syride

Syride technology for free flight.
Simple, lightweight, powerful

SYRIDE is a french company who designs, produces and sells innovative flying instruments that permit pilots to analyze, share and compare their performances.

- **SYS'Evolution :** flight computer
- **SYS'Nav :** Altimeter, variometer, G-meter, GPS, Navigation, online flightbook
- **SYS'GPS :** Altimeter, variometer, G-meter, GPS, online flightbook
- **SYS'Alti :** Altimeter, variometer, G-meter, online flightbook
- **SYS'One :** Variometer with sound and light

PRESS RELEASE, Grenoble, France, March 1st 2017 : Syride announces the SYS'Evolution

More than a year, and a lot of prototypes were required to bring the SYS'Evolution to the real world. We worked hard and pushed forward again our experience and skills in designing instruments for free flight.

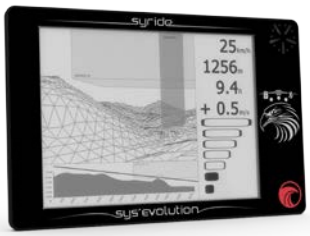
First, the specifications were not that simple! After a deep and accurate analysis of pilots needs and requirements, existing instruments, and last technologies, we had to set ourselves high standards … very high standards, to keep Syride on top of innovation.

Several major innovations come with the SYS'Evolution. That's the reason why we're no more talking about an "alti-vario gps" or "flying instrument" but a flight computer as it does so much more :

- *Optimized ergonomics make accessible to any pilot the often complicated use of a tablet in flight. No need to be a computer engineer or to read 4 pages of discussions on Internet forums to see your track, setup your screen, or navigate through menus.. The software is 100% made by Syride. And as usual, it's simple, intuitive and obvious. The complete life of a pilot can be done with the SYS'Evolution, from his first flight to competition.*
- *Features will blow the world away! Its connectivity enables automatic synchronization of flights, flying sites information, weather forecast, satellites positions through Wi-Fi or Bluetooth. In addition, you will be able to see the world in 3D, including airspaces and waypoints, as well as the highly appreciated transition assistant with airspaces.*
- *High-tech, with its high resolution 6-inch E-ink screen, flight items are readable regardless of the viewing angle and sun. It is also the first flying instrument in the world to embed a Multi-GNSS GPS chip which is able to receive satellites from several constellations (i.e : GPS, GLONASS, Beidou, Galileo) simultaneously.*

Just try it!

Technical specifications



	SYS'One v3	SYS'Alti v3	SYS'GPS v3	SYS'Nav v3	SYS'Evolution
Description	Micro-vario	Alti Vario G-Force	Alti Vario GPS G-Force	Alti Vario GPS G-Force	Flight computer
Retail price	69€	199€	349€	399€	649€
Online flight book	No	**Yes**	**Yes**	**Yes**	**Yes**
Size	5.3cm x 4.3cm x 1.4cm	10cm x 6.1cm x 1.7cm	10cm x 6.1cm x 1.7cm	10cm x 6.1cm x 1.7cm	11.2cm x 17cm x 1.5cm
Weight	**19gr**	**75gr**	**83gr**	**90gr**	**<300gr**
Position	Wrist / Helmet / Riser	Riser / Cockpit / Thigh	Riser / Cockpit / Thigh	Riser / Cockpit / Thigh	Cockpit
Battery	Cell coin CR2450	Li-ion battery charge through USB	Li-ion battery charge through USB	Li-ion battery charge through USB	Li-ion battery charge through USB
GPS	No	No	Yes 50 channels	Yes 56 channels	**Yes 72 channels Simultaneous Multi-GNSS**
Topography	No	No	**Yes**	**Worldwide**	**Worldwide**
Map	No	No	No	No	**Worldwide**
Airspaces	No	No	No	**Worldwide**	**Worldwide**
Navigation	No	No	No	**Yes**	**Yes**
Waypoints	No	No	No	**Yes (25 000)**	**Yes (25 000)**
Routes	No	No	No	**Yes (150)**	**Yes (200)**
Augmented reality	No	No	No	No	**Yes**
Weather station	No	No	No	No	**Yes**
Touchscreen	No	No	No	No	**Yes with and without gloves**
Safety SMS	No	No	No	No	**Yes via smartphone an BT**
Autonomy	**290h**	**>200h**	**40h**	**45h**	**>20 to 30h**
Memory	No	150h of flights	75h of flights	1500h of flights	2000h of flights
Screen	No	128x128 **backlight**	128x128 **backlight**	128x128 **backlight 4 grayscale**	**600x800 E-ink 16 grayscale**
Customizable screen	No	**Yes 2 screens**	**Yes 2 screens**	**Yes 4 screens**	**Yes Up to 19 screens**
G-meter	No	**Yes**	**Yes**	**Yes**	**Yes**
headset jack	No	No	No	No	**Yes 3.5mm stereo**
Sound volume	5 levels + OFF	3 levels + OFF	3 levels + OFF	3 levels + OFF	**4 levels + OFF**
Synchronization with syride.com	No	No	No	No	**Yes flights, flying sites**
File format	No	Proprietary format	IGC / GPX / KML	IGC / GPX / KML	IGC / GPX / KML
Data transfer	No	Yes with USB on : Windows / Linux / Mac	Yes with USB on : Windows / Linux / Mac	Yes with USB on : Windows / Linux / Mac	**WIFI**, **Bluetooth** or USB Windows/Mac/Linux
Warranty	**10 years**	2 years	2 years	2 years	2 years

Some technical details which are interesting to describe:

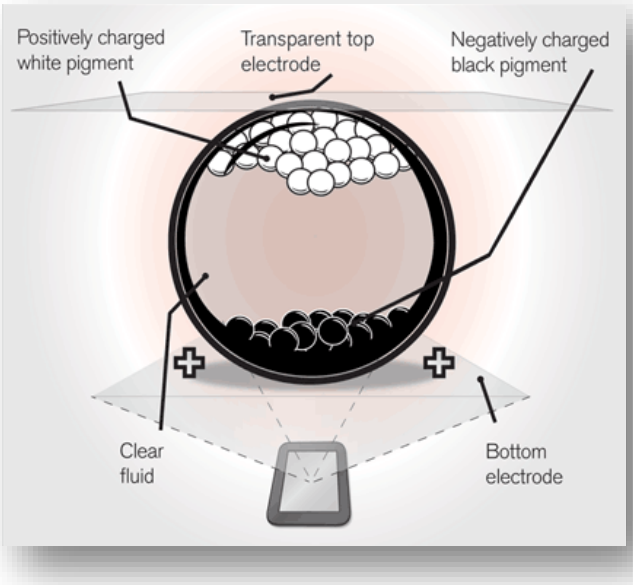
A last generation GPS chip:

U-blox M8 multi-GNSS! Behind these words, there is the best we can offer today regarding the GPS network. In addition to an **increased position precision** (2m) and a reduced power consumption, this GPS chip is able to synchronize up to **72 channels** from the following systems:

- GPS (American)
- Galileo (European)
- GLONASS (Russian)
- Beidou (Chinese)
- QZS (Japonese)
- SBAS (Satellite-Based Augmentation System) using land-based systems (like EGNOS in Europe, WAAS in USA…) to increase again the position precision and reliability.

The real advantage of this GPS chip is that it will synchronize **simultaneously** different systems. The SYS'Evolution will be the first instrument in the world to take advantage of this last generation electronics.

In addition, have you ever noticed that the GPS altitude indicated by your smartphone has a big latency when you're flying a thermal? Regardless of the technology, the GPS chip has to be customized depending on the use case. Syride sets up the GPS chip with high accuracy to perfectly fit **free flight movements and requirements.**



The best screen for free flight:

Why would you fly with the best instrument ever, if you can't read it ?

When we've decided to design an instrument with a large touchscreen, we've tried most known technologies while flying. The result is obvious: **E-ink screens** outperform every other technologies, especially regarding viewing angle and sun.

The SYS'Evolution is equipped of a 6-inch E-ink screen. Its resolution of **800 x 600** pixels with **16 levels of gray** gives incredible images and possibilities.

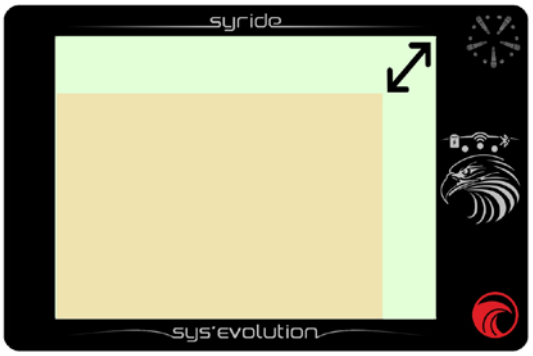
We've chosen the **3rd generation** of E-ink screen, called « **CARTA** ». It's a new kind of E-ink screen which has 50% increased contrast and 20% reduced reflections compared to the previous generations. It has the best contrast ratio ever we can find on this kind of screen, while keeping power consumption at a very low level. **While flying, you read information like they were written on a paper!**

A complete connectivity:

When connected through Wi-Fi, Bluetooth or USB, the SYS'Evolution is able to synchronize data. Here is what it can download or upload (user-customizable):

- The **current and next positions** (up to next 35 days) of satellites networks through the "AssistNow" feature of U-Blox GPS chip. This will reduce the GPS fix delay down to 1 second after hard reset.
- **Real-time weather forecast** from available weather providers.
- Automatic flight upload to your **online flightbook on syride.com**
- **Flying sites information** from Syride database (more than 6000 flying sites over 100 countries).
- **Real-time live tracking** through smartphone and Bluetooth.
- Pre-recorded **Safety message** with GPS coordinates sent by SMS (through Bluetooth connection to smartphone)

All these information will be **FREE** and included with the SYS'Evolution.



An optimized screen size:

An important criteria when buying an instrument is the ratio between instrument size and screen size.

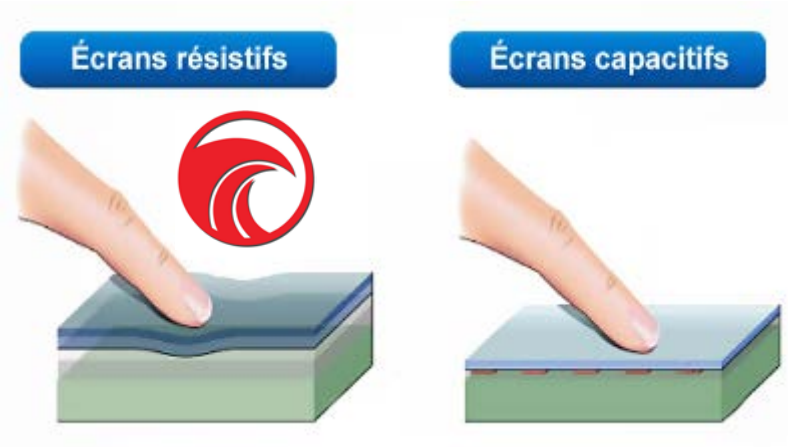
We spent a lot of time to reduce this ratio as far as we could, and we finally reached to **reduce it up to 1.5 times** compared to the average of other current instruments. This mean **more free space** on your cockpit, and **reduced weight** in your bag.

Resistive touchscreen:

There are currently 2 technologies in touchscreen:

Capacitive, is the one we can find in most smartphone and e-readers. It is highly sensitive, but cannot be used with gloves. It needs to get in contact with your skin to work.

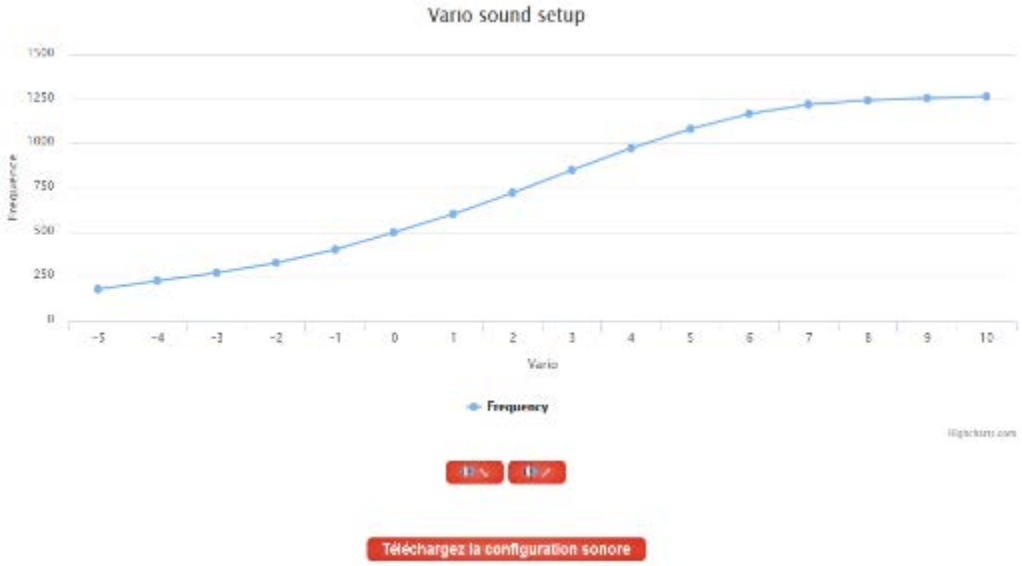
Resistive, is the one chosen by Syride. This technology is less sensitive, but can be used with gloves, pencil or any material. Menus of the SYS'Evolution have been designed keeping in mind this technology.



A highly sensitive and customizable vario:

Always been discussed, a good vario obviously comes with a **good pressure sensor**. On paper, most manufacturer of high quality sensors claim a high sensitivity, but when it comes to fly, it can be like night and day between 2 manufacturers. Generally speaking, there's a direct link between price and quality… But then we have to bring our expertise in **signal processing**, with several filters to get something usable in flight.

Then comes the most interesting part for pilots: **customization**. Each pilot has its own feeling, experience and requirements. Needs can be completely different from one pilot to another. In addition to rising and falling thresholds and volume, we've created a great **vario setup tool**: https://www.syride.com/en/variosetup



Vario on X-axis (in m/s) and tone frequency on Y-axis.

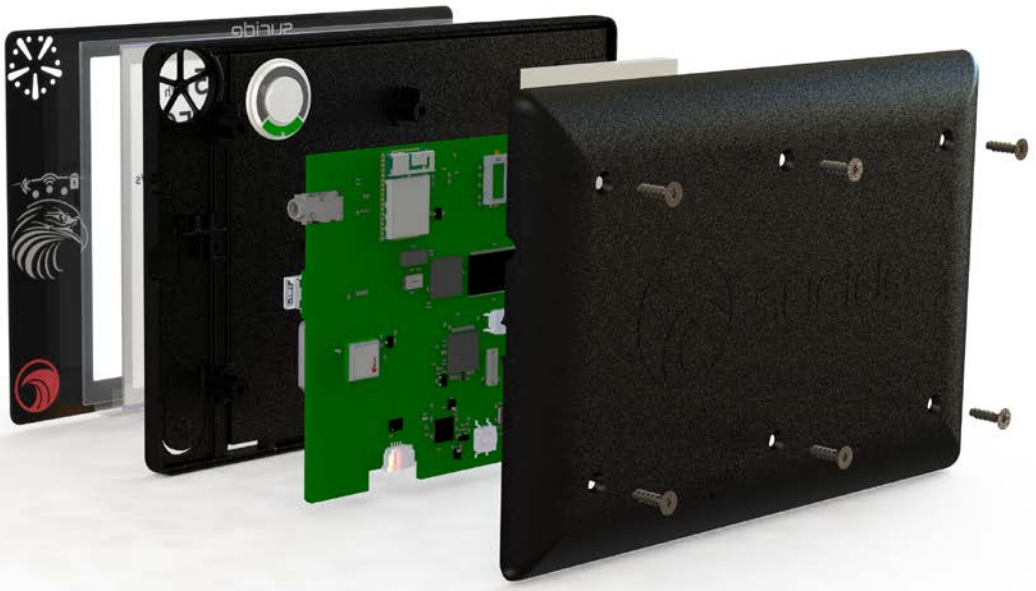
You want a lower frequency? Lower the whole curve.

Unbeatable autonomy:

The choice of the E-ink screen erases the biggest energy-consuming part of an instrument. In « normal » conditions, its autonomy will be from **20h to 30h**, thanks to a 3.4Ah battery. This autonomy will be highly dependent on what's turned-on and what is displayed. Bluetooth, sound volume, GPS signal quality or indicators that require high processor computing (like Augmented reality) impacts autonomy.

Optimized volume and weight:

To tell the truth, there's not that much place left inside the SYS'Evolution! With a **thickness of 1.5cm** (the SYS'Nav v3 has a thickness of 1.7cm), the flight computer is very compact. Placed on the cockpit, the SYS'Evolution is by far the lightest flight computer on the market with **less than 300gr**!



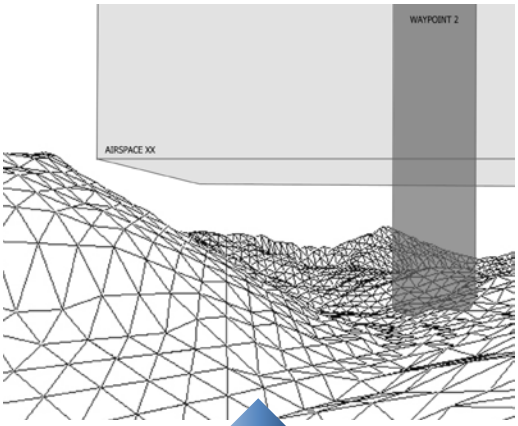
Augmented reality on board (work in progress):

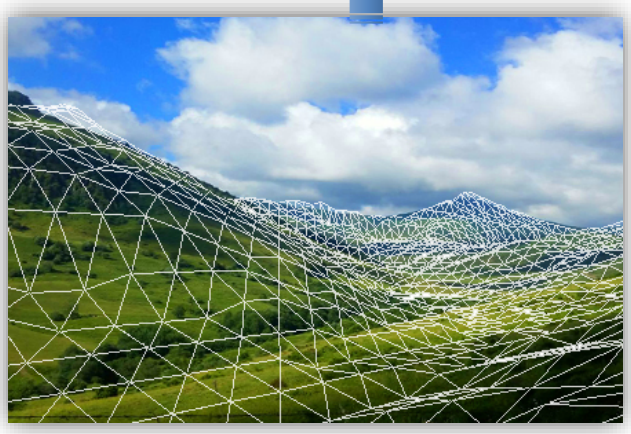
Seeing the world in 3 dimensions gives great advantages. It is the easiest and more comprehensive way to:

- get out of clouds without hitting a hill
- estimate your position to airspaces
- optimize your route in a contest
- confirm your glide ratio and landing point

This new feature represents the environment in front of you (magnetic heading). On this environment, you will be able to see:

- terrain topography
- airspaces in 3D
- next waypoint in 3D.
- cities





Fully customizable screen :

Such an essential feature should have been implemented by all instruments manufacturers since a long time!

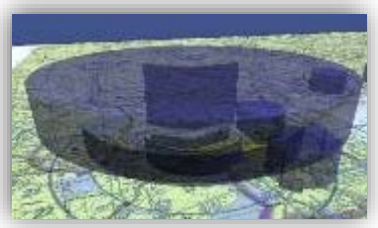
Customizing your screen the **way you want**, by **modifying units**, **sizes** and **position of information** is a must have for any pilot. Wether you are a beginner, competitor, paraglider, powered-paraglider, sailplane pilot, balloon pilot, wearing glasses or not, flying seaside or mountains, in Europe, USA or Australia… **The SYS'Evolution will display what you want it to display. You will adapt what is displayed with your improvements**.

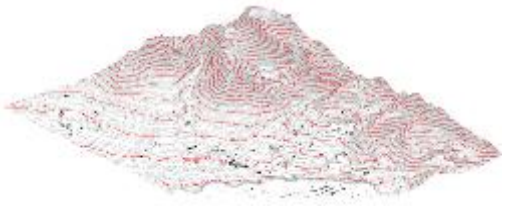
The online tool called « SSC Tool » is the simplest tool ever. Just drag and drop items on your screen, and you're done: https://www.syride.com/en/ssctool

Embedded data:

In order to navigate safely, the SYS'Evolution knows:

- the airspaces of most countries (https://www.syride.com/en/airspace). The online tool also enables the pilots to select the airspace class they want to include or not. Activable and customizable visual and acoustic warnings prevent from entering into an airspace.





- the worldwide **topography** recorded by Endeavour mission from NASA during year 2000. With a 20m precision, the SYS'Evolution extrapolates the data between each points in order to get a better precision and rendering. This topography is mandatory to correctly handle airspaces with AGL altitudes.

- The worldwide road map which enables to display routes and the smallest city. This help to know exactly where you are after flying a few km out of a known area. It is no more possible to lose yourself!

Live tracking

As soon as we takeoff, it is relaxing to know that your family can see where you are in case of emergency… Using the Live Tracking App on Android (and soon iOS), linked to the SYS'Evolution with Bluetooth is really easy. As soon as your smartphone has a "data" network, whatever you are, your position will be displayed in real-time on https://www.syride.com/en/live

The Live Tracking App will use the SYS'Evolution's position in order to save your smartphone's battery.

A 3-level system warning:

As soon as your SYS'Evolution is connected with Bluetooth to your smartphone, you will be able to press an emergency button and immediately send an emergency SMS to a list of selected phone numbers. This SMS will contain your GPS coordinates, as well as an emergency URL to live-show where you are on a Google Map: https://www.syride.com/en/live

In case of emergency, it can be complicated and dangerous to try to catch your smartphone in your bag. This is why you will be able to send that emergency message from your SYS'Evolution.

3 levels of emergency have been defined (3 different SMS with 3 different lists of phone numbers). This can be like "I am flying, everything's fine", up to "Need emergency immediately: N45°25'49" E2°28'75" https://www.syride.com/en/live/nickname ».

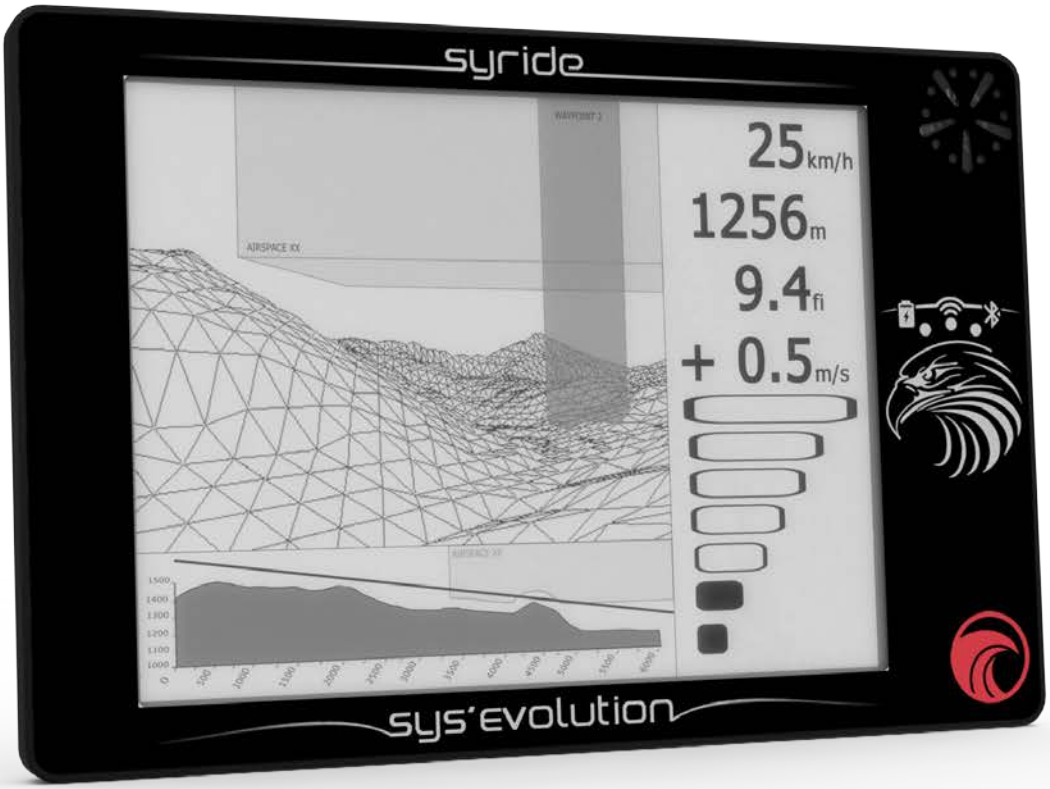
Bonus: a weather station for your home!

"When I opened the package of my SYS'Evolution, it was already turned-on and was displaying some information!".

This is normal... One of the advantages of the E-ink screen, is that if we turn-it off, it still displays its last image. This can be quite strange at the beginning, and you can think that your flight computer is always turned-on, but it does not use any power. That's why we've decided to turn your flight computer into a weather station for your home! Its pressure sensor, temperature sensor and Wi-Fi connectivity makes it ideal for a weather station ☺ !

And a lot of things incoming…

Our ideas of new features that we could add to the SYS'Evolution is endless ! Regular updates will give pilots great surprises in the coming months…



External content

Online flightbook : https://www.syride.com/

HD pictures, tools, user manual: https://www.syride.com/en/instruments (Click on SYS'Evolution then 'pictures' .. then click the picture to see it in HD)

Facebook : https://www.facebook.com/syride.news.en