

USER MANUAL

ALFANO 7



Index

	Pg
• 1. Device Overview	5
◦ 1.1. GPS at 25 Hz and 4 Constellations.....	6
◦ 1.2. Data Acquisition Frequencies.....	7
◦ 1.3. Fast Data Download.....	7
◦ 1.3. 1T & 2T.....	8
◦ 1.4. Wireless Communication.....	9
• 2. Info Button	10
• 3. Endurance Mode	10
• 4. Homepage	11
• 5. 9 LEDs	12
• 6. Data Sharing	13
◦ 6.1. Bluetooth Connection.....	13
◦ 6.2. Wireless Connection.....	13
◦ 6.3. USB Connection.....	14
• 7. Race Screen	15
◦ 7.1. Edit Race Screen 2/3/4/5 - EDITABLE.....	16
▪ 7.1.1. Add a Widget.....	17
▪ 7.1.2. Resize a Widget.....	19
▪ 7.1.3. Invert the Widget's color.....	19
▪ 7.1.4. Remove a Widget.....	19
▪ 7.1.5. 6 LEDs System.....	20
▪ 7.1.6. Rename Race Screen.....	23
◦ 7.2. Race Screen 1 - DEFAULT.....	25
▪ 7.2.1. Edit Race Screen 1 - DEFAULT.....	25
◦ 7.3. View/Set Race Screen before Starting.....	26
◦ 7.4. Swap Race Screen while Driving.....	26
◦ 7.5. Target Time.....	27
◦ 7.6. Swap Driver's Name while Session Recording.....	28
• 8. Settings	29
◦ 8.1. Backlight and Power Settings of the 9 LEDs	30
◦ 8.2. Alfano 7 Settings, Connected Sensors and Boxes.....	30
▪ 8.2.1. Standby.....	30
▪ 8.2.2. Transmission.....	31
• 8.2.2.1. Engaged Gear Configuration.....	31
▪ 8.2.3. Magnetic Speed Sensor.....	33
▪ 8.2.4. RPM.....	34
▪ 8.2.5. Wireless Wheel Sensors.....	36
• 8.2.5.1. Internal Sensors.....	36
◦ 8.2.5.1.1. Internal Sensor Connection.....	36
◦ 8.2.5.1.2. Internal Sensor Calibration.....	37
• 8.2.5.2. External Sensors.....	38
◦ 8.2.5.2.1. External Sensor Connection.....	38
• 8.2.5.3. Shortcut to Display Values of Connected Internal and External Sensors.....	39
▪ 8.2.6. Data Acquisition Frequencies.....	40
▪ 8.2.7. Units of Measure.....	40
▪ 8.2.8. Format - Time Zone.....	41
▪ 8.2.9. System Information and Reset.....	41
• 8.2.9.1. Factory Restoration.....	41
▪ 8.2.10. Manual.....	42
▪ 8.2.11. Switch to 2T.....	42
▪ 8.2.12. Locking Parameters.....	43

Index

	Pg
◦ 8.3. Settings - Box4Move.....	44
▪ 8.3.1. Motion Sensors.....	44
• 8.3.1.1. Brake Pedal Calibration.....	44
• 8.3.1.2. Accelerator Pedal Calibration.....	45
• 8.3.1.3. Steering Wheel Calibration.....	45
▪ 8.3.2. G-force Sensor.....	46
◦ 8.4. Settings - Box12.....	47
▪ 8.4.1. Magnetic Speed Sensor 1/2/3/4.....	47
▪ 8.4.2. Motion Sensors.....	47
▪ 8.4.3. G-force Sensor.....	48
▪ 8.4.4. Analog Input.....	48
◦ 8.5. Visual Aspect Settings.....	49
▪ 8.5.1. Screen Contrast.....	49
▪ 8.5.2. Peak Values.....	49
▪ 8.5.3. Synthesis of the Lap.....	51
▪ 8.5.4. 6 LEDs System Thresholds.....	52
• 8.5.4.1. RPM Channel.....	52
• 8.5.4.2. T°2 Exhaust Gas Channel.....	53
• 8.5.4.3. Best Lap + RPM Channel.....	53
• 8.5.4.4. Best Partial + RPM Channel.....	54
▪ 8.5.5. LED Alarm Left/Right Max/min.....	55
▪ 8.5.6. Delete Picture on Ignition.....	55
◦ 8.6. Driver Management.....	56
▪ 8.6.1. Driver Selection.....	56
▪ 8.6.2. Drive's Name Change.....	56
◦ 8.7. Counters Management.....	57
▪ 8.7.1. Activating/Deactivating Counters.....	57
▪ 8.7.2. Counters Initialization.....	57
▪ 8.7.3. Rename Counters.....	57
◦ 8.8. Change Device Language.....	58
◦ 8.9. Alfano Database and Memory Tracks Consultation.....	58
◦ 8.10. Delete Recorded Sessions.....	58
• 9. Alfano Mode.....	59
◦ 9.1. Automatic Mode.....	60
▪ 9.1.1. Track In the Alfano Database.....	60
▪ 9.1.2. Track Not in Memory.....	60
▪ 9.1.3. Semi-Automatic Mode.....	61
◦ 9.2. Professional Mode.....	61
▪ 9.2.1. Choice of Professional Track.....	62
▪ 9.2.2. Creation of a New Professional Track.....	62
▪ 9.2.3. Professional Track Modification.....	65
• 9.2.3.1. Add a Sector Line.....	66
• 9.2.3.2. Move a Sector Line.....	67
• 9.2.3.3. Change the Finish Line.....	68
• 9.2.3.4. Delete a Sector Line.....	68
• 9.2.3.5. Rename a Professional Track.....	69
▪ 9.2.4. Delete a Professional Track.....	70
▪ 9.2.5. Duplicate a Professional Track.....	70
▪ 9.2.6. Share a Professional Track to another Alfano 7.....	71
◦ 9.3. Magnetic Mode.....	73
▪ 9.3.1. Create a new Magnetic Track.....	74
▪ 9.3.2. Magnetic Track Modification.....	74
▪ 9.3.3. Delete a Magnetic Track.....	74

Index

	Pg
◦ 9.4. Track Open Mode.....	75
▪ 9.4.1. Track Open - Speed.....	75
▪ 9.4.2. Track Open - RPM.....	75
▪ 9.4.3. Track Open - GPS.....	75
• 9.4.3.1. Create new GPS Track Open.....	76
• 10. Data Analysis Directly from Alfano 7.....	78

1. Device Overview

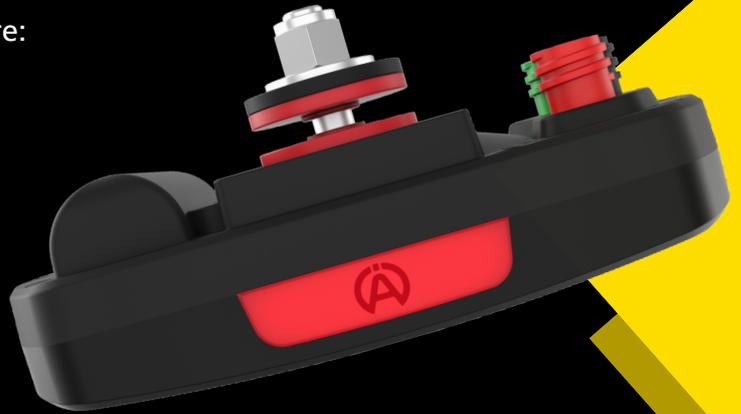


1.1. GPS at 25hz and 4 Constellations

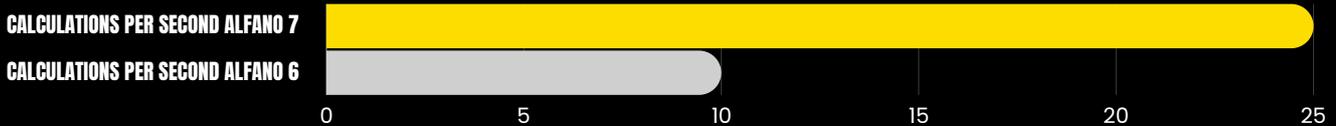
The **Alfano 7** is equipped with an advanced **25Hz satellite chip** that enables it to receive **4** different types of **satellite systems**, ensuring **maximum reception capacity** even in the **most difficult situations** and **in every corner** of the world

Satellite system technologies supported are:

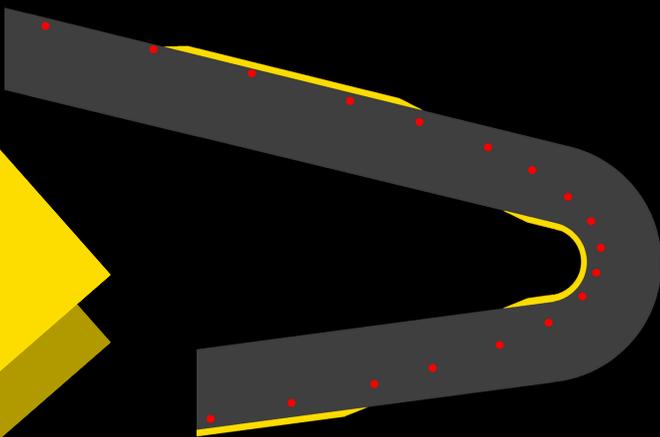
- NAVSTARS
- GLONASS
- GALILEO
- Beidou



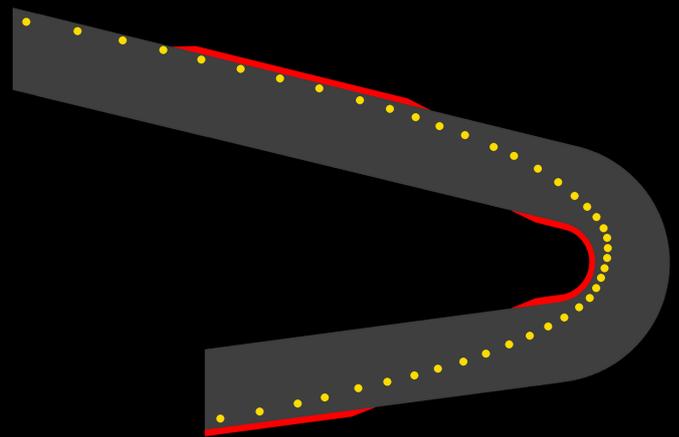
Thanks to this **advanced localisation chip**, the **Alfano 7** is able to **calculate its position** in space **25 times per second**. This is an **increase of 150%** compared to the **Alfano 6**



Increasing the frequency of GPS data acquisition improves the **accuracy of the detected trajectory** and **micro-variations in vehicle speed**, enabling a **more accurate analysis of the driver's micro-corrections** using the steering wheel



Alfano 6 satellite chip at 10 Hz



Alfano 7 satellite chip at 25 Hz

In addition to increasing the number of calculations per second, the latest generation satellite chip is compatible with the new BeiDou satellite system. This **brings the number of satellite systems compatible with the Alfano 7 to 4**, increasing the **number of satellites received** and the **quality of GPS data**

1.2. Data Acquisition Frequencies

The **Alfano 7** not only records **high frequency data** for **GPS** at **25 Hz**, but also for other channels, **enabling precise and comprehensive analysis through ADA**

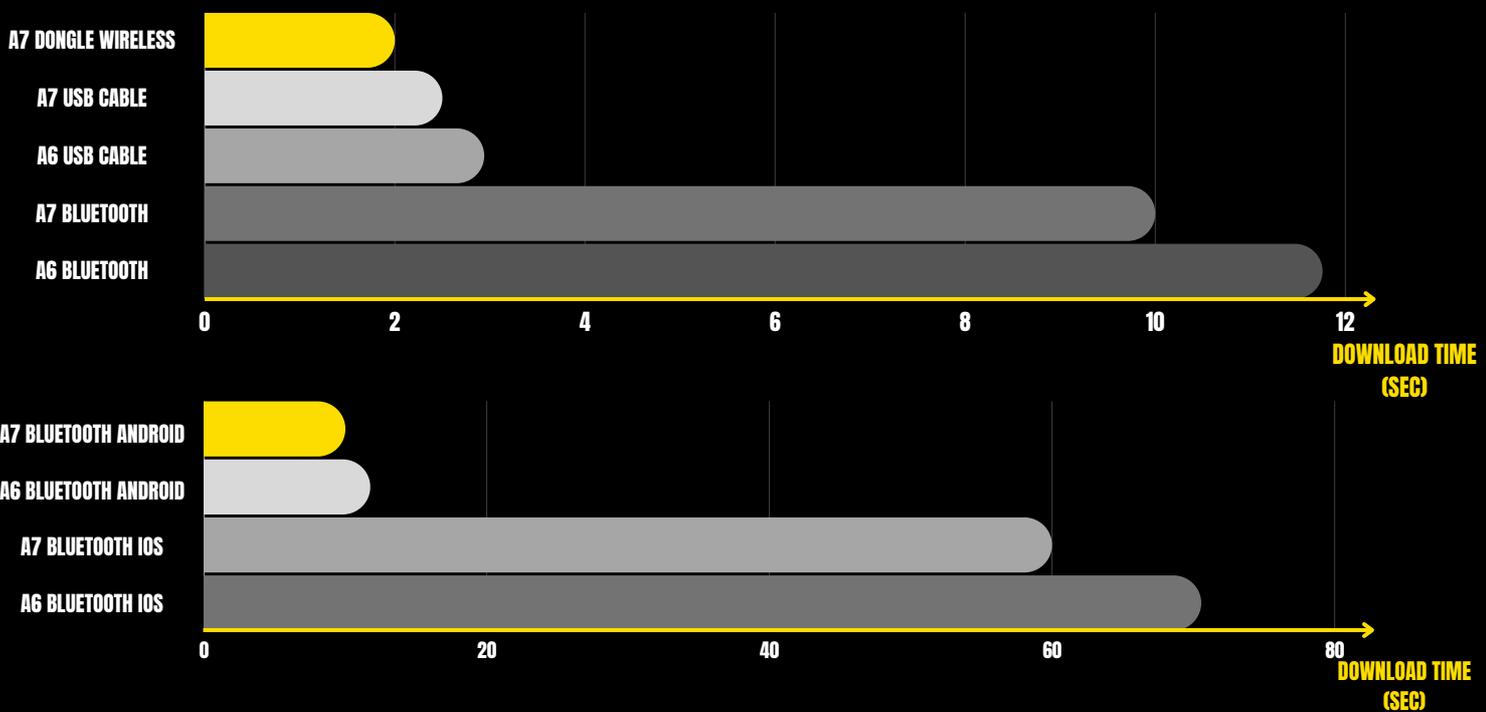
For further details, refer to page 40

MAGNETIC SPEED SENSOR	10/20HZ
EXHAUST TEMPERATURE T2	10/20/50HZ
ANALOG INPUT 5V	10/20/50HZ
LAMBDA	10/20/50HZ
RPM	10/20/50HZ



1.3. Fast Data Download

The **Alfano 7** increases download speeds by an average of **17.6%** compared to **Alfano 6**



BENCHMARKS WERE CALCULATED ON IDENTICAL CONFIGURATIONS OF ALFANO 7 AND ALFANO 6, WITH CONNECTED SENSORS SET AT 10 HZ, EXCEPT FOR THE GPS WHICH WAS SET AT 25 HZ IN ALFANO 7 AND 10 HZ IN ALFANO 6. DOWNLOAD TIMES WERE CALCULATED ON AN 8-LAPS SESSION, WITH EACH LAP TAKING 50 SECONDS

1.4. 1T & 2T

The **Alfano 7** is capable of **measuring vehicle temperatures** through **two distinct technologies**:

- **NTC**
- **K thermocouple**

- ▶ **ALFANO 7 1T** can measure **one temperature at a time**, both NTC and K
- ▶ **ALFANO 7 2T** can measure **two temperatures simultaneously**, one NTC and one K, it is not possible to acquire two NTC temperatures or two K temperatures at the same time (unless a Box12 is used)

ALFANO 7 1T can **evolve** to the **2T version** by purchasing a lifetime license on our website [Click here](#)



More information on page 42

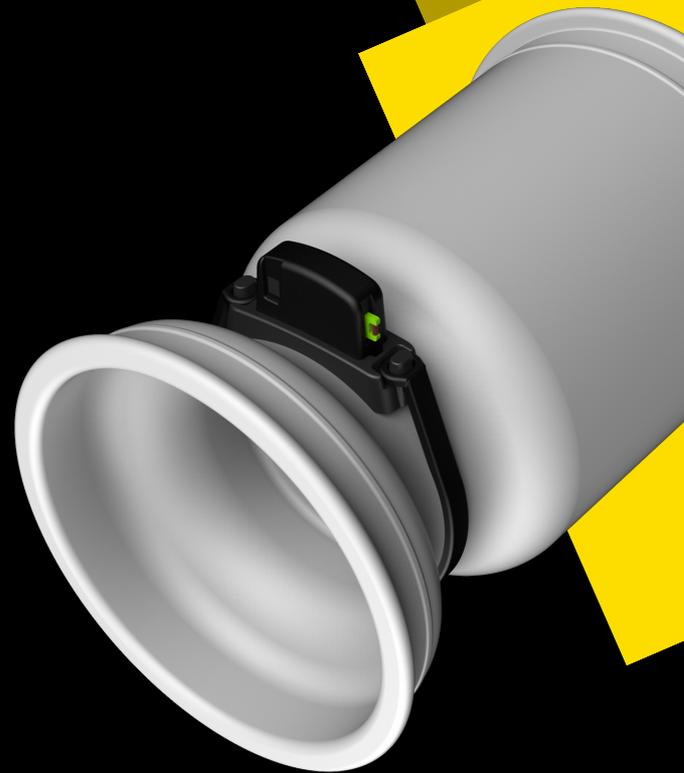
1.5. Wireless Communication



The **Alfano 7** is equipped with a **wireless chip** that **allows** the device to **communicate** with **our new wireless sensors** and with our **Alfano Dongle A4550** (coming soon) for **ultra-fast data download**

Our technology makes possible to **acquire data** that **would have been impossible** to obtain **with a cable**

For instance, our **A1210** wireless sensor, which is **inserted inside** the **tire** (coming soon), **can detect** with precision the **pressure** and **internal air temperature** of the tire



The **absence** of **cables** **simplifies** the **installation** of some sensors, **making them convenient** and **quick**

As in the case of our new **A1211 IR tire surface temperature sensor** (coming soon)



2. Info Button

The **Alfano 7** screens often have an 'info' button that provides additional explanations about the current page

To access an explanation of the current screen in your device's language, simply press the the central right button

Note that for Dutch, Norwegian, Finnish and Swedish languages, the content will be displayed in English



To scroll through longer messages, use the upper and lower left buttons

To return to the previous page, simply click the 'back' button (lower right button)

3. Endurance Mode

The **Alfano 7** will automatically activate **Endurance Mode** when its memory capacity exceeds 99%

Upon turning on the device, an informational message will be displayed



The Alfano 7 will not record the data according to the set data acquisition frequencies (see page 40) but will only record:

- **Lap times**
- **Sector times** (if split times are present)
- **Minimum and maximum** of each **connected sensor** to the Alfano 7 for each lap and for each sector (if split times are present)

In this way it will still be possible to keep track of the fundamental data of the session carried out

Direct on-device analysis of sessions recorded in **Endurance Mode** is interrupted at screen 5 due to the smaller amount of recorded data (see page 77 for more information)

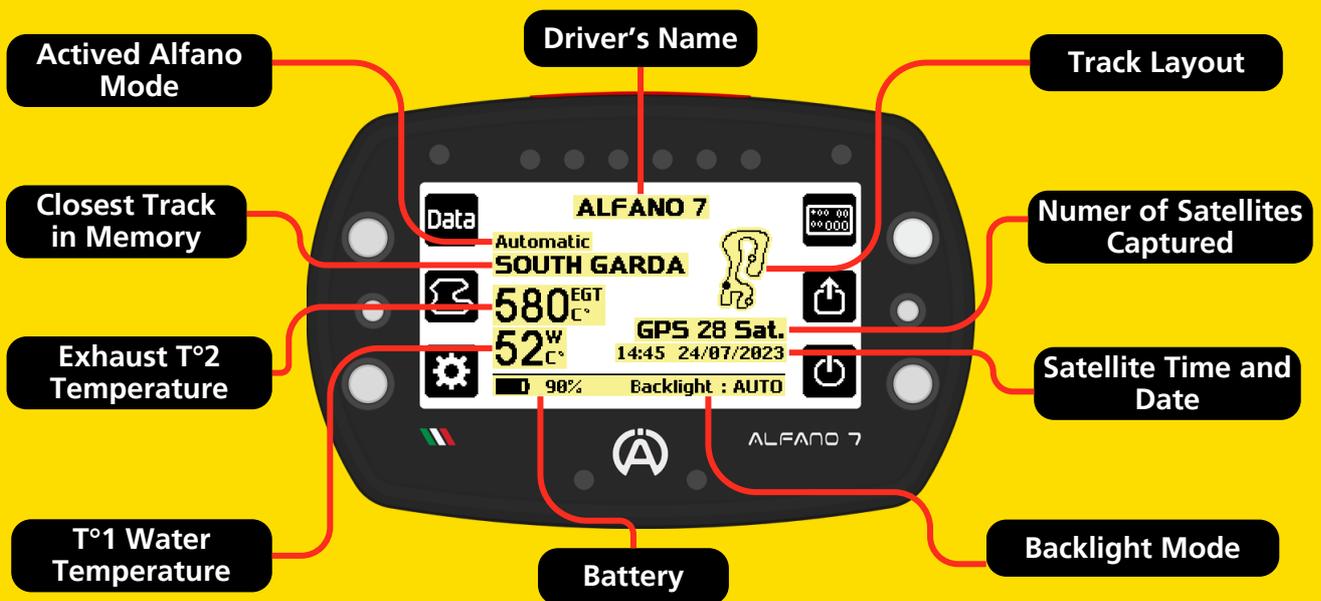
It is not possible to directly activate or deactivate the endurance mode. To deactivate it free up space in the device's memory

4. Homepage

The Alfano 7 homepage grants access to all key screens



The homepage shows all the most important information before starting

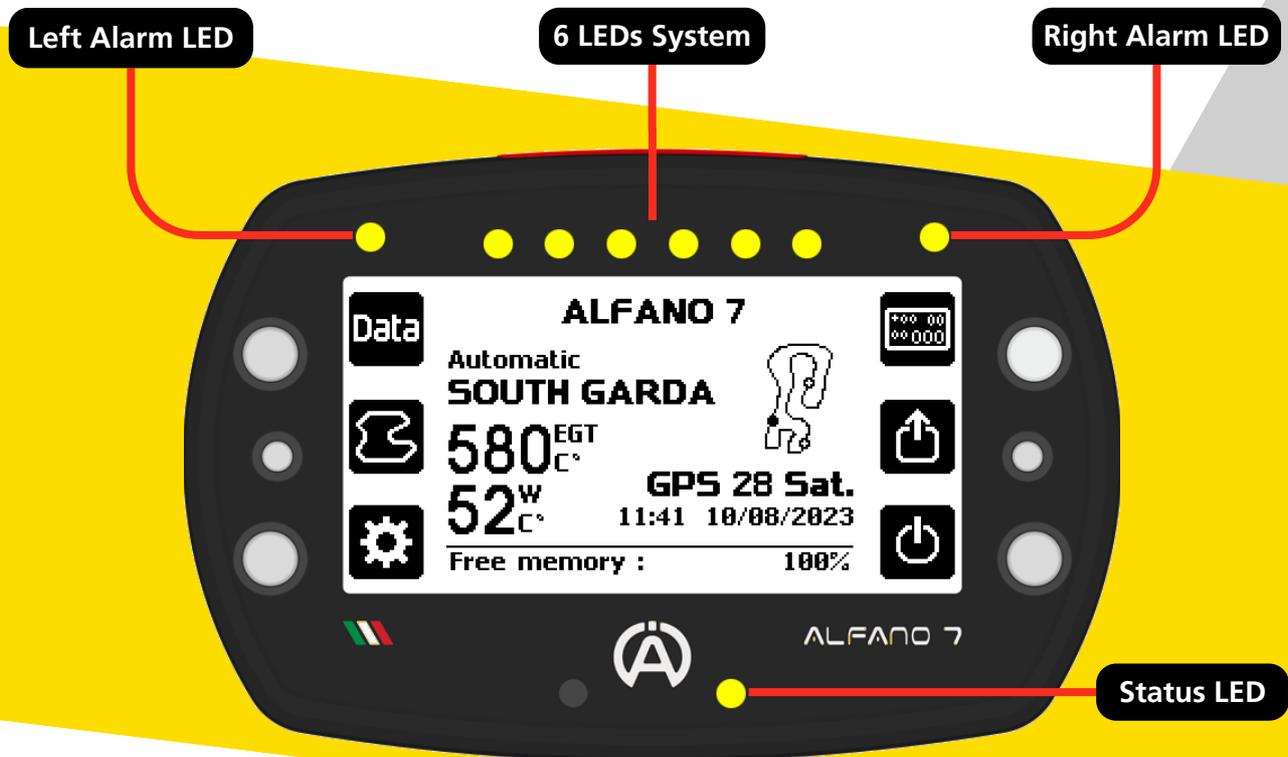


The device's available memory is displayed at the bottom of the screen, alternating with the battery charge and backlight mode



5. 9 LEDs

The Alfano 7 features 9 LEDs to improve the user experience and speed up the reading of the most important information



The **right and left Alarm LEDs** visually communicate **too high or too low temperatures**, (more information on page 55)



The **6 LEDs system** interacts with the driver in various ways depending on the selected race screen, providing visual information during track operation (more information on page 20)



The **Status LED** communicates secondary information, such as **charging, data transfer to other devices, update cycles, resetting to factory settings, and other details**

6. Data Sharing

The **Alfano 7** has three communication technologies:



Bluetooth to ADA application (available on iOS / Android portable devices and Windows PCs) and towards other Alfano 7s



USB cable to ADA application for Windows PC



Wireless to ADA application for Windows PC (via Alfano A4550 Dongle) and Alfano wireless sensors



To share data with another device, simply activate the sharing mode on the Alfano 7 by pressing the central right button from the homepage. Pressing this button while the Alfano 7 is off will turn it on and make it immediately ready to share data

6.1. Bluetooth Connection

By default, when entering the Sharing Menu, the Alfano 7 will activate the Bluetooth Mode



The **Driver's Name** selected may not be associated with the sent data. This information helps teams to promptly identify the device from which they are downloading data

To switch between Bluetooth, Wireless, or USB modes, simply press the corresponding button

6.2. Wireless Connection

The **Wireless** sharing screen shows the name of the device, the security code for the first connection and at the top the name of the last selected driver

Wireless communication is only possible with Windows PCs via the Alfano Dongle (A4550 - available soon)

Data exchange with mobile devices is only possible via Bluetooth

The Alfano Dongle offers quick session downloads, with speeds about 6 times faster than Bluetooth and 25% faster than the USB cable, even over long distances



6. Data Sharing

6.3 USB Connection

To switch from Bluetooth to USB mode, press the upper right button

To establish a connection, identify the COM port assigned by your PC to the Alfano data cable

The correct COM port for the device can be found on your computer's 'device management' page



To download data via USB cable, the **A4540** data cable is required (not supplied in the package)

Communication via USB cable is only possible with Windows PCs and is enabled for all types of data exchange

7. Race Screen

With the **Alfano 7** it is possible to configure the **Race Screen** down to the smallest detail, i.e. the information that the display shows during operation on the track

There are 5 race screens, the first is default, meaning it is not possible to change the information shown on the screen

The only setting that can be changed is that of the information communicated by the 6 LED's system

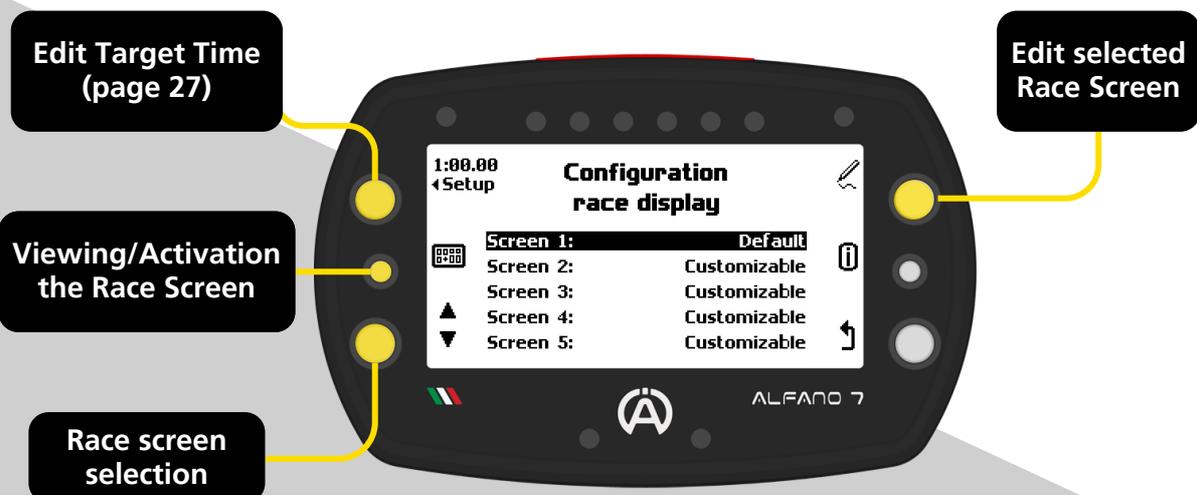
The other 4 race screens are empty and entirely configurable



To access the menu for selecting and editing the Race Screens, press the top right button of the homepage



On this page all the actions related to the race screens are carried out:



7. Race Screen

7.1. Edit Race Screen 2/3/4/5 - EDITABLE

Race screens 2/3/4/5 are entirely customizable

To modify a Race Screen, simply select it using the button at the bottom left and access the workspace by pressing the button at the top right

By default race screens 2/3/4/5 are empty



Race screen editing tools:

-  Add a Widget
-  Move a previously inserted Eidget
-  Resize a Widget
-  Invert the Widget's color
-  Remove a Widget
-  6 LEDs System
-  Rename Race Screen
-  View the Race Screen while editing
-  Exit Editing Race Screen

7. Race Screen

7.1. Edit Race Screen 2/3/4/5 - EDITABLE

7.1.1 Add a Widget

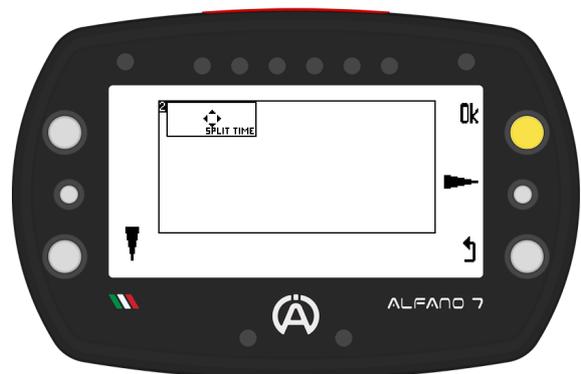


To add a widget clicking "Ok" (when the corresponding icon is selected) a list will open for selecting the desired block



Once the desired widget has been selected, Alfano 7 will return to the work space

You can then position the block where you want and confirm the position by clicking the 'ok' button



Alfano's Widget

Lap time	Indicates the lap time just completed
Best absolute time	Indicates the absolute best time on that track
Best time of the session	Indicates the best time of the current session
Partial time	Indicates the partial time just completed
Target time	It starts counting down the set target time each time the finish line is crossed
Predictive lap time	Shows the difference in time at each point on the track compared to the best lap of the session. Indicates the difference in time taken to reach the same point on the track during the best lap of the current session
Lap difference on absolute best	Indicates the difference in time of the lap just completed compared to the absolute best lap on that track
Lap difference on session best	Indicates the difference in time of the lap just completed compared to the best lap of the current session

7. Race Screen

7.1. Edit Race Screen 2/3/4/5 - EDITABLE



7.1.1 Add a Widget

Partial difference on absolute best	Indicates time difference in time of the partial just completed compared to the corresponding absolute best partial on that track
Partial difference on session best	Indicates time difference in time of the partial just completed compared to the corresponding current session best partial
Lap difference on the target time	Indicates the difference in time of the lap just completed compared to the set target time
Number of laps	Indicates the number of laps of the session
Engine RPM	Indicates engine rpm
Progress bar (RPM)	Indicates engine rpm in graphic form
Speed	Indicates speed
Gearbox	Indicates the gear engaged
T°1: Water / Cylinder Head	Indicates the temperature T°1
T°2: Exhaust	Indicates the temperature T°2
T°2: Exhaust min	Indicates the minimum T°2 temperature of the lap just completed
T°3: Channel 3	Indicates the temperature T°3
T°4: Channel 4	Indicates the temperature T°4
Clock	Indicate the time
C1, time	Indicates the usage time of counter 1 in minutes
C2, time	Indicates the usage time of counter 2 in minutes
C3, time	Indicates the usage time of the counter 3 in minutes
C4, time	Indicates the usage time of the counter 4 in minutes
C5, distance	Indicates the distance recorded by the counter 5 in km or miles
Valve	Indicates the valve position in percentage value
Lambda	Indicates the coefficient detected by the lambda probe
Analog input	Indicates the value from 0 to 5V of the analog input of box 12
Steering wheel	Indicates the steering position as a percentage value from -50% (all-left steering) to +50% (all-right steering)
Throttle / Gas pedal	Indicates the position of the accelerator pedal in percentage value
Brake pedal	Indicates the position of the brake pedal in percentage value

The widgets inserted in the screen are marked in the widget selection list with a symbol next to the name

7. Race Screen

7.1. Edit Race Screen 2/3/4/5 - EDITABLE

7.1.2. Resize a Widget

You can **resize inserted widgets** as per your requirement. The **default size is medium**, but you can **adjust** it to make it **smaller or larger**



7.1.3. Invert the Widget's color

This option **inverts the colors of a widget to highlight important information**. By default the **block has a white background and black information**. Inverting the colors will make the **background black and the information white**



7.1.4. Remove a Widget

This option **removes the widgets from the workspace by pressing the "ok" button**

7. Race Screen

7.1. Edit Race Screen 2/3/4/5 - EDITABLE

7.1.5. 6 LEDs System

This option will assign the function to the 6 LEDs system for the race screen in question.

By clicking "ok" on the 6 LED system icon, a list will open in which to select the desired function to assign to the 6 LED system for these race screen



6 LED system available functions:

OFF

The 6 LEDs system is deactivated and will not communicate any information. If alarms have been set for the upper LEDs they will remain active (see page 55)

RPM

The 6 LEDs system indicates the engine rpm, to set the ignition thresholds and the colors of each LED see page 52

Exhaust Gas T°2

The 6 LEDs system indicates the temperature of the exhaust gases, to set the ignition thresholds and the colors of each LED see page 53

Best Lap

The 6 LEDs system communicates the gap compared to the best lap of the current session as soon as you cross the finish line

Each red LED that lights up corresponds to a worsening of one tenth of a second, each green LED corresponds to an improvement of one tenth of a second

Best Partial

The 6 LEDs system communicates the gap compared to the best corresponding partial of the current session as soon as the line that delimits the sector is crossed

Each red LED that lights up corresponds to a worsening of one tenth of a second, each green LED corresponds to an improvement of one tenth of a second

Real Time gap

Alfano 7 is able to calculate the gap in real time compared to the best lap of the current session at every point on the track and also communicate it via the 6 LED system

Each red LED that lights up corresponds to a worsening of one tenth of a second, each green LED corresponds to an improvement of one tenth of a second

7. Race Screen

7.1. Edit Race Screen 2/3/4/5 - EDITABLE

7.1.5. 6 LEDs System

Best lap + RPM

The 6 LED system in this configuration communicates two types of information:

- During the lap they indicate the RPM, to set the thresholds and ignition colors (see page 52)
- Once a lap has been completed, they will indicate the gap compared to the best lap of the current session for the set time (see page 53)

Each red LED that lights up corresponds to a worsening of one tenth of a second, each green LED corresponds to an improvement of one tenth of a second

Best partial + RPM

The 6 LED system in this configuration communicates two types of information:

- During the lap they indicate the RPM, to set the thresholds and ignition colors (see page 52)
- Once a partial has been completed, they will indicate the gap compared to the best corresponding partial of the current session for the set time (see page 54)

Each red LED that lights up corresponds to a worsening of one tenth of a second, each green LED corresponds to an improvement of one tenth of a second

EXAMPLE - Time GAP

➤ Each red LED that lights up corresponds to a worsening of one tenth of a second, each green LED corresponds to an improvement of one tenth of a second

- Improvement of 1 tenth 
- Worsening of 2 tenths 

➤ The LEDs communicate gaps in steps of a tenth of a second, the intermediate values are rounded to the nearest tenth of a second

- Improvement of 1.4 tenths 
- Worsening of 1.8 tenths 
- Worsening of 0.4 tenths 

➤ Positive or negative gaps of more than 6 tenths of a second are signaled by all the LEDs turning on

- Improvement of 6 tenths 
- Improvement of 8 tenths 

7. Race Screen

7.1. Edit Race Screen 2/3/4/5 - EDITABLE

7.1.5. 6 LEDs System

Lambda Coefficient

The 6 LEDs system communicates the lambda coefficient

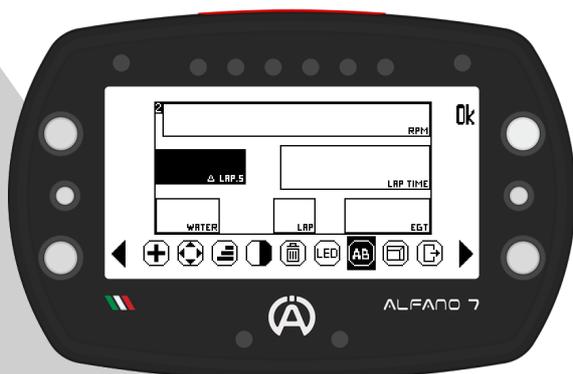
	Lambda coefficient greater than 1.08
	Lambda coefficient between 1.06 and 1.08
	Lambda coefficient between 1.02 and 1.06
	Lambda coefficient between 0.98 and 1.02
	Lambda coefficient between 0.94 and 0.98
	Lambda coefficient between 0.92 and 0.94
	Lambda coefficient less than 0.92

7. Race Screen

7.1. Edit Race Screen 2/3/4/5 - EDITABLE

7.1.6. Rename Race Screen

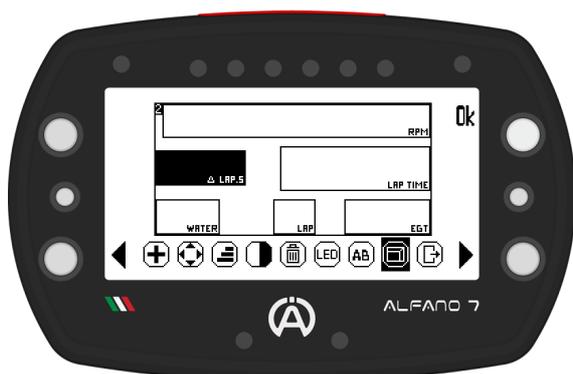
To rename the race screen, select the icon for changing the name and confirm by clicking 'ok'. This will open the keyboard



The new name will be visible on the selection page of the race screen in the right column

View the Race Screen while Editing

To preview the screen's appearance during track operation, use the view option when creating your own race screen



7. Race Screen

7.1. Edit Race Screen 2/3/4/5 - EDITABLE

Exit Editing Race Screen

To exit the workspace you can:

- **Record:** save the race screen
- **Cancel/Annul:** cancel the work done, in this case the race screen in memory will revert to the previous one, if present, or remain empty if no race screen had been saved
- **Remove:** Remove all settings, in this case the race screen will be saved blank



Workspace Widget Pointer

To edit a widget when there are multiple widgets in the workspace, select the block you wish to edit using the left and right center keys

A pointer will move between the widgets and select the one you want to edit, allowing you to move, resize, invert colors, and delete the desired widget

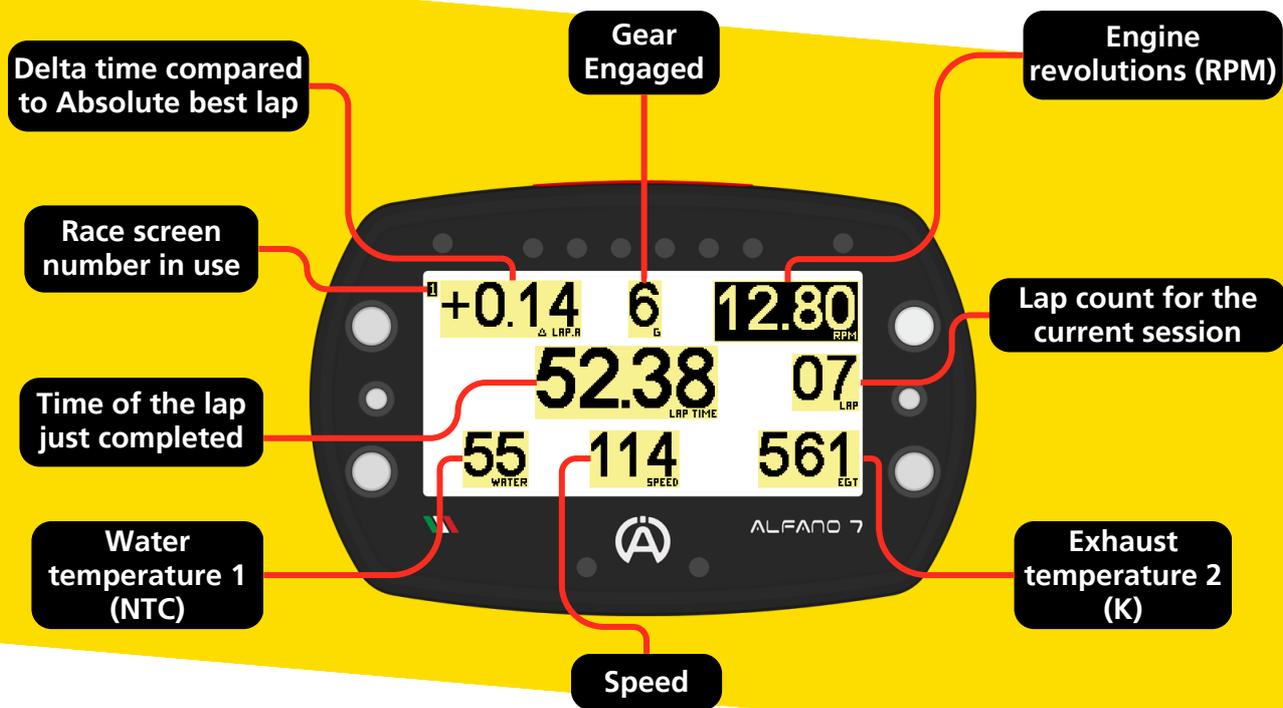


7. Race Screen

7.2. Race Screen 1 - DEFAULT

Race screen 1 is the only screen already present in Alfano 7

Widget Race Screen 1 - DEFAULT



7.2.1. Edit Race Screen 1 - DEFAULT

The only editable setting on this screen concerns the function of the 6 LED system (page 20)



7. Race Screen

7.3. View/Set Race Screen before Starting

To choose the race screen that will be displayed on the track, select it with the bottom left selection button and confirm your choice with the upper left button



The race screen will be displayed, confirm your choice with "ok" or cancel by going back

7.4. Swap Race Screen while Driving

If there is more than one race screen configured, including the default race screen, you can switch the displayed screen during track operation by briefly pressing the top right button



When the device enters race mode, if you have not manually chosen the desired screen in the race screen management menu, the screen used in the previous session will be shown

7. Race Screen

7.5. Target Time

The target time can be set in the device to be used as a reference

When creating customized race screens it is possible to insert widgets that refer to the target time, the available blocks are:

- ▶ **Target time:** with each new lap a countdown equal to the set value starts
- ▶ **Lap dif. on the target time:** as soon as a lap is completed, the delta time of the last lap compared to the target time is displayed

Target time setting

To modify the target time, press the top left button in the main race screen management menu



Set the desired time using the upper and lower left buttons.

The target time can be set in increments of one hundredth of a second, ranging from 10 seconds to 9 minutes and 59 seconds



To edit the displayed time, simply press the upper right button



7. Race Screen

7.6. Swap Driver's Name while Session Recording

During a track session, it is possible to change drivers, which is useful for endurance races to keep track of the sessions completed by different drivers.

To change drivers, enter pit lane mode by pressing the lower left button directly from the race screen



The screen for to the pit lane and driver change consists of:

- Current driver name on the top
- Name of the next driver
- Time counter that is triggered as soon as pit lane mode is activated
- Instant speed for respecting speed limits in pit lane



In pit lane mode you can perform two actions with the left buttons:

- Lower left button: exit pit lane mode and return to the race screen
- Upper left button: set the next pilot

Press the top left button to change the pilot. The new selected pilot will be displayed in the center and the next pilot in the top left. Press the upper left button until the desired driver is set



After a short period of inactivity, the Alfano 7 will return to the main pit lane mode screen

By changing the driver during the race, Alfano 7 will interrupt the session and start a new one with the driver name updated immediately or at the latest on the next lap (a condition that depends on the layout of the circuit and where the driver change is made)

8. Settings



Backlight and Power Settings of the 9 LEDs



Alfano 7 Settings, Connected Sensors and Boxes



Visual Aspect Settings



Driver Management



Counters Management



Change Device Language



Alfano Database and Memory Tracks Consultation



Delete Recorded Sessions

8. Settings



8.1. Backlight and Power Settings of the 9 LEDs

The **backlight** can be set to **always on**, **always off** or **automatic**

In **automatic mode**, the **Alfano 7**, thanks a brightness sensor, will **switch the backlight on or off** depending on the **external conditions**

The available **backlight colours** are **White, Orange, Purple, Green, Blue** and **Red**.

The **backlight** can be set to **3 intensity levels**: **low, normal** and **high**.



The **9 LEDs** (6 LED system, two alarm LEDs and status LEDs) can also be **adjusted** to **three levels of light intensity**: **low, normal** and **high**



8.2. Alfano 7 Settings, Connected Sensors and Boxes



8.2.1 STANDBY

The **Alfano 7** features a **standby mode** that is **activated automatically** after a certain period of **inactivity**

The device will **reactivate** either upon **detection of engine RPM** or by **pressing the lower right button**



From factory settings, the device will enter **standby mode** after **15 minutes** of **inactivity**

If there are **no RPMs** detected or the device is **not manually activated** within the next **300 minutes**, it will **turn off completely**

On this page you can set the **time** for the device to enter **standby mode** (activation Standby) and the **duration** it will remain in **standby** before **turning off** (standby time)

8. Settings



8.2. Alfano 7 Settings, Connected Sensors and Boxes

4

8.2.2. TRANSMISSION

On this page you can set the type of vehicle transmission between direct/clutch and gearbox
By setting a vehicle with gearbox, you can enter the number of gears and configure the device so that it detects the gear engaged



8.2.2.1 Engaged Gear Configuration

To initiate the device's learning process to recognize the engaged gear, click on 'Start learning'

Configuration can be done in two ways:

- Using only the RPM cable, in this case the GPS speed will be utilized to calculate the engaged gear
- Using RPM cable and magnetic speed sensor (A2203)

For a more precise reading we recommend configuration via a magnetic speed sensor

The Alfano 7 automatically detects the presence of a magnetic speed sensor and selects the most accurate configuration method. Therefore, no action is required to select the configuration method

Calibration on the trolley is recommended for configurations that use a magnetic speed sensor, while entering the track is necessary for configurations that use GPS speed

By clicking "Ok" on "Start learning" the first screen of the configuration process will be displayed



8. Settings



8.2. Alfano 7 Settings, Connected Sensors and Boxes

4

8.2.2. TRANSMISSION

8.2.2.1 Engaged Gear Configuration

Start the vehicle by engaging first gear (do not start in second gear)

The device will begin to learn first gear once the RPM and speed are detected



While learning the gear, the gear that the device is configuring is indicated in the center of the screen

For correct configuration, constant and non-abrupt guidance is required

Do not change the indicated gear until the device requests it

Once the device has successfully learned the specified gear, it will prompt to proceed to the next one



Enter the requested gear and continue learning until the last gear is reached (value entered in the previous screen under the "number of gears" item)

After completing the learning of the last gear, the Alfano 7 will start recording the session. There is no need to return to the pits. You may complete the session as usual.

8. Settings



8.2. Alfano 7 Settings, Connected Sensors and Boxes



8.2.2. TRANSMISSION

8.2.2.1 Engaged Gear Configuration

If the **driving** is irregular or abrupt, an alarm will appear to inform the driver that gear calculation is not possible. It is important to maintain a consistent and smooth driving style to ensure accurate gear calculation

Once the riding becomes stable, the indicated gear will be calculated and learning will continue



When reconfiguring gear recognition

Recalibration is required whenever a transmission component is replaced and the gear ratio is changed

If the type of speed acquisition is altered, such as adding a magnetic speed sensor from an RPM-only configuration or vice versa, it is recommended to perform recalibration



8.2.3. MAGNETIC SPEED SENSOR

To set up a magnetic speed sensor:

- enter the number of magnets present on the Alfano magnetic ring
- enter the external diameter of the tyre

Connecting a Box12 will unlock three additional channels of magnetic speed sensors, bringing the total to four

The configuration of the other magnetic speed sensors channels is identical



8. Settings



8.2. Alfano 7 Settings, Connected Sensors and Boxes



8.2.4. RPM

Maximum RPM

This menu allows you to **adjust the RPM full scale**, which is the **maximum value** that the device can read. The factory setting is 18000

Any RPM values above this threshold will be recorded as equal to the set value

The **RPM full scale serves as protection against electromagnetic disturbances from the engine or from limiter interventions (if present)**



RPM Factor

If the **engine rpm reading is a multiple or sub-multiple of the real engine rpm**, a **multiplication factor can be set to correct it**. The available factors are: /4 - /3 - /2 - x1 - x2 - x3 - x4

Engine Type

Alfano 7 allows users to select the type of engine being used. The available options are:

- Standard
- TM Mini 60cc
- Vortex Mini

The **standard setting keeps the pure data read through the RPM cable**. It is **recommended that all users keep the engine type set to standard**

In some cases, especially for **TM Mini 60cc and Vortex Mini engines**, the **standard engine setting may show the limiter trip with spikes downwards and upwards in engine RPM**.

In these cases it is **recommended to set a Maximin RPM slightly higher than the theoretical RPM value at which the limiter intervenes** (for example 14300 or 14500)

For users of the respective engines who do not wish to see the peaks generated by ECU, the **TM Mini 60cc and Vortex Mini options must be selected**

8. Settings



8.2. Alfano 7 Settings, Connected Sensors and Boxes

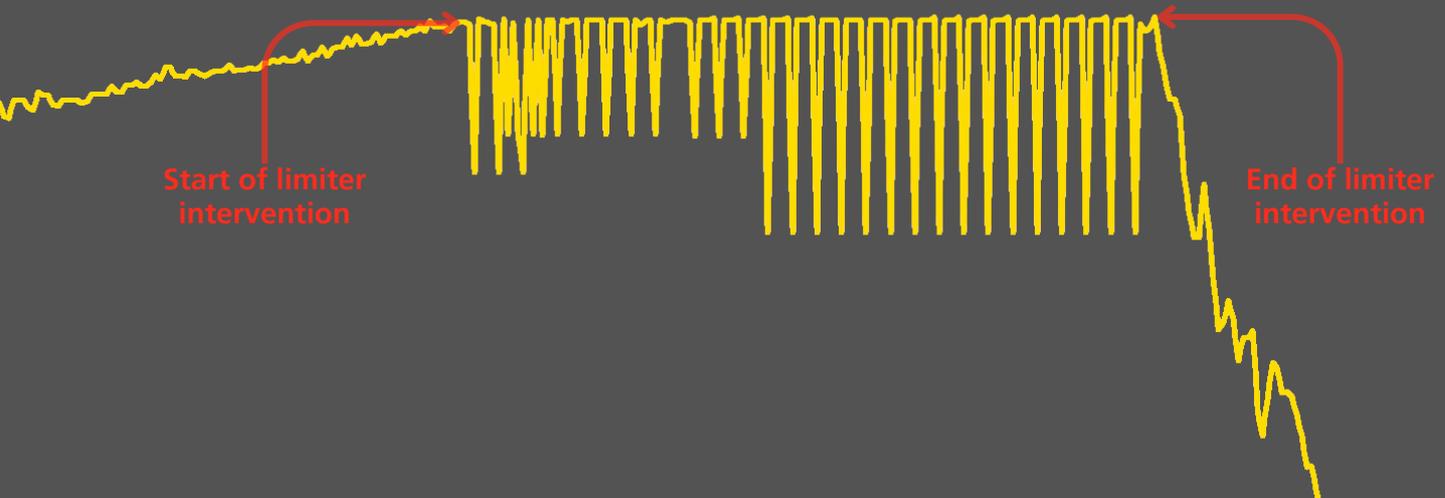


8.2.4. RPM

EXAMPLE - RPM curve with standard engine type setting

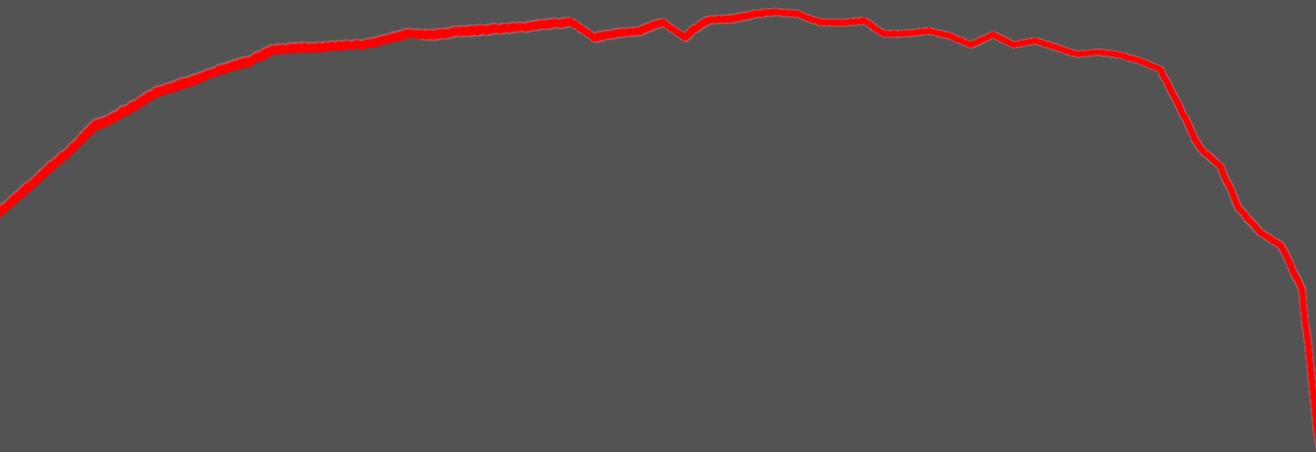
The RPM curve shows data from a TM Mini 60cc engine with standard engine setting. As can be seen from the RPM curve the limiter generated downward peaks during the intervention period

The starting and ending points of intervention of the engine speed limiter are highlighted



EXAMPLE - RPM curve with TM Mini 60cc engine type setting

The RPM curve shows data from a TM Mini 60cc engine with the engine setting set to TM Mini 60cc. As can be seen from the RPM curve, Alfano 7, knowing the type of engine in use, was able to recognize the discontinuities generated by the limiter, hiding its intervention and consequently the start and end points



8. Settings



8.2. Alfano 7 Settings, Connected Sensors and Boxes



8.2.5. WIRELESS WHEEL SENSORS

Alfano 7, thanks to the new wireless system, allows the use of wireless sensors that monitor the fundamental data of the tires while driving

This menu allows you to connect, calibrate, and view the status of the wireless tire sensors

8.2.5.1. INTERNAL SENSORS

The sensors inside the wheel detect the tire's internal pressure and air temperature

Selecting the corresponding icon will open the internal sensor management page

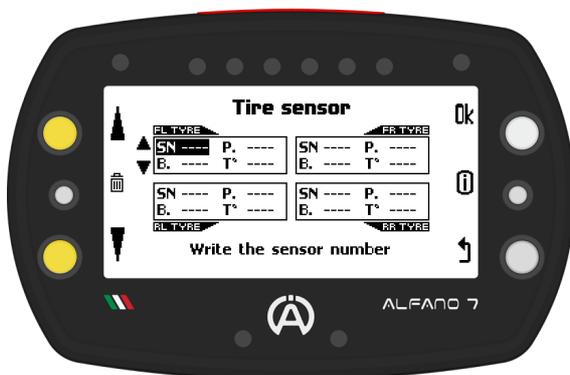
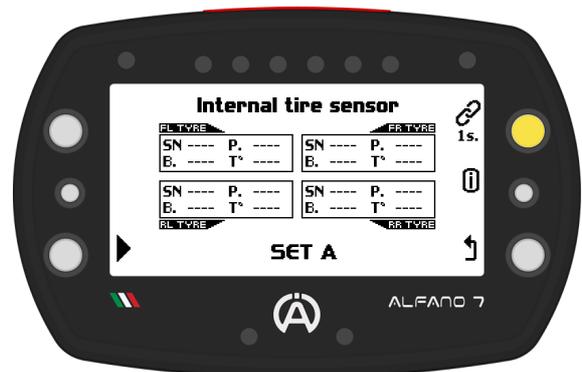


8.2.5.1.1 INTERNAL SENSOR CONNECTION

Alfano 7 can manage up to 8 internal sensors, divided into two sets: 4 in Set A and 4 in Set B. The device automatically detects which SET of sensors is installed on the vehicle's wheels during tire changes in the pit, ensuring correct data acquisition without manual intervention

To associate the sensors with the Alfano 7, select the desired SET with the lower left button, press and hold the top right button for one second

Enter the number engraved on the outside of the pressure and internal air temperature sensor



Using the lower and upper left buttons, set the serial number of the sensor you want to associate with the wheel:

- FL - Front Left Wheel
- FR - Front Right Wheel
- RL - Rear Left Wheel
- RR - Rear Right Wheel

Press 'ok' to move to the next wheel

If you do not want to associate a sensor for one or more wheels, keep the serial number on "----" and press the "ok" button to confirm and move on to the next wheel

8. Settings



8.2. Alfano 7 Settings, Connected Sensors and Boxes



8.2.5. WIRELESS WHEEL SENSORS

8.2.5.1. INTERNAL SENSORS

Due to the energy-saving algorithm, when the sensors have not yet self-activated, it will be necessary to wait a maximum of 1 minute for connection



After establishing the connection, you will be able to read the detected air pressure and internal air temperature values

To remove a connected sensor, enter connection mode by pressing the connection button for one second. Then, select the desired internal sensor and press the central left button for one second



8.2.5.1.2. INTERNAL SENSOR CALIBRATION

This operation is necessary to compensate for atmospheric pressure in your location

Calibration is possible if at least one sensor has been associated with a SET

Ensure that all sensors associated with both SETs are exposed to ambient air and positioned close to Afano 7

Press the center button and wait for the loading bar to complete, the device will confirm successful calibration with a message on the screen



8. Settings



8.2. Alfano 7 Settings, Connected Sensors and Boxes



8.2.5. WIRELESS WHEEL SENSORS

8.2.5.2. EXTERNAL SENSORS

External sensors detect the surface temperature of the tire via an IR temperature sensor

Selecting the corresponding icon will open the external sensor management page



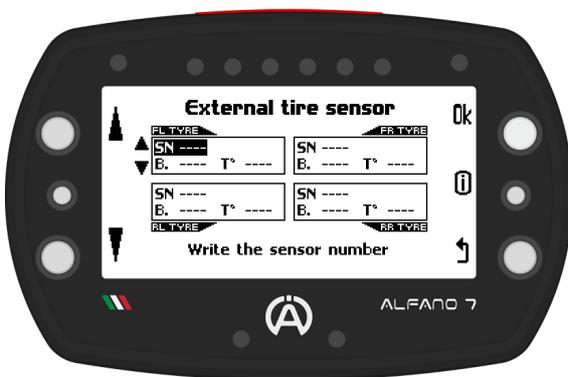
8.2.5.2.1. EXTERNAL SENSOR CONNECTION

The association of the sensor with the device is achieved via the serial number engraved on the outside of the IR temperature sensor

Before connecting, turn on the infrared sensors by passing a magnet near the LED

The red LED will indicate that the wireless sensor is turned on. To turn off the sensor, bring the magnet close to the LED again

Once all the sensors you want to connect to the Alfano 7 are switched on, press the top right button for one second to start the pairing process



Using the lower and upper left buttons, set the serial number of the sensor you want to associate with the wheel:

- FL - Front Left Wheel
- FR - Front Right Wheel
- RL - Rear Left Wheel
- RR - Rear Right Wheel

Press 'ok' to move to the next wheel

If you do not want to associate a sensor for one or more wheels, keep the serial number on "----" and press the "ok" button to confirm and move on to the next wheel

8. Settings



8.2. Alfano 7 Settings, Connected Sensors and Boxes



8.2.5. WIRELESS WHEEL SENSORS

8.2.5.2. EXTERNAL SENSORS

8.2.5.2.1. EXTERNAL SENSOR CONNECTION

Once the connection is established, the tire surface temperature will be displayed

To remove a connected sensor, enter connection mode by pressing the connection button for one second. Then, select the desired external sensor and press the central left button for one second

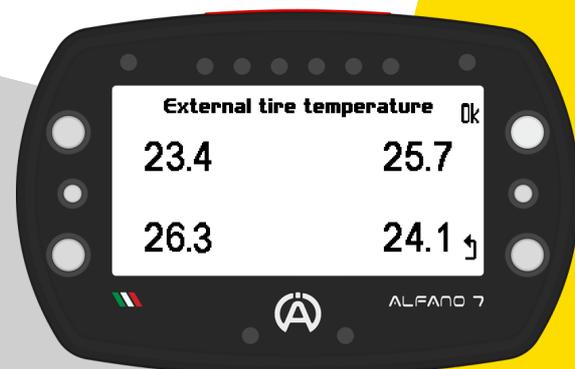


8.2.5.3. SHORTCUT TO DISPLAY VALUES OF CONNECTED INTERNAL AND EXTERNAL SENSORS

To view the values detected by the wireless sensors, press and hold the top right button while on the homepage

The screen will display real-time detected pressure values of internal sensors coupled to SET A and B

Press the upper right button on this screen to display real-time detected temperature values of the external sensors



8. Settings



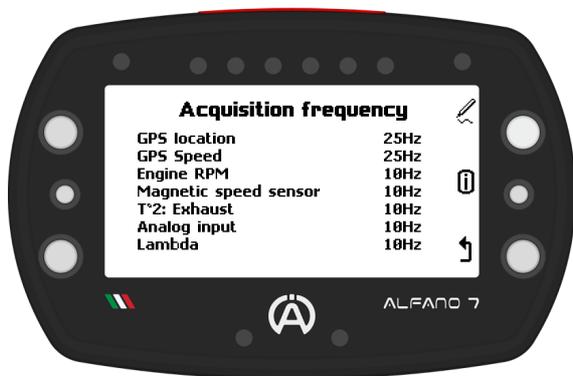
8.2. Alfano 7 Settings, Connected Sensors and Boxes



8.2.6. DATA ACQUISITION FREQUENCY

Depending on your needs, you can adjust the frequency of acquisition for the most important data

The data acquisition frequency of all sensors/channels not mentioned is fixed at 10 Hz



Recording channels	Acquisition frequencies
GPS location	25 Hz
GPS speed	25 Hz
Engine RPM	10/20/50 Hz
Magnetic speed sensor	10/20 Hz
T°2: Exhaust	10/20/50 Hz
Analog Input (Box 12)	10/20/50 Hz
Lambda (Box lambda o Box12)	10/20/50 Hz
Others	10 Hz

Increasing the number of recorded data per second will inevitably increase data download times, a slowdown that will be more noticeable when downloading data via Bluetooth

In addition, the device's memory will be able to store fewer minutes of recording



8.2.7. UNITS OF MEASURE

Set your desired units of measurement on this page

Given	Unit of measurement available	
Speed	km/h	mph
Distance	km - mm	miles - inches
Temperature	C°	F°
Bar	bar	psi



8. Settings



8.2. Alfano 7 Settings, Connected Sensors and Boxes



8.2.8. FORMAT - TIME ZONE

This page allows you to set the display format for date and time

If the Alfano 7 receives a GPS signal, it will display the UTC time. You can also set the time zone for your area of interest



8.2.9 SYSTEM INFORMATION and RESET

This screen indicates:

- Alfano 7 serial number
- Serial number and type of connected Alfano Box
- Alfano 7 firmware version



8.2.9.1. FACTORY RESTORATION

To restore your Alfano 7 to the factory settings, press the button located at the bottom left



An intermediate confirmation page will appear

Confirm the device reset by pressing the "ok" button until the progress bar that appears is fully loaded

The Alfano 7 will be restored to its factory state, and all saved data, tracks, and settings will be deleted

8. Settings



8.2. Alfano 7 Settings, Connected Sensors and Boxes



8.2.10. MANUAL

By scanning the QR code, you can access this manual directly



8.2.11. SWITCH TO 2T

Owners of Alfano 7 1T devices can upgrade to the 2T version



Scan the QR code to learn more and purchase the 2T lifetime license directly

Once purchased, the product code will be sent via email

To enter the code received by email, press the "Ok" button and enter the product code using the lower and upper left buttons

When the first digit has been entered, press "ok" to proceed to the next digit. When all the digits have been entered, press "ok" again



The unit will restart and 2T functionality will be enabled

8. Settings



8.2. Alfano 7 Settings, Connected Sensors and Boxes



8.2.12. LOCKING PARAMETERS

The last page of the setup menu allows you to lock the Alfano 7 parameters

To block parameter modification, press the upper right button for 3 seconds

As soon as the progressive bar is loaded, the device will block access to the parameter modification pages and return to the home page



To unlock, press and hold the lower left or centre left button for 3 seconds

Access to the all settings menu (icon on the bottom left) and access to the **Alfano mode selection** menu (icon on the centre left) is not possible until the lock is removed



8. Settings



8.3. Settings - Box4Move

Connecting a Box4Move to the Alfano 7 unlocks the settings menu items related to the operation of the additional module, in particular the "Motion sensors" and "G-Force sensor" menus

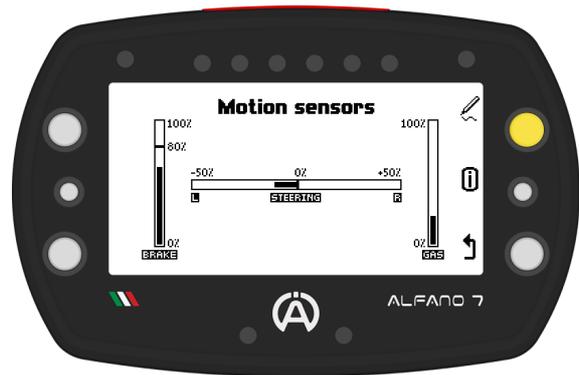


8.3.1 MOTION SENSORS

By accessing the motion sensors page, the current status of the sensors is displayed

The sensors must be calibrated after each installation

To access the calibration menu, press the top right button



The selection page of the sensor you want to calibrate will open, select:

- Brake pedal calibration
- Steering calibration
- Accelerator pedal calibration

8.3.1.1. BRAKE PEDAL CALIBRATION

By accessing the brake pedal calibration, the status of the brake pedal is displayed again, i.e. the detected position

To calibrate the brake pedal, press and hold the upper right button for one second, as indicated by "1S-CAL"



When you confirm that you want to calibrate the sensor, the cursor will move to the 80% position

Fully depress the brake pedal and confirm with the upper right button to record the position



The value corresponding to the pedal being fully depressed is 80% to monitor the wear of the brake pads

When the brake pads have worn down, values greater than 80% will be recorded

8. Settings



8.3. Settings - Box4Move



8.3.1 MOTION SENSORS

8.3.1.1. BRAKE PEDAL CALIBRATION

Once the position of the fully depressed brake pedal is confirmed, the cursor will position itself on the 0% value

Release the brake pedal and record the position when it is not depressed with the upper right button



When the position corresponding to 0% is confirmed, the calibration is completed and the real-time status of the brake pedal is displayed again

8.3.1.2. ACCELERATOR PEDAL CALIBRATION

The calibration of the accelerator pedal is similar to that of the brake pedal, except for the maximum value of 100%

8.3.1.3. STEERING WHEEL CALIBRATION

Calibration is started by pressing and holding the "15-CAL" button for one second

The steering wheel is calibrated at 3 points:



When the start of calibration is confirmed, the cursor is positioned on the -50% value, which corresponds to the steering wheel being turned all the way to the left

Turn the steering wheel all the way to the left and record the first calibration point with the upper right button

8. Settings



8.3. Settings - Box4Move



8.3.1 MOTION SENSORS

8.3.1.3. STEERING WHEEL CALIBRATION



Once the position has been confirmed with the steering wheel fully turned to the left, the cursor will position itself on the 0% value corresponding to a straight steering wheel

Straighten the steering wheel and record the second point with the upper right button

Once the position corresponding to the straight steering wheel has been recorded, the cursor will move to the +50% value corresponding to the steering wheel turned all the way to the right

Turn the steering wheel all the way to the right and record the third and final point with the top right button



Once calibration is complete, the Alfano 7 will display the current status of the steering wheel



8.3.2 G-FORCE SENSOR

The Box4Move has an internal G-force sensor that must be calibrated for correct operation

To calibrate the G-force sensor, the Box4Move must be installed so that the connectors are perpendicular to the ground

The box must be positioned as shown in the photo in relation to the direction of movement of the vehicle as indicated by the red arrows



8. Settings



8.3. Settings - Box4Move



8.3.2 G-FORCE SENSOR

If the box is not in the correct position for calibration, an error message will be displayed at the bottom on the configuration page and the wording "1S-CAL" will not appear



When the Box4Move is in the correct position, press the upper left button for one second, corresponding to "1S-CAL", the calibration will be performed



8.4. Settings - Box12

Connecting a Box12 to the Alfano 7 unlocks the settings menu items related to the operation of the additional module, in particular the following items:

- Speed sensor 1
- Speed sensor 2
- Speed sensor 3
- Speed sensor 4
- Motion sensors
- G-Force Sensor
- Analog Input



8.4.1. SPEED SENSOR 1 / 2 / 3 / 4

The settings of the 4 magnetic speed channels are identical to those of the single magnetic speed channel of the Alfano 7 when it is not connected to a Box12, see page 33



8.3.1 MOTION SENSORS

The settings for the motion sensors are the same as for Box4Move, see page 44

8. Settings



8.4. Settings - Box12



8.4.3. G-FORCE SENSOR

The **Box12** has an **internal G-force sensor** that **must be calibrated** for **correct operation**

To **calibrate the G-force sensor**, the **Box12** **must be installed** so that the **connectors are parallel to the ground**

The **Box12** **must be positioned** as shown in the **photo** in **relation to the direction of movement** of the **vehicle** as indicated by the **red arrows**



0-5 V

8.4.4. ANALOGUE INPUT

The **0-5V input** of **Box12** is a **universal input** for **connecting any sensor** that **returns values between 0 and 5 V**. The **Alfano A3406 cable** is **required for the connection**

The **0-5V analogue input** is **factory calibrated** but for **sensors with impedance** it is **possible to calibrate the voltage read**



8. Settings



8.5. Visual Aspect Settings



8.5.1. SCREEN CONTRAST

This screen allows you to **adjust** the **screen contrast** for correct viewing in difficult external conditions

Contrast can be **adjusted** from **5% to 95%**



8.5.2. PEAK VALUES

Alfabo 7 allows you to set a **freeze time** for the channels:

- Lap time
- RPM
- Speed
- Temperature



If a **freezing time** is set, when a **maximum/minimum value** is reached on this channel, Alfabo 7 will **block the relevant widget** (if present on the race screen used) for the **set time**. If, during the **freezing time**, the **maximum/minimum value** shown on the display is **exceeded**, the **value is updated** and **remains frozen** for the **set time**.

The **freezing time**, which can be set from **0 to 5 seconds**, is **useful** for the **driver** to be able to see the **maximum** and **minimum** of the **most important values** while driving.

8. Settings



8.5. Visual Aspect Settings



8.5.2. PEAK VALUES

What are minimums and maximums

Maximum: highest value detected after a sequence of increasingly larger values before a sequence of increasingly smaller values

Minimum: lowest value detected after a sequence of increasingly smaller values before a sequence of increasingly larger values



LAP TIME

Lap time freezing can be set from 0 to 10 seconds or for the entire lap

Once you cross the finish line:

- If a **freezing time** has been set, the **time of the lap just completed** will be shown for the set time and, subsequently, the **time of the current lap** will be displayed scroll
- If the **"fixed"** option has been selected, the **time of the lap just completed** is displayed until a new lap is completed

8. Settings



8.5. Visual Aspect Settings



8.5.3. SYNTHESIS OF THE LAP

The Synthesis of a lap is a screen that appears as soon as you cross the finish line and shows the most interesting data of the lap you have just completed:

- Lap time
- RPM max
- RPM min
- Exhaust T2 max
- Exhaust T2 min

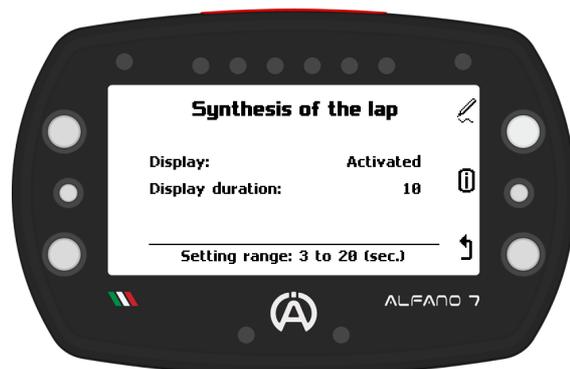


The word "BEST" appears next to the lap time if the lap is the best of the session, otherwise the difference between the lap just completed and the best time of the session appears

If the exhaust sensor is not connected, the ALFANO 7 will show the maximum and minimum temperatures of the engine water sensor

The synthesis of the lap is deactivated by default. To activate it, set the display time after the finish line from 3 to 20 seconds

After this time, the race screen with the real time values will be displayed again



8. Settings



8.5. Visual Aspect Settings



8.5.4. 6 LEDs SYSTEM THRESHOLDS

The Alfano 7 enable detailed configuration of the information displayed during operation on the track, including that communicated by the 6 LED system (see page 20)

You can configure all parameters related to the 6 LED system on this screen

Press the upper button to enter the channel selection section that you wish to modify



Use the upper and lower left buttons to scroll through the channels. Press the 'ok' button to modify the thresholds and LED color of the selected channel

8.5.4.1. RPM CHANNEL

If the RPM channel is configured on the race screen, the LED will be controlled by the settings on that screen

It is possible to customize the color of each LED and the value at which the LED turns on



Upon modifying the parameters, the corresponding LED will illuminate

The initial editable setting is the LED colour

You can choose from:

- Yellow
- White
- Red
- Blue
- Green
- Purple

Click the 'OK' button to proceed to the next LED. After configuring the colours of all LEDs, you can adjust the switch-on thresholds of each of the 6 LEDs in increments of 10 RPM

8. Settings



8.5. Visual Aspect Settings

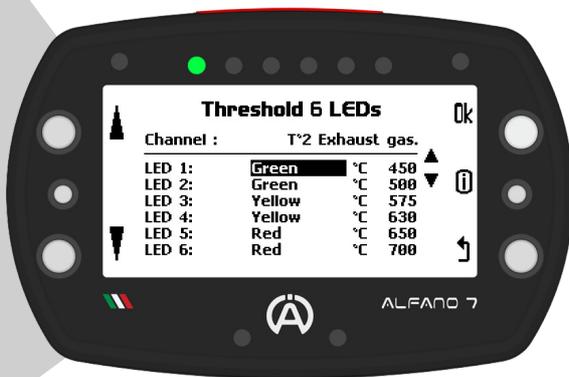


8.5.4. 6 LEDs SYSTEM THRESHOLDS

8.5.4.2. T°2 EXHAUST GAS CHANNEL

If the T°2 exhaust gas channel is configured on the race screen, the LED will be controlled by the settings on that screen

It is possible to customize the color of each LED and the value at which the LED turns on



Upon modifying the parameters, the corresponding LED will illuminate

The initial editable setting is the LED colour

You can choose from:

- Yellow
- White
- Red
- Blue
- Green
- Purple

Click the 'OK' button to proceed to the next LED. After configuring the colours of all LEDs, you can adjust the switch-on thresholds of each of the 6 LEDs in increments of 1°C / 1°F

8.5.4.3. BEST LAP + RPM CHANNEL

The 6 LEDs system can be set to communicate two types of information at the same time (as explained on page 21)



In this case:

- **During the lap:** the LEDs will indicate the RPM (the thresholds and colors on which the LEDs will be based are those set in the RPM channel, see page 52)
- **Crossed the finish line:** LEDs will indicate the delta compared to the best lap of the session for the time set in this screen (from 3 to 20 seconds)

Time after which the engine RPM will be communicated again

Explanations and examples of how LEDs communicate time gaps on page 21

8. Settings



8.5. Visual Aspect Settings



8.5.4. 6 LEDs SYSTEM THRESHOLDS

8.5.4.4. BEST PARTIAL + RPM CHANNEL

The **6 LEDs system** can be set to **communicate two types of information** at the same time (as explained on page 21)



In this case:

- **During the lap:** the LEDs will indicate the **RPM** (the thresholds and colors on which the LEDs will be based are those set in the RPM channel, see page 52)
- **Crossed a sector line:** LEDs indicate the **delta from the best corresponding sector of the session for the time set in this screen** (3 to 20 seconds)

Time after which the engine RPM will be communicated again

Explanations and examples of how LEDs communicate time gaps on page 21

8. Settings



8.5. Visual Aspect Settings



8.5.5. LED ALARM LEFT/RIGHT MAX/MIN

The Alfano 7 features 2 upper LEDs that are specifically designed to indicate temperature alarms. Each LED can be programmed to signal either a temperature that is too low or too high, allowing for a maximum of 4 temperature alarms in total (2 for each LED)

The four alarms are independent.

If a Box12 is connected, they can refer to four different temperatures

Similarly, the maximum and minimum alarms of the same LED are not dependent, and one can be active while the other is inactive



For each of these 4 alarms it is possible to set:

- The alarm reference temperature (the options include the disabled item)
- The threshold value above which (maximum alarm) or below which (minimum alarm) the LED turns on
- The color of the alarm LED
- The type of visual message (slow flashing, fast flashing or steady on)



8.5.6. DELETE PICTURE ON IGNITION

If you have added a custom power-on image using ADA, you can remove it using this menu

If a customized image is present, the word 'OK' will appear at the top right. To remove the image, press and hold for 3 seconds



8. Settings



8.6. Driver Management

Up to six drivers can be set, the factory settings include the first driver named "Alfano 7" and drivers 2/3/4/5/6, all names are editable

The name of the driver is linked to the session registration. When downloading the data in ADA, the session is linked to the name of the pilot selected at the start of registration

For endurance races where multiple drivers drive the same vehicle, it is possible to change the driver while recording a session. Refer to page 28 for further details

8.6.1. DRIVER SELECTION

To change the driver associated with data recording, select the driver using the lower and upper left buttons and confirm by pressing the 'ok' button



Once you confirm the desired driver, the device will return to the homepage

The new driver's name will be visible at the top center of the screen

8.6.2. DRIVER'S NAME CHANGE

To rename a pilot, select them and press the central right button



The keyboard will open, allowing you to rename the driver

8. Settings



8.7. Counters Management

Alfano 7 allows you to monitor your vehicle's health using four time counters and a distance counter

Use the upper and lower left keys to select the desired counter and perform actions:

- Activate
- Deactivate
- Initialize
- Renaming

The default settings have time counters 1 and 2, as well as distance counter 5, activated



8.7.1. ACTIVATION/DEACTIVATION COUNTERS

After selecting a counter, simply press the 'ok' button to activate or deactivate it

8.7.2. COUNTERS INITIALIZATION

After selecting the desired counter, press and hold the 'ok' button for one second to initialize it

8.7.3. RENAME COUNTERS

After selecting the desired counter, you can rename the counters by pressing the central left button. This will help you keep track of the components whose wear you want to monitor more conveniently

8. Settings



8.8. Change Device Language

The Alfano 7 can be set in 11 languages:

- English
- Italian
- German
- Spanish
- Portuguese
- Japanese
- Dutch
- Swedish
- Finnish
- Norwegian
- French



For Dutch, Norwegian, Finnish, and Swedish languages, the information displayed in the info button will be in English. For more information about the info button, refer to page 10



8.9. Alfano Database and Memory Tracks Consultation

This screen provides access to the list of all tracks in the Alfano database, which is divided by country. Additionally, it provides access to the list of tracks created by the user or by Alfano 7 automatically. Please refer to page 60 for more information



The selected track in the list of created tracks can be renamed by clicking the 'ok' button



8.10. Delete Recorded Sessions

This screen allows you to delete race data, the available options are:

- Deletion of all sessions
- Deletion of all sessions except best laps
- Deletion of best laps only



Deleting this data does not remove any tracks you have created, race screens, or any device settings

9. Alfano Mode

The Alfano 7 has 4 operating modes:

- Automatic
- Professional
- Magnetic Classic
- Track Open

Modes can be selected from the homepage by accessing the mode selection screen through the left center button



AUTOMATIC MODE



When operating in automatic mode, the Alfano 7 requires no adjustments

The device can identify the track it is on by utilizing its memory of over 5000 tracks, and will begin recording data immediately upon entering the track.

If a track is not in the memory, the device creates one automatically

PROFESSIONAL MODE

The professional mode allows the creation and modification of GPS or GPS+Mag/IR tracks down to the smallest details

In professional mode the correct track must be selected before departure



MAGNETIC MODE



The classic magnetic mode allows only the use of the magnetic/IR sensor

Tracks need to be created and can be saved in memory

The correct track must be selected before the start

OPEN TRACK MODE

The track open mode allows the use of the Alfano 7 on tracks where the start and end points do not coincide

You can set the parameters according to which the device should start and end the recording of a session



9. Alfano Mode

9.1. AUTOMATIC MODE

This mode was developed so that the Alfano 7 automatically recognises the situation it is in and without the need for any intervention by the user makes the correct decisions to record a session



9.1.1. Track In the Alfano Database



Once the device detects the GPS signal, it will identify its location

If the Alfano 7 is located on a track in memory (Alfano database or personal database) the device will set this circuit

As soon as you cross the finish line it will begin recording the session and attribute it to the correct circuit

9.1.2. Track Not in memory

If the track is not stored in memory, the device will display the closest known track

Once the device enters the track, it will automatically start learning the new track and recording data from the second lap

The device will save the automatically generated circuit in memory, so that next time I will be known to Alfano 7

The track will be saved with the name "***P* TRACK GPS DD/MM/YY hh/mm**"

It can be renamed and modified by adjusting the finish line and adding split times (refer to page 65)



In automatic mode the device works only via GPS for timing the lap and split times (if present on the track in use)

9. Alfano Mode

9.1. AUTOMATIC MODE

9.1.3. Semi-Automatic Mode

In automatic mode, if the Alfano 7 finds several tracks in its databases in the same geographical point, for example due to different known variants, several professional tracks created by the user or a racetrack with several tracks very close to each other, it switches to semi-automatic mode



In this mode, due to the different versions of tracks in memory, the device will automatically preselect possible nearby tracks



You can select the track version you want by clicking the centre left button

A list will appear from which the desired track can be selected

If no selection is made by the user, the device will select the track version used last time at this location or, if it is the first time on this race way, the first track in the list

In semi-automatic mode the device works only via GPS for timing the lap and split times (if present on the track in use)

To switch from this mode to another, press the centre left button a second time when the nearby track selection list is open

9.2. PROFESSIONAL MODE

In this mode the circuits must be created by the user and selected before the start.

It is possible to modify the tracks by inserting split times where you want and moving the finish line as you wish

Professional tracks can be shared with other Alfano users, directly from the Alfano 7 or via ADA



Once the Alfano 7 has created a track in automatic mode, it is considered as a professional tracks created by the user, so it is possible to modify it

In professional mode, the Alfano 7 works via GPS, but gives priority to the magnetic sensor if it is connected to the device

9. Alfano Mode

9.2. PROFESSIONAL MODE

When Professional mode is selected, the Professional circuit management menu opens

9.2.1. Choice of Professional Track

In professional mode the user must select the track in which he wishes to record the data before starting, by opening the "choose" menu all the professional circuits in memory will be displayed

Once the desired track has been selected, using the left side buttons and confirmed with the "ok" button, the Alfano 7 will return to the home page, the selected circuit will appear at the top centre of the screen.

The Alfano 7 is ready to enter on the track



9.2.2. Creation of a New Professional Track

Professional tracks can be created in two ways:

- Automatically, when the device is in automatic mode but needs to create a circuit because the track was not found in the database
- Manually, using the second item of the professional mode track management menu



Confirming the "Create new track" item with the "ok" button will open the configuration menu for creating the new circuit if the instrument is receiving the GPS signal

Otherwise, a waiting window will appear until the GPS signal is correctly received

9. Alfano Mode

9.2. PROFESSIONAL MODE

9.2.2. Creation of a New Professional Track

When configuring the creation of a new professional track, it is possible to choose whether to create the track using GPS only or in combination with the Magnetic/IR sensor

If the Mag/IR option is selected, it is necessary to enter the number of the magnetic stripe or IR line that the device must consider as the finish line (example on page 64)



Once you have confirmed your selection with the 'ok' button, the unit will ask you to name the track. Once you have assigned a name and confirmed with "ok", the device will enter learning mode and return to the homepage, ready to get on track and learn it



To complete the configuration, simply complete one lap of the track. The session will be recorded from the second lap, so there is no need to return to the pits, the driver can start a session if he wishes

➤ Create new professional track only through GPS

The device will create the track only using GPS data. The track will not have intermediate times and the finish line will not necessarily correspond to the actual finish line of the circuit. Once the professional circuit has been created, it will be possible to modify it by inserting split times and moving the finish line wherever you want

➤ Create new professional track through Mag/IR mode

The device creates the track using the magnetic/IR sensor. By entering the number of the magnetic strip/IR line in the order of exit from the pit lane that you wish to assign to the finish line, the device will create the track assigning the finish line to the strip previously selected and will consider the other strips detected during the learning lap as split times

The number of the magnetic strip to be considered as the finish line must be set according to the point of access to the track during the learning lap, i.e. it must be the number of the desired strip in the order of crossing from the point of access to the track

9. Alfano Mode

9.2. PROFESSIONAL MODE

► Create new professional track through Mag/IR mode

The Alfano 7 records all GPS points during track creation even in this mode

This allows the track to be used without the magnetic/IR sensor and to edit it but track creation in this mode will be impossible if the Magnetic or IR sensor is not connected during the learning lap

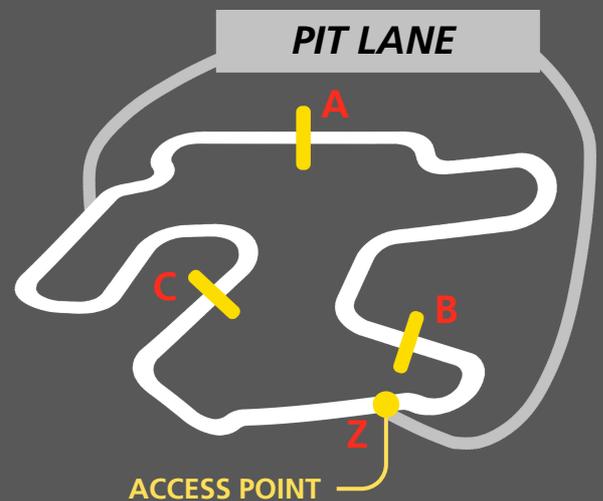
Tracks created in Mag/IR mode can be edited by swapping the finish line with other magnetic/IR lines but these, of course, cannot be moved.

Other GPS lines can be added and moved

EXAMPLE

In this case:

- The track has 3 magnetic stripes (A,B,C)
- The device is set with departure Mag/IR strip = 2
- The access point is the one shown in the illustration (Z)
- The direction of drive is clockwise



The device will enter the track from point Z ready to learn the track, during the learning lap it will encounter in order:

- **MAGNETIC STRIP C:** as this is the first strip the device will encounter it will set it as a magnetic strip delimiting a sector (having set strip number 2 as the finish line)
- **MAGNETIC STRIP A:** as this is the second strip that the device will encounter it will set it as the magnetic strip of the finish line (strip number 2 having been set as the finish line)
- **MAGNETIC STRIP B:** the device having already assigned the magnetic strip of the finish line will set this strip as delimitation of a sector
- **ACCESS POINT Z:** device will pass over the access point Z again, it will realise that it has completed a complete lap and will end the learning process

The newly created track will then have the following characteristics:

- **Sector 1:** portion of track between A and B
- **Sector 2:** portion of track between B and C
- **Sector 3:** portion of track between C and A

9. Alfano Mode

9.2. PROFESSIONAL MODE

9.2.3. Professional Track Modification

After creating the professional track, you can modify it to suit your needs



Select "modify", scroll through the professional tracks in the memory with the left buttons and select the track you want to modify with "ok"

By entering the editing page of the specific track, you will see:

- At the bottom, the available tools for editing the track
- At the top right, the current track layout
- On the left, a legend of the track elements



EXAMPLE

In this case, the track in question has 3 magnetic lines and 1 GPS line

This means that the track was created using the GPS+Mag/IR function and a fourth GPS line was added by modifying the track previously created



9. Alfano Mode

9.2. PROFESSIONAL MODE

9.2.3. Professional Track Modification

The available editing tools are:



Add a Sector Line



Move a Sector Line



Change Finish Line



Delete a Sector Line



Rename Professional Track



Exit Professional Track Editing



9.2.3.1. Add a Sector Line

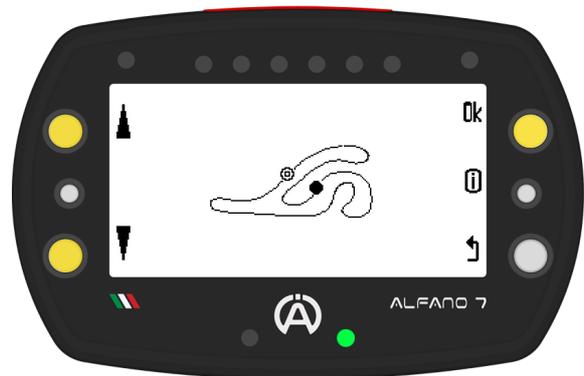


The lower right LED will turn green to indicate that the line is far enough from the existing lines on the track

Confirm the position of the inserted line with the "ok" button

The "Add sector line" option adds a sector to the track bounded by the inserted line

The "+" icon inserts a line, once inserted on the track you can move it with the left side buttons



9. Alfano Mode

9.2. PROFESSIONAL MODE

9.2.3. Professional Track Modification

9.2.3.1. Add a Sector Line



The LED lights up red if the inserted line is too close to a line already present on the track

In this case, the icons for the actions "Add line" and "Confirm job" do not appear on the screen



If you do not wish to add any more lines, press "ok" to exit and confirm the positions of the new lines

If the device does not allow you to add other lines, you have entered the maximum number of sectors for this circuit or the maximum number of sectors supported by Alfano 7, which is 9

9.2.3.1. Move a Sector Line

You can move a line that already exists on the track

To select the track lines to be moved, click on the upper right button

Move it with the left buttons

Save the changes and exit the menu by pressing the 'ok' button



The LED indicator displays a green light if the modified line is at a sufficient distance from the existing lines on the layout, and a red light if it is too close to another line; in this case, it is not possible to exit the modification until the line is in a valid position

9. Alfano Mode

9.2. PROFESSIONAL MODE

9.2.3. Professional Track Modification



9.2.3.3. Change the Finish Line

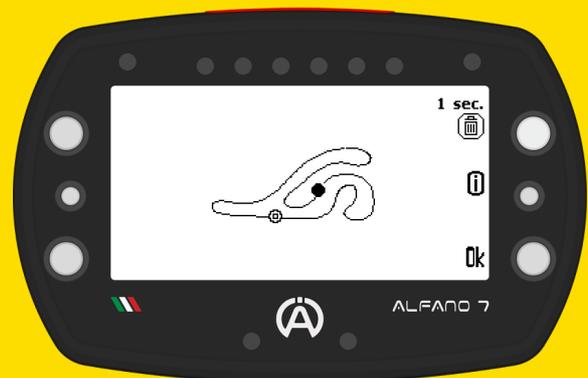
To promote a line to the finish line, select the desired line using the upper right button and confirm with the 'ok' button



9.2.3.4. Delete a Sector Line

To delete a sector line, select it using the left keys and press the top right key for one second.

Confirm the change by pressing the 'ok' button



To delete the finish line it will be necessary to change the finish line with another line and then it will be possible to delete the old finish line

9. Alfano Mode

9.2. PROFESSIONAL MODE

9.2.3. Professional Track Modification



9.2.3.5. Rename Professional Track

This option allows you to rename the professional track. Confirm with "OK" once the name has been changed



Exit Professional Track Editing

When you want to exit track editing you can:

- Save your work
- Cancel/Annul the changes and restore last version track
- Go back and continue editing



9. Alfano Mode

9.2. PROFESSIONAL MODE

9.2.4. Delete a Professional Track

To delete a track from memory, select the 'remove' option

This will open the list of tracks currently stored



Select the track you want to delete, press and hold the "Ok" button for 3 seconds

Deleting a track is permanent. It is not possible to recover a deleted track unless it has been saved elsewhere

9.2.5. Duplicate a Professional Track

To have multiple versions of a track in memory and modify them without acquiring the track again, you can duplicate it



Once you have selected the track and confirmed the action by clicking the 'ok' button, the Alfano b will prompt you to enter a name to save the track copy

9. Alfano Mode

9.2. PROFESSIONAL MODE

9.2.6. Share a Professional Track to another Alfano 7

You can easily share a professional track with another Alfano 7 to time yourselves on the same track

Confirm by pressing the "Ok" button from the device that will send the track



Alfano 7 Sending the Track

Select the track from the Alfano 7 that has it in memory with the upper and bottom left buttons, confirm with the 'OK' button



The Alfano 7 device will scan for nearby devices. Select the device you want to share the track with once the search is complete



Alfano 7 Receiving the Track

Activate Bluetooth mode in the Alfano 7 that will receive the track



Wait for the connection



9. Alfano Mode

9.2. PROFESSIONAL MODE

9.2.6. Share a Professional Track to another Alfano 7

Alfano 7 Sending the Track

After selecting the device to which you want to send the trace, the Alfano 7 emitter will wait for approval from the Alfano 7 receiver



After sending the tracing, a confirmation message will be displayed



Alfano 7 Receiving the Track

By clicking 'OK', you confirm that you wish to receive the track from the specified Alfano 7 device (in this case, the ALFANO-730C).



After sending the tracing, a confirmation message will be displayed



Professional tracks can only be shared between Alfano 7

9. Alfano Mode

9.3. MAGNETIC MODE

In this mode, the user must create and select the circuits before starting

When the Alfano 7 is set to magnetic mode, it will only function through the magnetic or IR sensor for time detection



Click 'choose' to select the track on the memory that you want to run



To select a track from memory, open the list of tracks and use the lower and upper left buttons to choose the desired track. Confirm your selection by pressing the 'ok' button



After selecting the desired track, Alfano 7 will return to the homepage and be ready to start racing



The Alfano 7 has three magnetic tracks in memory by default, each named by the number of magnetic strips set:

- STRIP NUMBER 1
- STRIP NUMBER 2
- STRIP NUMBER 3

All of these tracks have magnetic strip 1 as the finish line and a latency time of 3 seconds

9. Alfano Mode

9.3. MAGNETIC MODE

9.3.1. Create a new Magnetic Track

Click on 'create new track'. The Alfano 7 will prompt you to enter the name of the track you wish to create. Afterward, the page dedicated to magnetic circuit settings will open



You can set:

- The number of magnetic stripes / IR lines from 1 to 6
- The number of the strip corresponding to the finish line
- Latency time from 3 to 60 seconds

Latency Time

Latency time is the period during which the device ignores the magnetic stripes/IR lines it encounters. This feature is used to ignore the acquisition of a sector or old magnetic stripes that may still be present in the asphalt

It is important to set the latency time appropriately so that the desired magnetic stripes or IR lines are ignored, but the detection of the desired ones is not affected

9.3.2. Magnetic Track Modification

After creating a magnetic circuit, you can adjust the latency time later. To edit a magnetic track, open the 'Modify' page and select the track using the upper and lower left buttons. Then, click 'ok' on the desired track to change the latency time

9.3.3. Delete a Magnetic Track

To delete a magnetic track, open the 'remove' page and select the track using the left side buttons, and confirm by pressing 'ok' for 3 seconds

9. Alfano Mode

9.4. TRACK OPEN MODE

The **Alfano 7** can record sessions on open tracks, where the starting and ending points do not coincide

There are three different ways to manage the start and end of a session on open tracks:



9.4.1. TRACK OPEN - SPEED

The session will start once the **Alfano 7** detects a speed other than 0 km/h - mph and will stop as soon as the vehicle is stopped again

By confirming this circuit track management mode with "ok", the device will return to the homepage ready to start a session



9.4.2. TRACK OPEN - RPM

The session will start once the **Alfano 7** detects engine RPM and will stop as soon as the engine is turned off

By confirming this track management mode with "ok", the device will return to the homepage ready to start a session



9.4.3. TRACK OPEN - GPS

The session will start and end according to **GPS points** that must be configured before departure

By confirming this track management mode with "ok", the device will open the **GPS open track management page**



9. Alfano Mode

9.4. TRACK OPEN MODE

9.4.3. TRACK OPEN - GPS



In GPS mode, the open track mode management screen enables you to:

- Choose a previously created open track
- Create a new open track
- Permanently delete a open track in memory

9.4.3.1. Create a new GPS Track Open



After selecting 'create new track', the Alfano 7 will prompt you to name the track

If the GPS signal is received, a new open track can be created. Otherwise, a waiting screen will be displayed until the GPS signal is correctly received

To set the start and end points, the vehicle must move forward at a speed of at least 10 km/h



Press the upper left button when you have reached the geographical point you wish to set as the starting point (A)

The vehicle must never come to a stop

9. Alfano Mode

9.4. TRACK OPEN MODE

9.4.3. TRACK OPEN - GPS

9.4.3.1. Create a new GPS Track Open



Once the starting point (A) is set, its coordinates will be displayed at the top right of the screen

The distance travelled by the vehicle from point A will be shown in the center of the screen

If the finish point (B) has not yet been recorded, it is possible to overwrite the starting point (A)

Press the lower left button when you have reached the geographical point you wish to set as the ending point (B)

The vehicle must never come to a stop



The finish line coordinates will be displayed at the bottom left. You can update the coordinates of point (B) by pressing the corresponding button again (this will update the distance traveled between points A and B)



Press 'OK' to save the open track. Pressing the 'back' button will delete the track you just created

10. Data Analysis Directly from the Alfano 7

Data can be easily analyzed directly from the Alfano 7 by clicking on 'Data' on the homepage using the top left button



Upon entering this section, you will see a summary of the best lap from the previous session

To begin the analysis, click the 'OK' button

Session Set Selection

Clicking 'OK' on the summary page of the best lap of the last session will open a screen that groups the sessions by date and track



EXAMPLE

Although the driver did run at Lonato on 8th June, the two circuits are different, so the groups of recorded sessions have been divided

First Page



Selecting the desired set of sessions with "OK" opens the first page of the data analysis menu, where you can select the specific session to be analysed

The sessions are distinguished according to:

- Start time
- Number of laps
- Best lap (B)
- Rolling lap (R)

EXAMPLE

In this case the selected session:

- It began at 8.09pm
- It is made up of 7 laps
- The best lap is 51.79 seconds
- The rolling lap is equal to 51.74 seconds

10. Data Analysis Directly from the Alfano 7

Second Page

Data analysis page two is divided into two parts:

The upper part provides a summary of the maximum values of the entire session for:

- RPM
- Speed
- Exhaust T2
- Water T1



The bottom section summarizes the 3 best laps showing:

- Corresponding lap number
- Lap time
- Min e max RPM
- Min and max Speed
- Min and max Exhaust temperature T2
- Min and max Water temperature T1

EXAMPLE

During the session of 07/19/2023 which started at 8.09 pm the maximum values recorded are:

- 15653 RPM Engine rpm
- 134.0 km/h Speed
- 594 °C Exhaust gas temperature
- 60 °C Water temperature



Taking into consideration the third fastest lap, i.e. the fourth lap completed with a time of 51.95 seconds, the maximum and minimum values recorded are:

	Engine rpm	Speed	T2 exhaust	T1 water
Minimum	8869 RPM	52.9 km/h	265 °C	55 °C
Maximum	15271 RPM	134.0 km/h	592 °C	59 °C

10. Data Analysis Directly from the Alfano 7

Third Page

Continuing the analysis on the third page will be shown:

- Best lap
- Rolling lap
- Theoretical lap

All with their respective sector times and the number of the lap in which the sector time in question was done



Fourth Page

On the fourth page of the data analysis, you can view the lap time's temporal evolution graphically. Use the upper and lower left buttons to select different laps

The session's best lap time is displayed, followed by the time of the selected lap and its relative gap



Fifth Page

On the fifth analysis page, depending on the lap selected on the previous page, a summary of the selected lap is shown

The maximums and minimums of:

- RPM
- Speed
- T2 exhaust
- T1 water

You can navigate to the next or previous lap using the upper and lower left buttons



If present, the sectors that make up the lap are shown, the sectors with the best time of the session will be highlighted

If the lap is the best, the word "best" will be present at the top right, otherwise the difference in time compared to the best of the session

EXAMPLE

In the example shown, sector 1 of lap number 3 is highlighted since it is best first sector of the session

In the top right there is the gap compared to the best lap of the session, in this case the lap was 0.17 seconds slower

10. Data Analysis Directly from the Alfano 7

Sixth Page

On the sixth screen of the analysis, the engine RPM is divided into intervals of 1000 RPM for each lap

The operating time of the engine in each specific RPM range is indicated as:

- Percentage
- Graphical way
- Amount of time



EXAMPLE

During lap 3, the engine operated at RPMs between 11000 and 12000 for 12.20 seconds, which is 23.3% of the total lap time.

To analyze another lap, return to the previous page and select the desired lap

Seventh Page

The seventh page of the analysis menu allows for the analysis of the entire selected lap at a frequency of 10 Hz

In one-tenth of a second increments, using the buttons at the top and bottom left, you can move around the track and analyse for each point:

- RPM
- Speed
- T2 exhaust
- T1 water



The graph at the centre of the screen displays the engine RPM throughout the lap

The track is located at the bottom right, which shows the position of the vehicle at the point of the lap being analysed, in addition to the finish line and split times (if present)

The time taken by the vehicle to reach the point of the track being analysed is shown on the top left and the total lap time is shown on the right

The Alfano 7 analysis is limited to 10 Hz. For more detailed analysis at 100 Hz, ADA (Alfano Data Analysis) must be used. ADA is available for Windows PCs and Android and iOS mobile devices

To analyze another lap, return to the previous pages where you can select another lap

10. Data Analysis Directly from the Alfano 7

Seventh Page

EXAMPLE

By retracing lap number 4 with the lower and upper left buttons it is possible to analyze all the points of the track

At the bottom left is the track which shows the exact point being analysed



The analysis highlights how the pilot took 44.30 seconds to reach the point under analysis

The values of the main channels detected by the Alfano 7 at that moment are:

- Engine rpm: 12358 RPM
- Speed: 94.6 km/h
- T°2 exhaust: 544 °C
- T°1 water: 56 °C

