USER MANUAL

ALFANO 7

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9 Leds

Bluetooth Communication

Water and Dust Resistant

Data ALFANO 7
Automatic
SOUTH GARDA
580 EGT C°
52 W C°
GPS 28 Sat.
11:41 10/08/2023
100% Backlight : AUTO
ALFANO 7

Brightness Sensor

Wireless Communication

New Black Frame

New Red insert for GPS

GPS 25 hz - 4 Constellations

NTC and K Temperature Sensor

Long Battery Life

Charging - USB Data Exchange - Communication with BOX

Magnetic/IR Sensor - Magnetic Speed Sensor

RPM

Technopolymer Body with Internal Reinforcements

alfano.com

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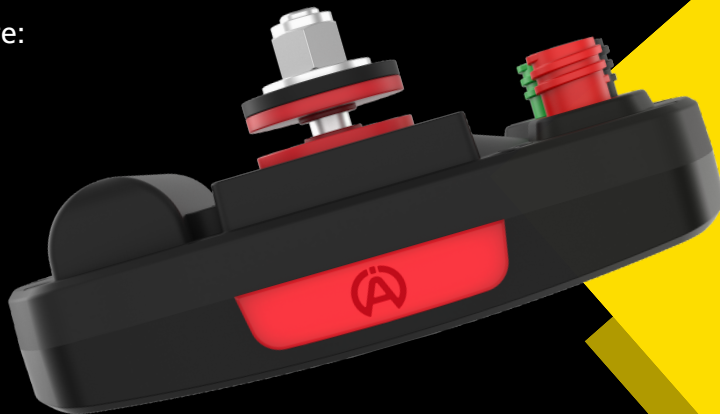
Thanks to this **advanced localisation chip**, the **Alfano 7** is able to **calculate its position** in **space 25 times** per **second**. This is an **increase** of **150% compared** to the **Alfano 6**

CALCULATIONS PER SECOND ALFANO 7	████████████████████████
CALCULATIONS PER SECOND ALFANO 6	██████████

0   5   10   15   20   25
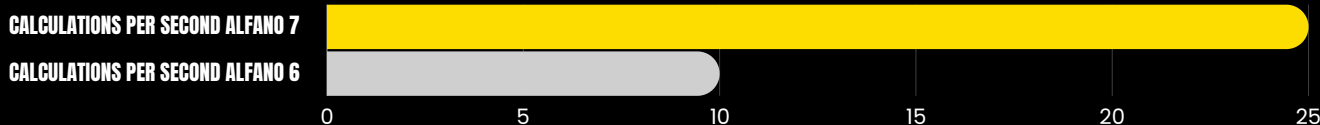
Increasing the **frequency** of **GPS** data **acquisition improves** the **accuracy** of the **detected trajectory** and **micro-variations** in vehicle **speed**, enabling a **more accurate analysis** of the **driver's micro-corrections** using the steering wheel
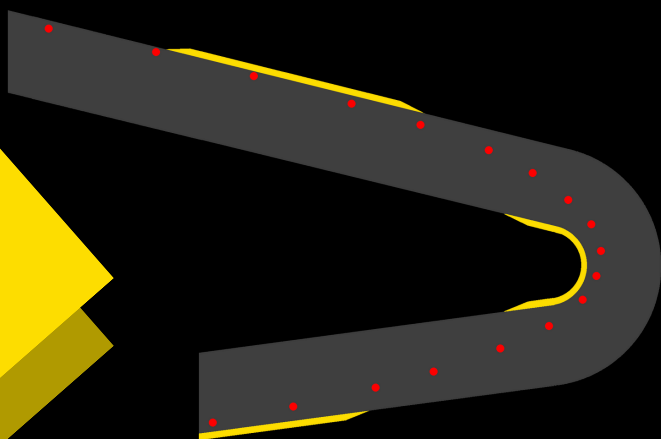
Alfano 6 satellite chip at 10 Hz
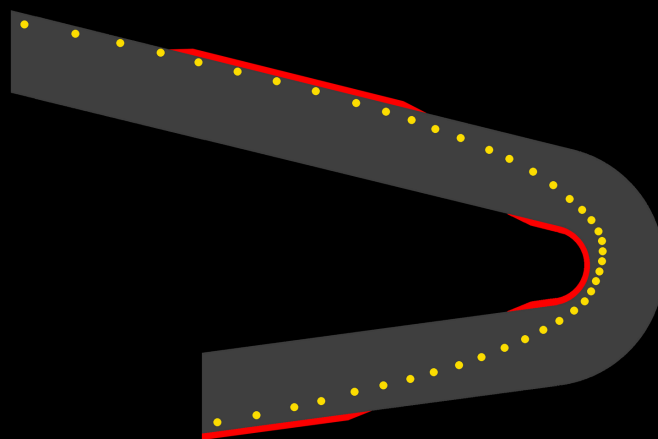
Alfano 7 satellite chip at 25 Hz

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**

DOWNLOAD TIME (SEC)
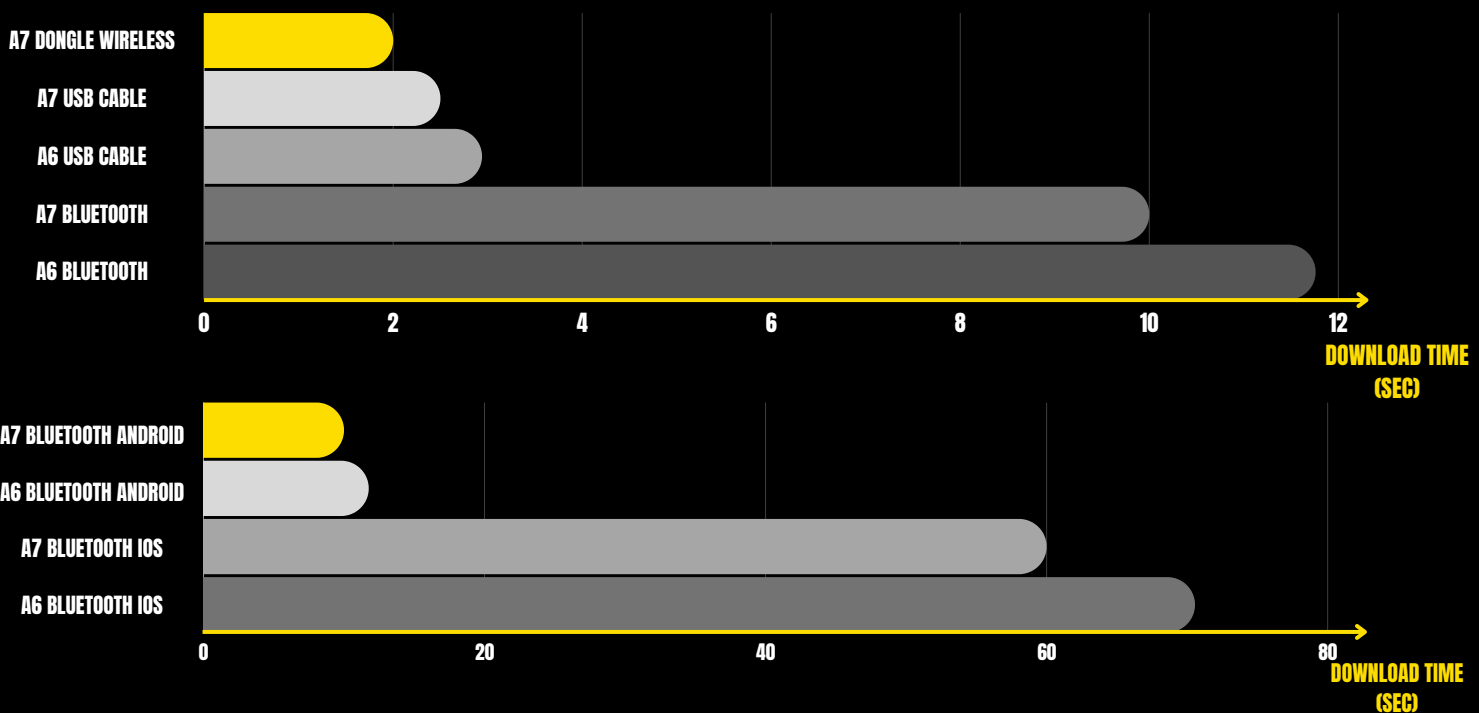
DOWNLOAD TIME (SEC)

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**

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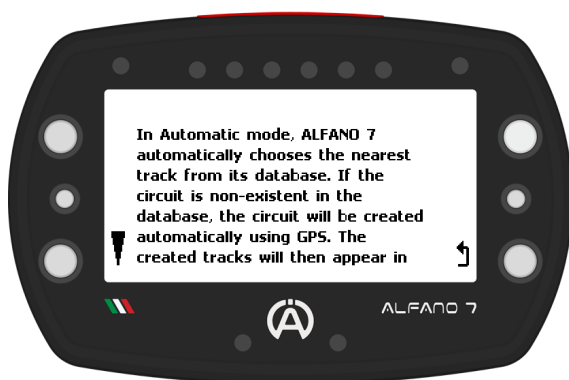
To **scroll through longer messages**, use the **upper** and **lower left buttons**

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

Data Analysis page 78		Race Screens page 15
Alfano Mode page 59		Sharing via Bluetooth, Wireless and USB pag 13
Settings page 29		Turning OFF

ALFANO 7
Professional
ˣPˣ **SARNO**
580 EGT C°
52 W C°
GPS 28 Sat.
14:45 24/07/2023
Free memory : 100%

The **homepage shows** all the **most important information before starting**

Actived Alfano Mode	Driver's Name	Track Layout
Closest Track in Memory		Numer of Satellites Captured
Exhaust T°2 Temperature		Satellite Time and Date
T°1 Water Temperature	Battery	Backlight Mode

ALFANO 7
Automatic
SOUTH GARDA
580 EGT C°
52 W C°
GPS 28 Sat.
14:45 24/07/2023
90%   Backlight : AUTO
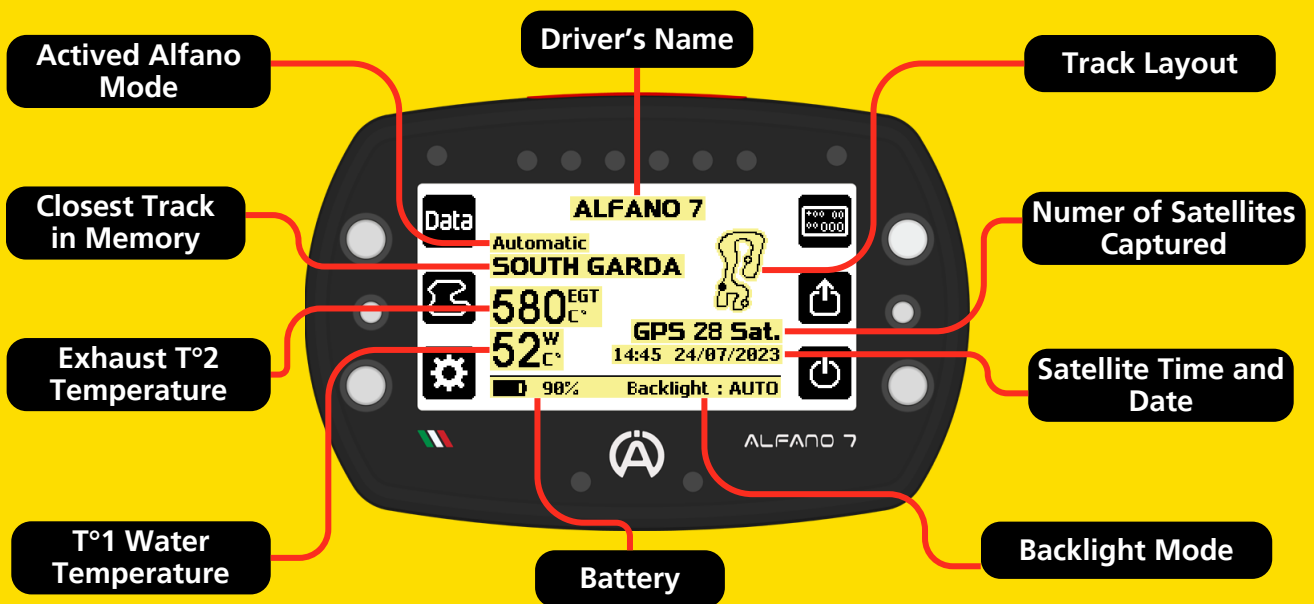
The **device's available memory** is **displayed** at the **bottom** of the **screen, alternating with** the **battery charge** and **backlight mode**

ALFANO 7
Professional
ˣPˣ **SARNO**
580 EGT C°
52 W C°
GPS 28 Sat.
14:45 24/07/2023
Free memory : 100%

5. 9 LEDs

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

Left Alarm LED

6 LEDs System

Right Alarm LED

ALFANO 7

Automatic
SOUTH GARDA
580 EGT C°
52 W C°
Free memory :   100%

GPS 28 Sat.
11:41   10/08/2023

Data

ALFANO 7

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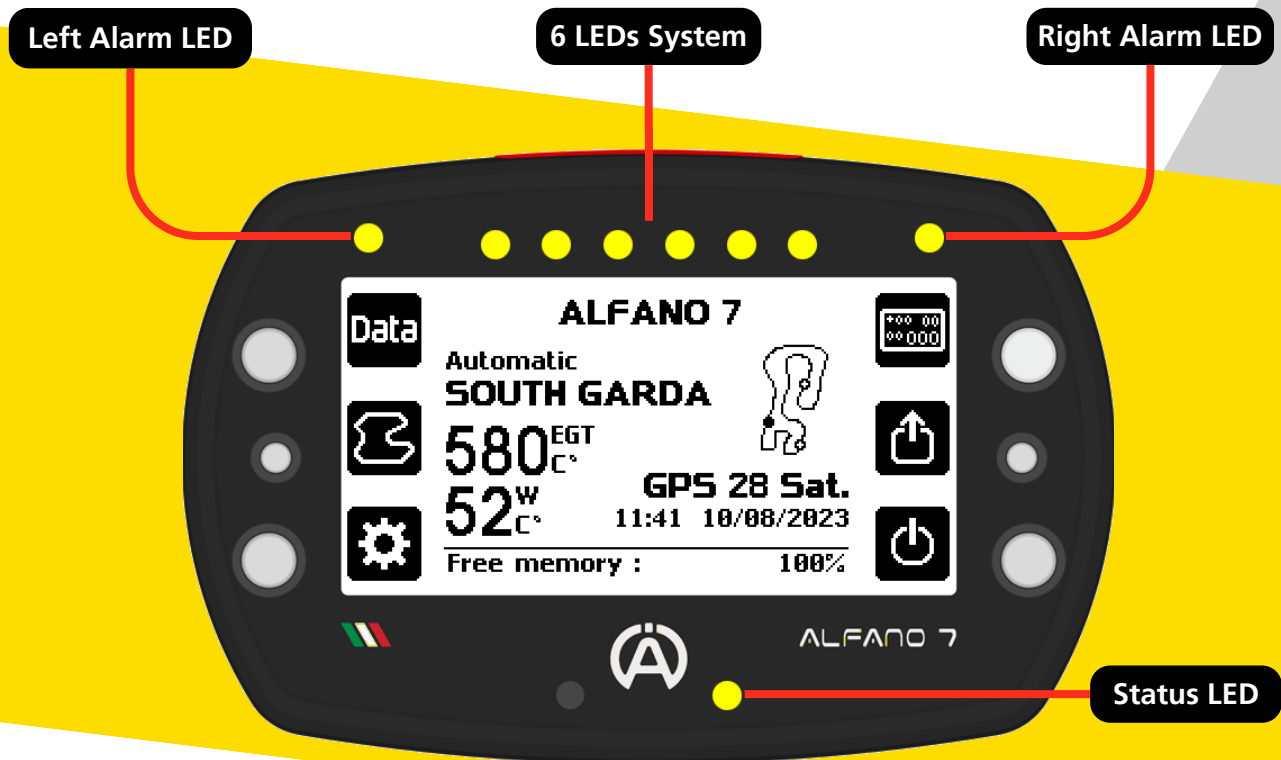
» The **right** and **left Alarm LEDs** visually **communicate too hight** or **too low temperatures**, (more information on page 55)

» 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 appplication (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**

Device Name — ALFANO-7353
Bluetooth Address — 608A20547353
Security PIN — PIN 7129
Driver's Name

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

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**

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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** (see page 20)

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:

Edit Target Time (page 27)

Edit selected Race Screen

Viewing/Activation the Race Screen

Race screen selection
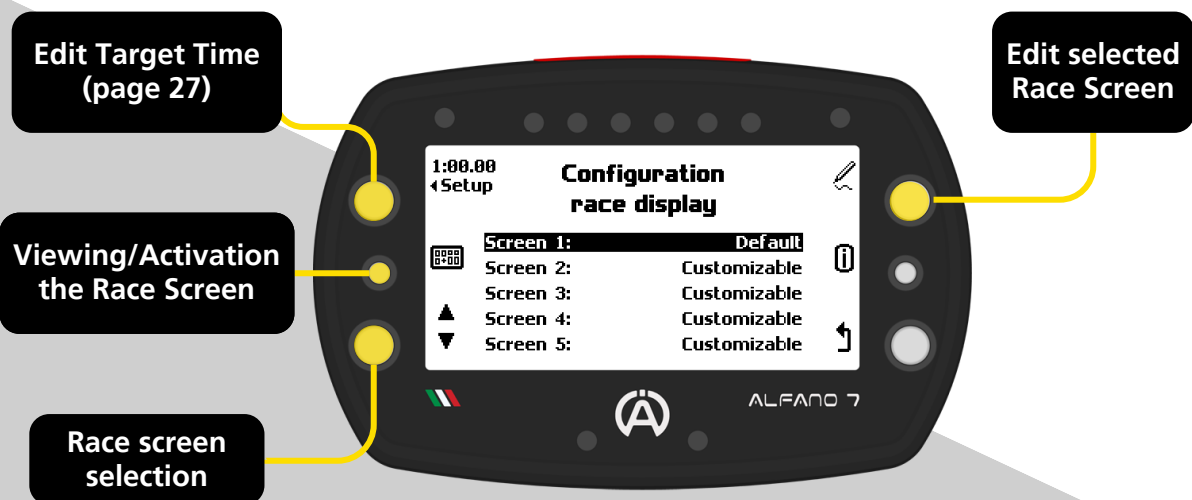
7. Race Screen

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**
LED	**6 LEDs System**
AB	**Rename Race Screen**
⊡	**View the Race Screen while editing**
↪	**Exit Editing Race Screen**

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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 poisition 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

LED 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

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

[LED] 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

⬡LED 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

AB 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**
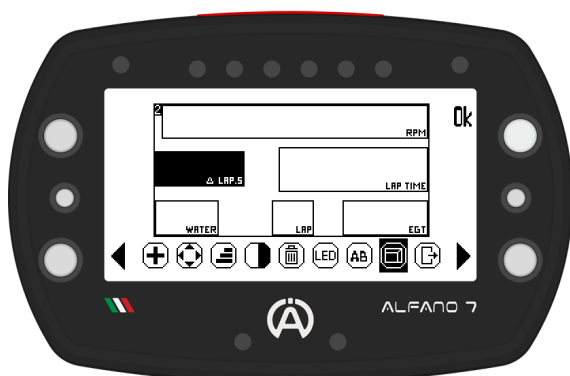
7. Race Screen

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
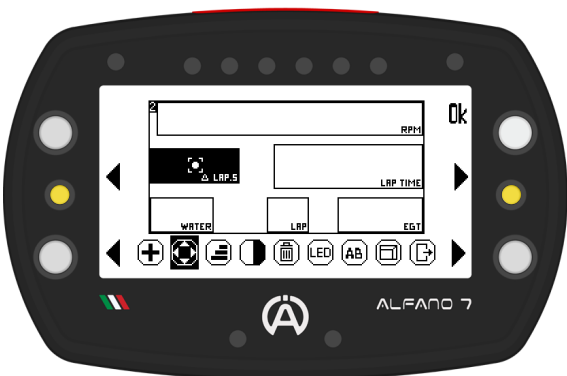
7. Race Screen

7.2. Race Screen 1 - DEFAULT

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

Widget Race Screen 1 - DEFAULT

Delta time compared to Absolute best lap

Gear Engaged

Engine revolutions (RPM)

Race screen number in use

Lap count for the current session

Time of the lap just completed

Water temperature 1 (NTC)

Exhaust temperature 2 (K)

Speed
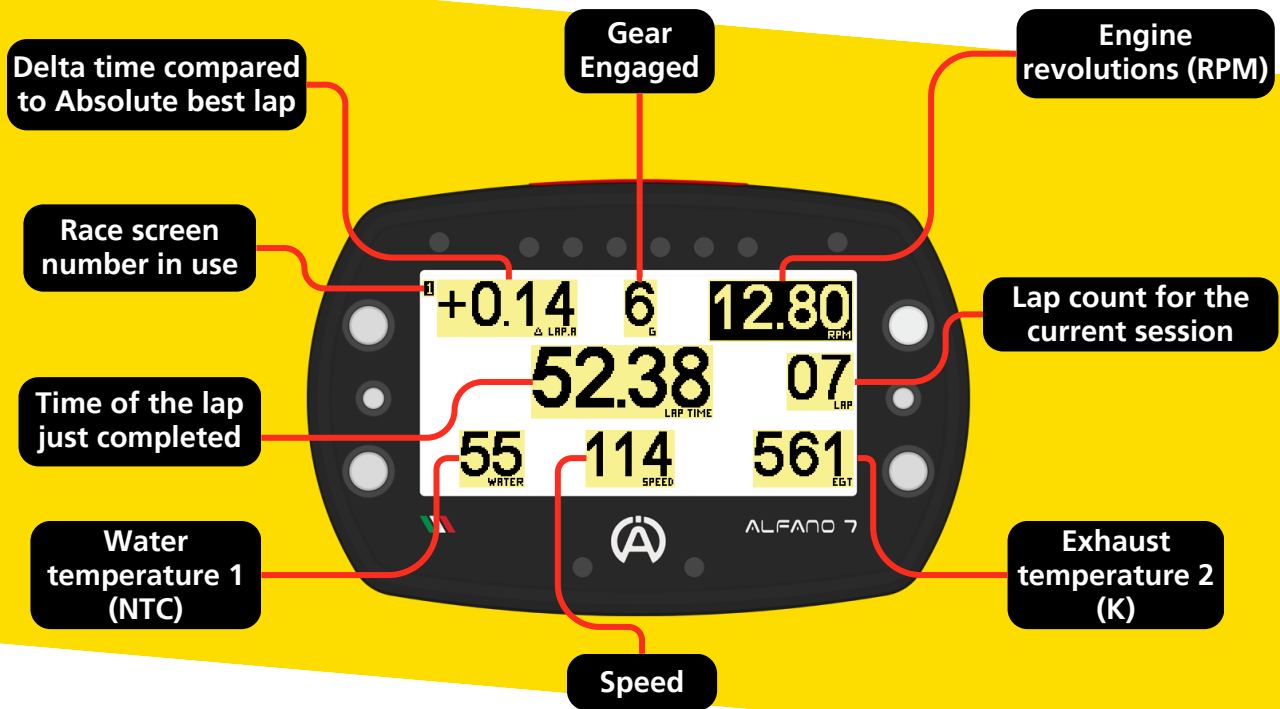
7.2.1. Edit Race Screen 1 - DEFAULT

The **only editable setting** of **the Race Screen 1 concerns** the **function** of the **6 LED system** (see 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**
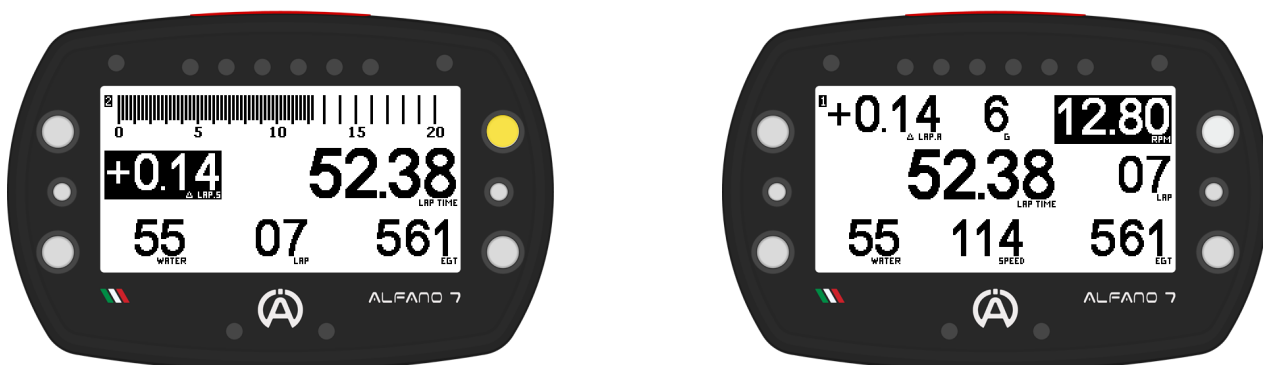
When the device enters race mode, if you have not manually chosen the desired screen in the race screen management menu, the screen used in the previous session will be shown

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 targat 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**

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

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**

7. Race Screen

7.6. Swap Driver's Name while Session Recordering

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**

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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

8.2.2. 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

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

8.2.2. 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                ✎

Maximum RPM :              18.000
RPM factor :                  x1       ⓘ
Engine type :           Standard

                                       ↰
```

▶ **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

8.2.4. 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

Start of limiter intervention

End of limiter intervention

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
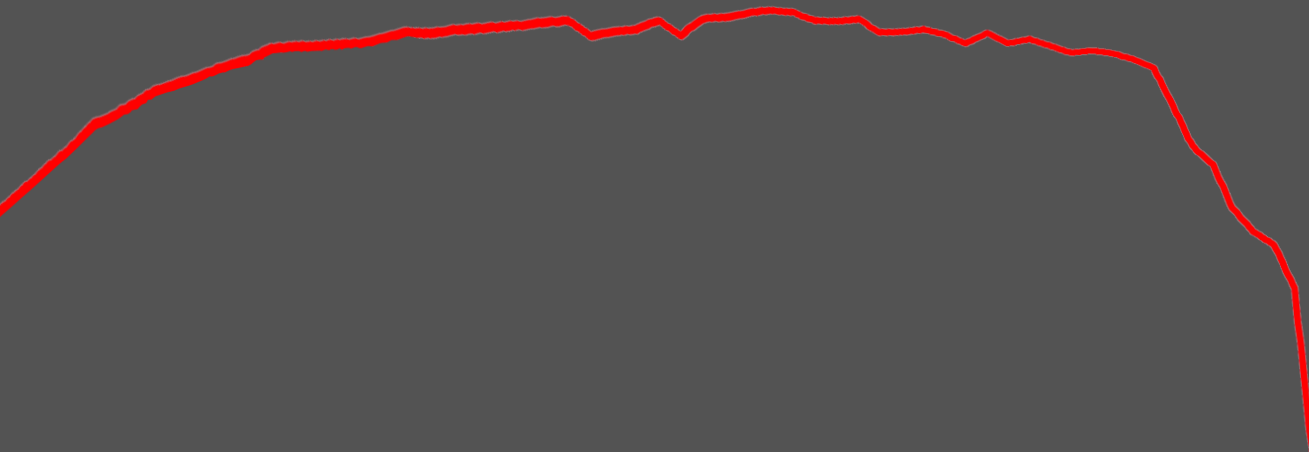
8. Settings

8.2.5. 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
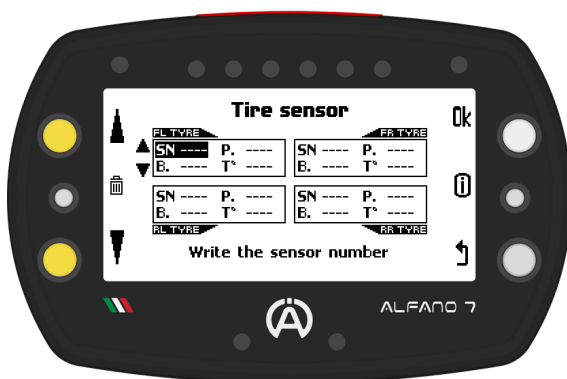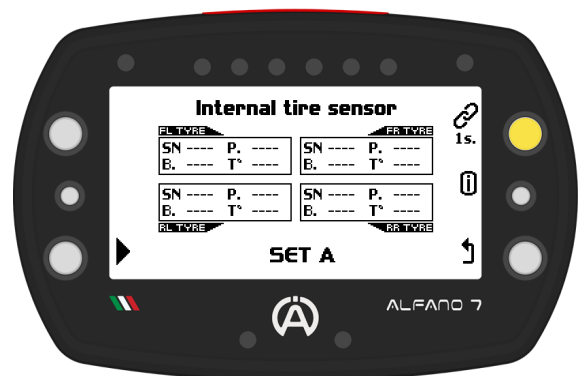
Using the **lower** and **upper left buttons**, **set** the **serial number** of the **sensor** you **want** to **associate with** the **wheel**:

- **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

8.2.5. 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
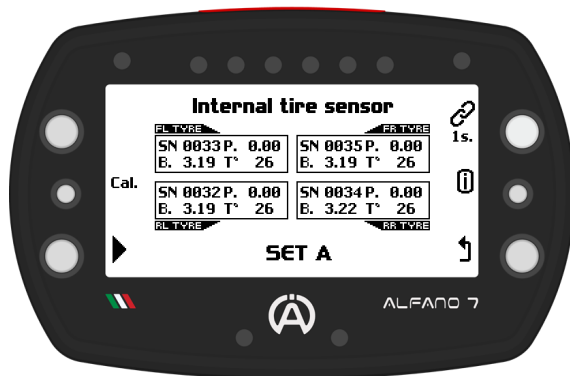
To **remove** a **connected sensor**, **enter connection mode** by **pressing** the **connection button** for **one second**. Then, **select** the **desired internal sensor** and **press** the **central left button** for **one second**

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**
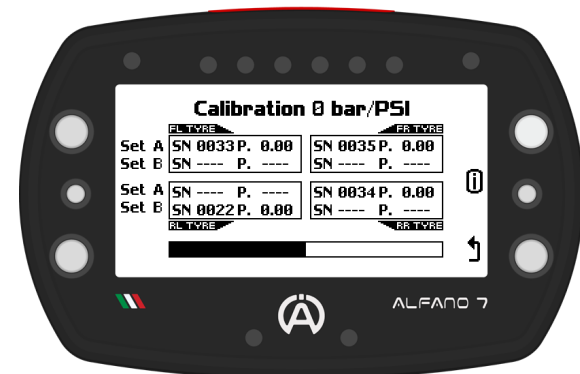
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8. Settings

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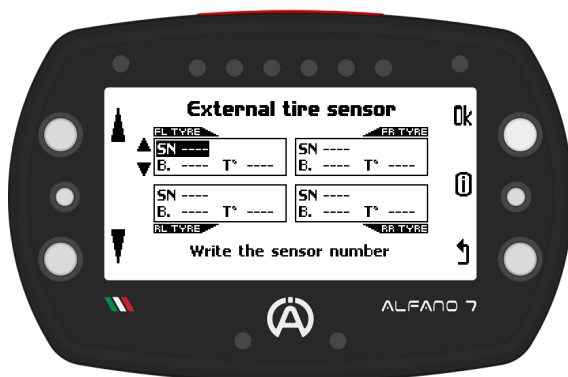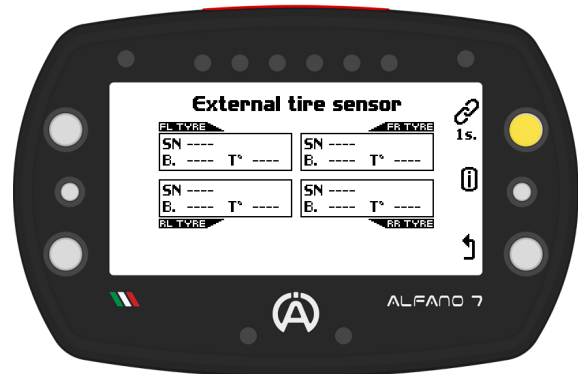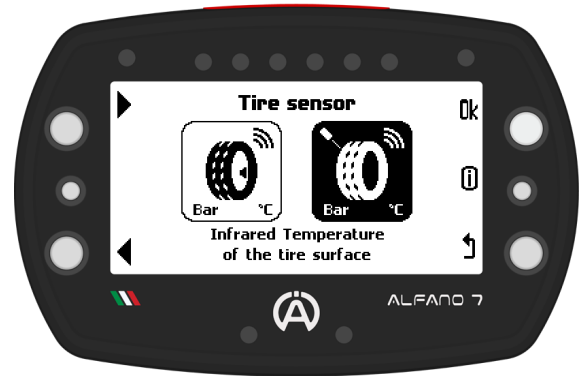
If you do not want to associate a sensor for one or more wheels, keep the serial number on "----" and press the "ok" button to confirm and move on to the next wheel

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**

8. Settings

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**
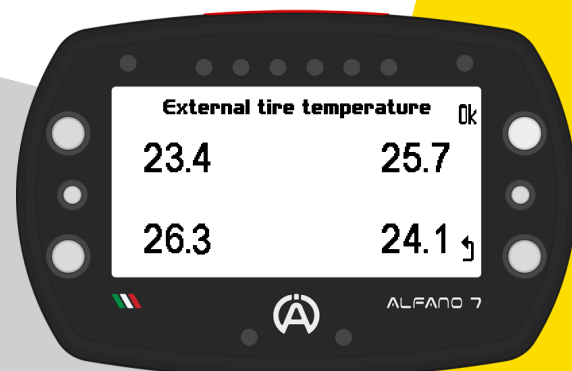
8. Settings

8.2.6. 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**
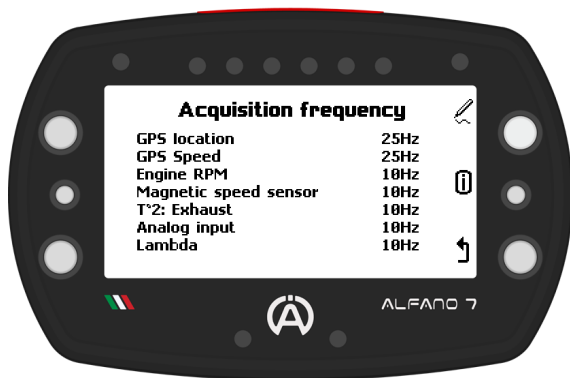
Recording channels	Acquisition frequencies
GPS location	25 Hz
GPS speed	*25 Hz*
Engine RPM	10/20/50 Hz
Magnetic speed sensor	10/20 Hz
T°2: Exhaust	10/20/50 Hz
Analog Input (Box 12)	10/20/50 Hz
Lambda (Box lambda o Box12)	10/20/50 Hz
Others	10 Hz

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

8.2.8. 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**
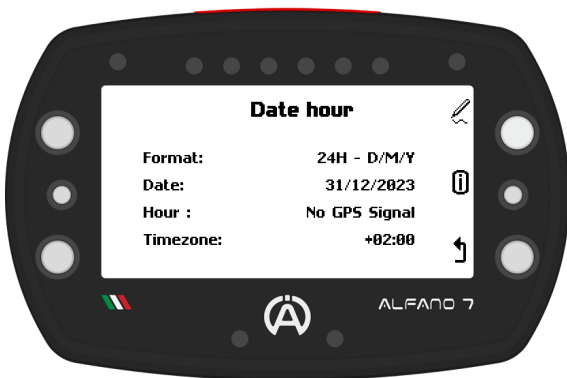
8.2.9 SYSTEM INFORMATION and RESET

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

8.2.10. 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**

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8. Settings

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**

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**

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

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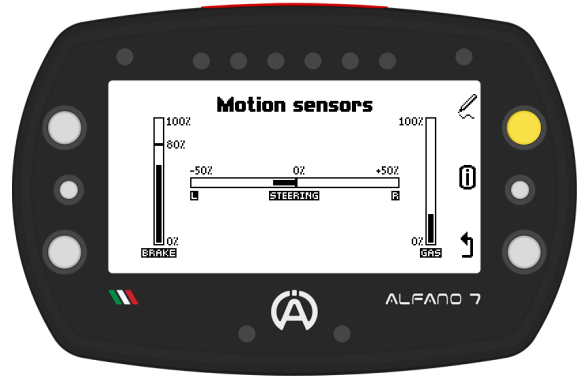
The **selection page** of the **sensor** you **want** to **calibrate** will **open**, **select**:

- **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**b **position**

Fully depress the **brake pedal** and **confirm** with the **upper right button** to **record** the **position**
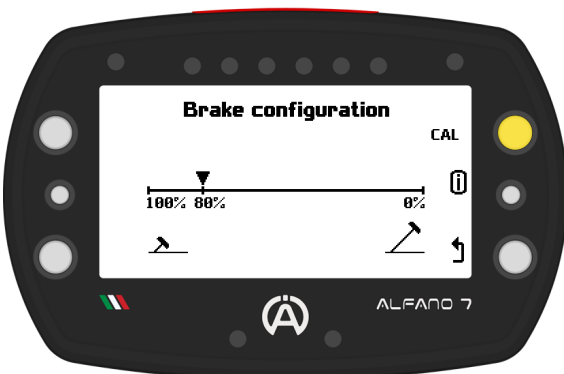
The value corresponding to the pedal being fully depressed is 80% to monitor the wear of the brake pads

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

8. Settings

8.3.1 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 "**1S-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**

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8. Settings

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

◄ G.F ► 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**

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 **Box12** is in the **correct position**, **press** the **upper left button** for **one second**, corresponding to **"1S-CAL"**, the **calibration** will be **performed**

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**
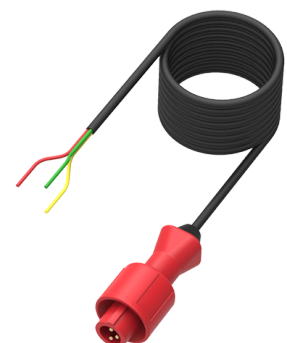
8. Settings

8.5.1. 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

Alfano 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**, **Alfano 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

8.5.3. 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**
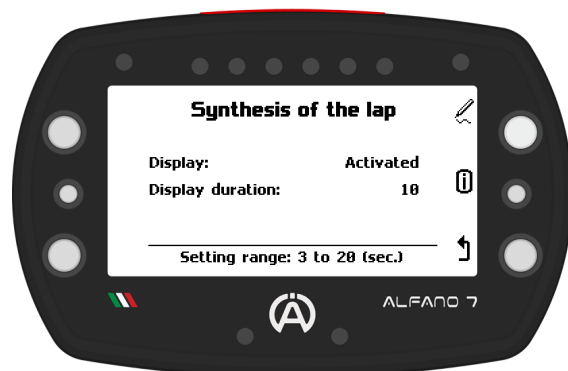
8. Settings

8.5.4. 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 th**e 6 LED system** on **this screen**

Press the **upper button** to **enter** the **channel selection** section that you **wish** to **modify**
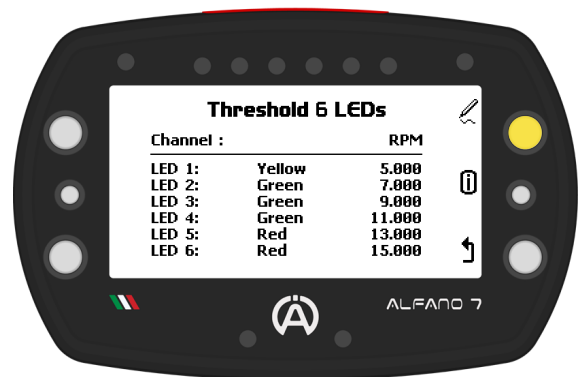
Use the **upper** and **lower** left **buttons** to **scroll through** the **channels**. **Press** the **'ok' button** to **modify** the **thresholds** and **LED color** of the **selected** channel

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

8.5.4. 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)
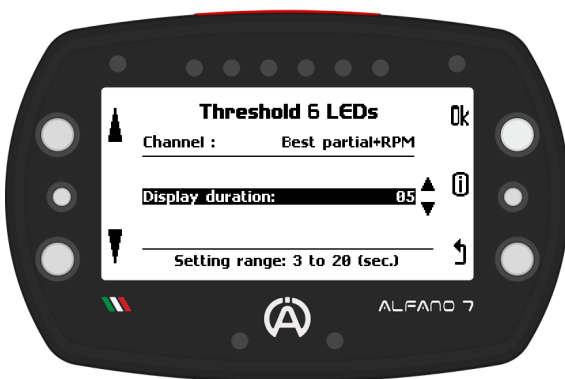
In this case:

- **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**

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8. 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 left**. 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**.

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**

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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**

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**

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

In **professional mode** the **correct track must** be **selected before departure**

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**

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

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

9.1.3. 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

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

9.2.2. 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)
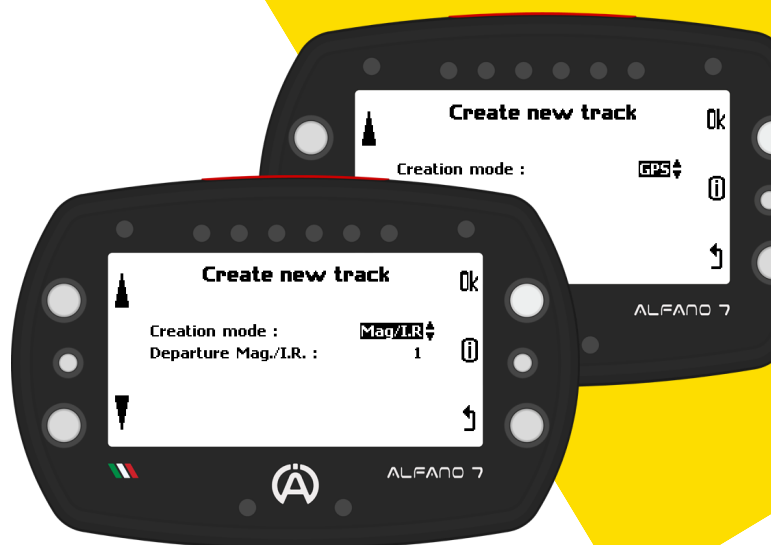
Once you have **confirmed** your **selection** with the 'ok' button, the **unit** will **ask** you to **name** the **track**. **Once** you have **assigned** a **name** and confirmed with "ok", the **device** will **enter learning mode** and **return** to the **homepage**, **ready** to **get** on **track** 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

▶ **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**

PIT LANE

A

C

B

Z

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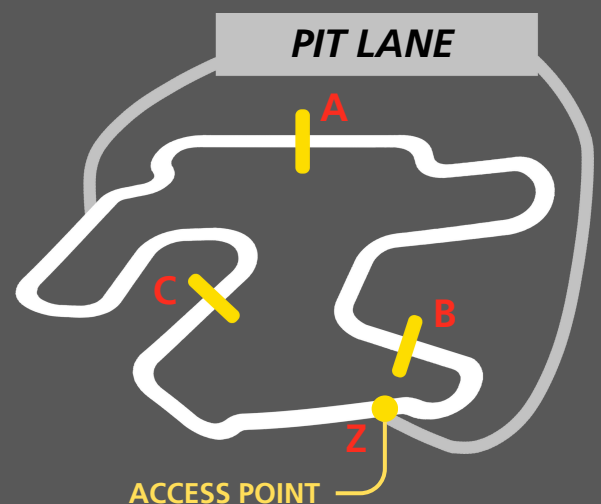
The device will enter the track from point Z ready to learn the track, during the learning lap it will encounter in order:

- **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

9.2.3. 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 **Mag/IR function and** a **fourth GPS line was added** by modifying the track previously created

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9. Alfano 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 **"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

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

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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 to **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

9.2.3. 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

9.2.3. Professional Track Modification

AB 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**
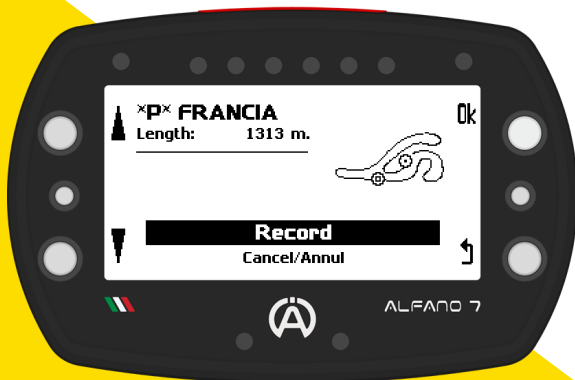
9. Alfano Mode

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	Alfano 7 Receiving 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	**Activate Bluetooth mode in the Alfano 7 that will receive the track**
The Alfano 7 device will scan for nearby devices. Select the device you want to share the track with once the search is complete	**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	Alfano 7 Receiving 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	By clicking 'OK', you confirm that you wish to receive the track from the specified Alfano 7 device (in this case, the ALFANO-730C).
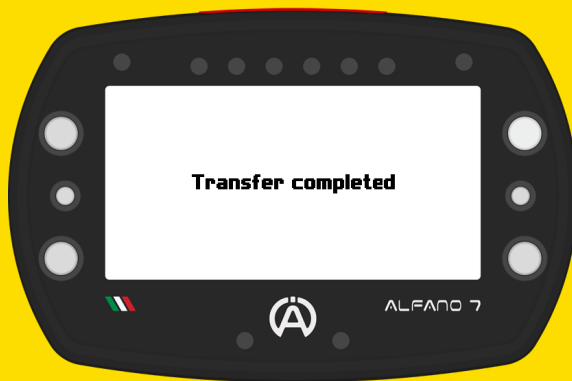
Track sharing between Alfano 7

Waiting connection with ALFANO-7353

Track sharing between Alfano 7 — Ok

ALFANO-730C Wants to share a track

After sending the tracing, a confirmation message will be displayed	After sending the tracing, a confirmation message will be displayed

Transfer completed

Transfer completed

Professional tracks can only be shared between Alfano 7

9. Alfano 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 **latecy time** of **3 seconds**

9. Alfano 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** (further explanation on page 64)
- **Latecy 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

9.4.3. 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

9.4.3.1. 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**

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
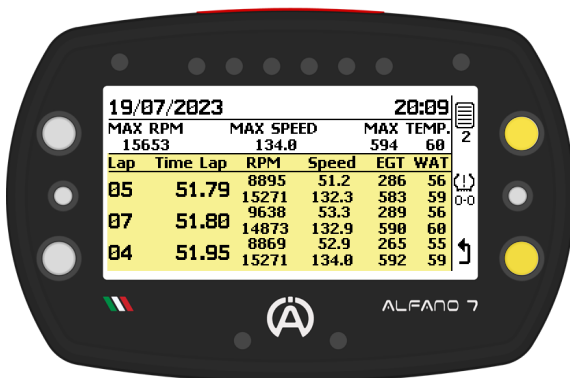- The rolling lap is equal to 51.74 seconds

10. Data Analysis Directly from the Alfano 7

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**
- **Max e min RPM**
- **Max and min Speed**
- **Max and min Exhaust temperature T2**
- **Max and min 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

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**

	Lap	Best	Lap	Rolling	Lap	Theoritic	
S1	05	20.61	05	20.61	03	20.54	3
S2	05	14.88	05	14.88	05	14.88	
S3	05	16.30	04	16.25	06	16.24	
		51.79		51.74		51.66	

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**

19/07/2023   20:09   4

BEST   51.79
Lap 03   51.96   Diff   00.17

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**

Lap 03   51.96   +00.17   5
S1   20.54   RPM   SPEED
S2   15.06   15653   133.2
S3   16.36   8853   52.4
              EGT   WAT
              593   58
              296   54

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

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**

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

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