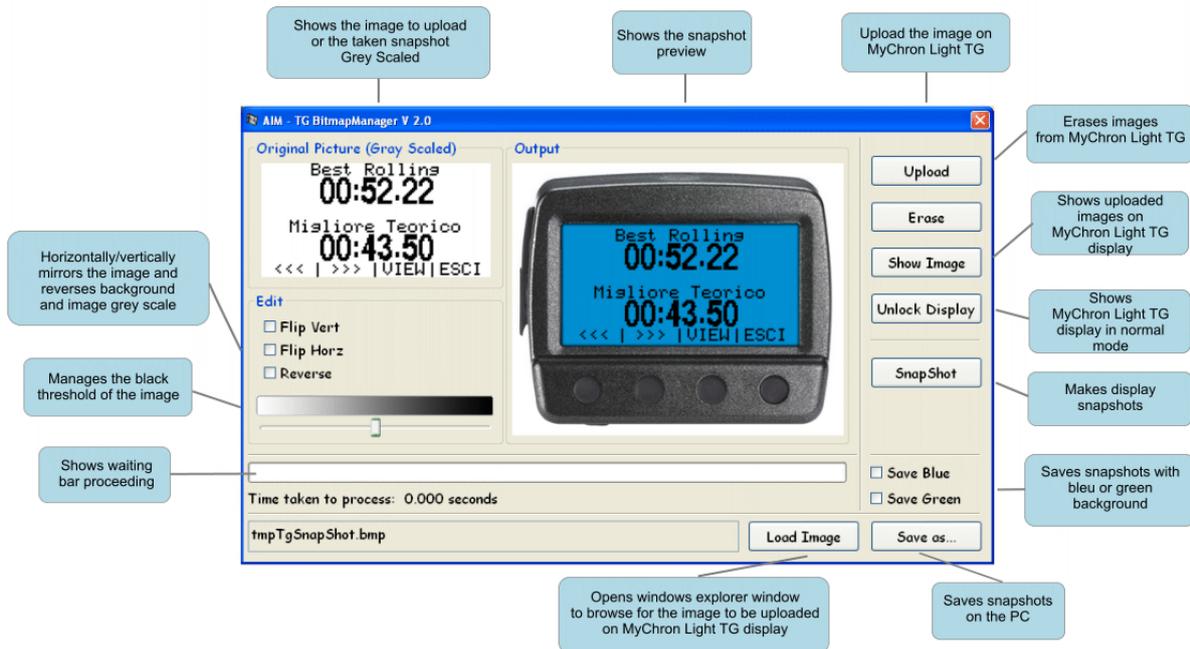
LightAnalyzer is the software properly developed by AIM to analyze data downloaded from **MyChron Light TG**. This software user manual is included in the download kit and can be downloaded from www.aim-sportline.com download software area.

7.2 – TG Picture Manager software

TG Picture Manager – available only in English – allows to:

- upload some images .bmp 128*64 pixel format on **MyChron Light TG** to be used also as screensaver. The software converts each image in greyscale and makes it possible to manage the black threshold;
- make snapshot of **MyChron Light TG** pages and save them as two colours .bmp format images.

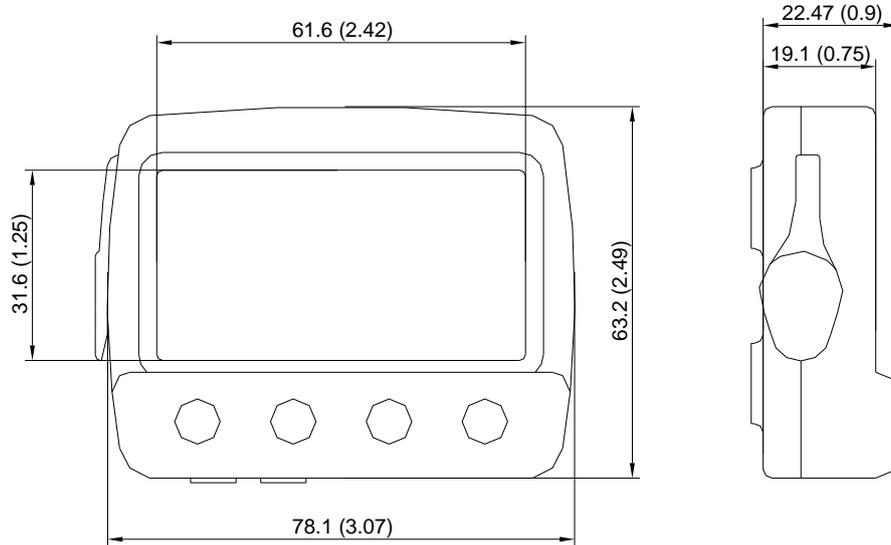
Running the software this page appears.



Please note: TG Picture Manager software can perform operations only one by one. It is thereby necessary to close and re-run it to perform another operation.

Chapter 8 – Technical notes

Here below are **MyChron Light TG** dimensions in cm (pixel).



General Characteristics:

Internal power:	2 3V round batteries code CR2430
External power:	7-15 V
Duration:	up to 1200 laps
Memory dimensions:	128 Kbytes
PC interface:	via USB
PC connection (optional):	USB cable (300kb/sec.)

Technical Characteristics:

Display dimensions:	78.1*63.2*22.4 mm
Display dot pitch:	0.42*0.42 mm
Display resolution:	128*64 pixel
Waterproof:	IP65