



# TRIM**CONTROL**<sup>TM</sup> SOLUTIONS

THE FUTURE OF TELLTALE



French made



# TRIMCONTROL™ SOLUTIONS

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THE FUTURE OF TELLTALE

Developed and improved for more than 15 years by Mer agitée, the E-Telltale® allow to make «electronic» the information normally only visual of the wool telltale. This system has been developed, tested and proven by Michel DESJOYAUX on a Vendée Globe (and not only) and has shown its efficiency and durability.

**The electronic penon (E-Telltale®) allows real-time monitoring of the aerodynamic performance of a sail or a wind turbine blade**

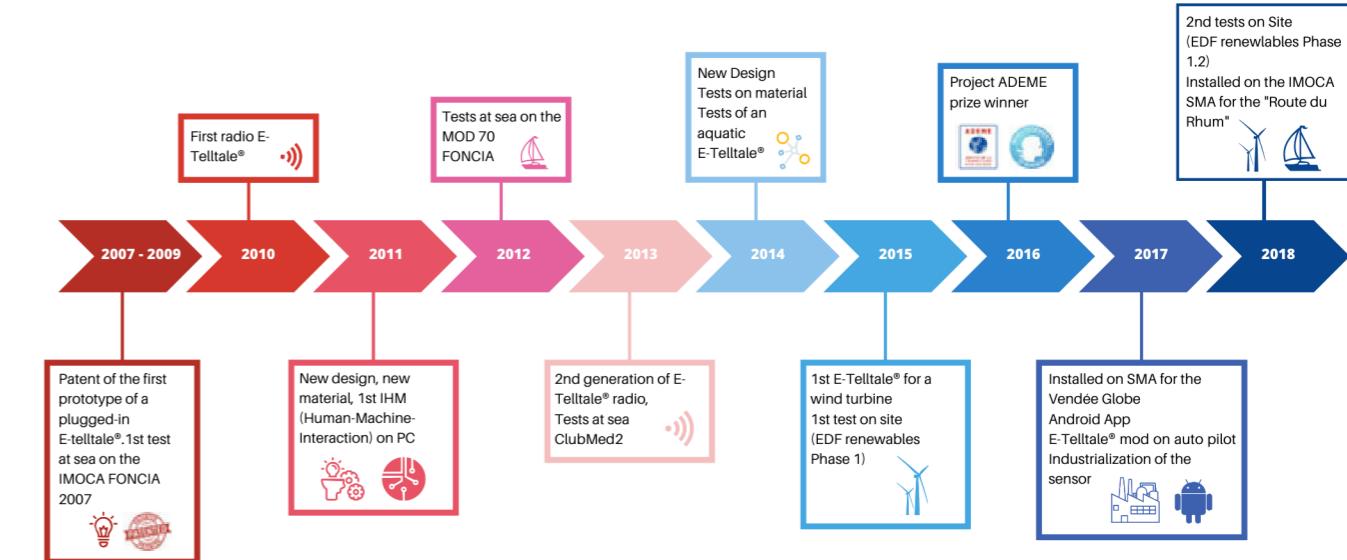
The E-Telltale® is a sensor that monitors in real time the state of the airflow (hooked/laminar or unhooked/turbulent) on an aerodynamic profile. It is a technology from offshore racing, which is very useful in the sailing merchant marine sector, the sport marine and in wind energy as well. Indeed, better tuning of the telltale allows you to optimize the performance of your sail in order to take advantage of the wind's potential.



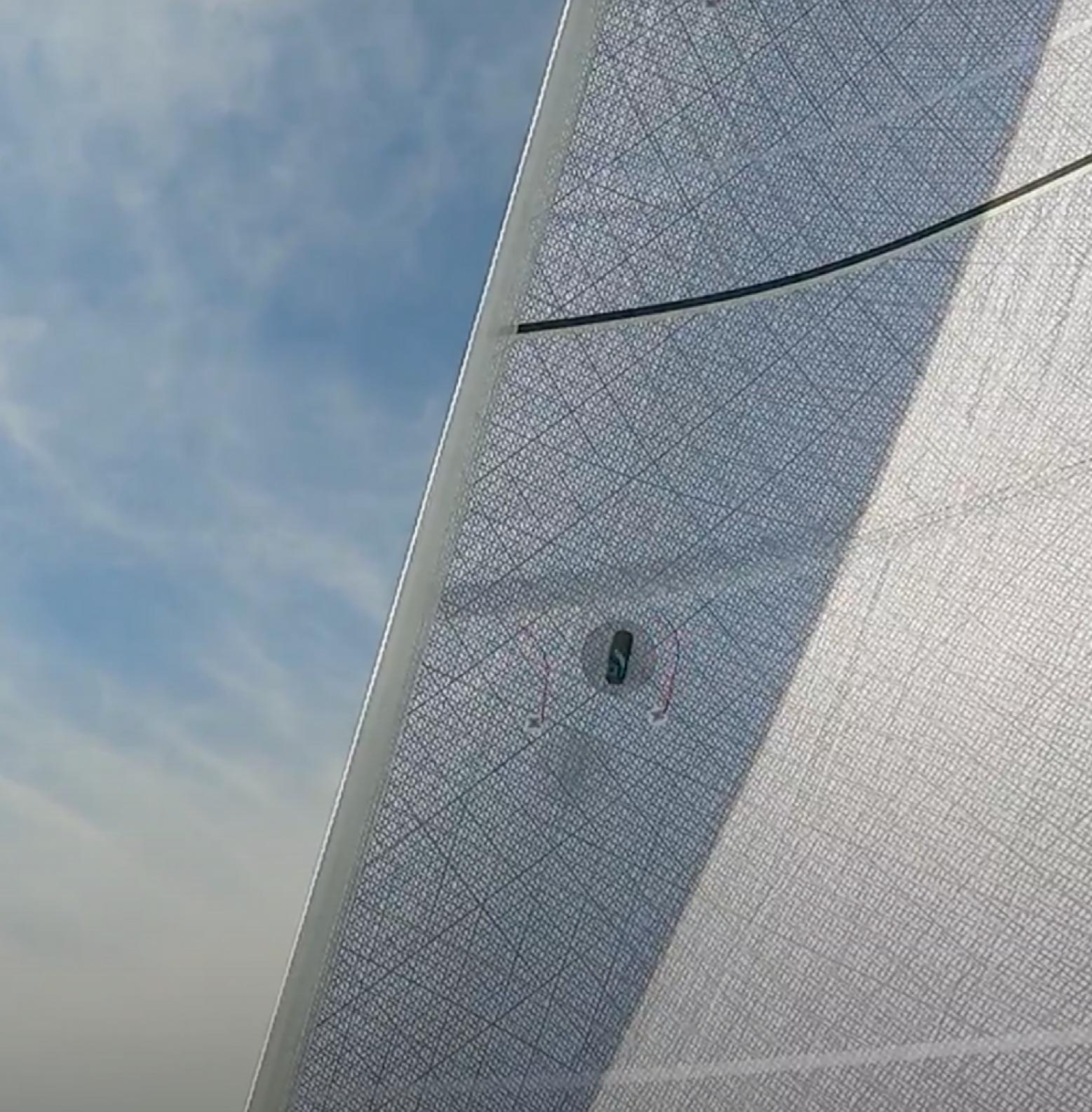
# DEVELOPMENT **HISTORY**



At **Trimcontrol™**, the E-Telltale® is not new: in fact, many versions of the telltale have been tested and improved in order to offer the product in its most functional and adapted version



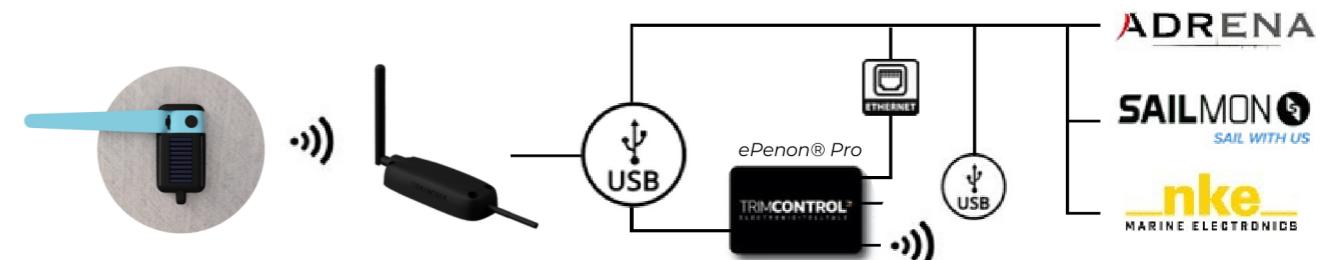
Since then, the final version has already been tested by professionals on several famous races: The trimaran MACIF with François GABART, the SMA monohull with Paul Meilhat, Michel Desjoyaux on the famous Vendée Globe, but also on other types of boats such as imoca, racing-cruising boats, super-yachts...



# AS LONG AS THERE IS A SAIL, THERE IS A TELLTALE

For a long time, wool strands have been used as telltale to optimize sail trim. We wanted to develop a system that would allow access to sail trim information, day and night, and in all weather conditions, with the objective of being able to analyze performance in real time and allow the autopilot to take this information into consideration in «Wind» mode. For the moment, only available with the Nke HR processor.

Michel Desjoyaux's wish was to  
«do a Vendée Globe in his own shoes» in his words



The sail of a sailboat works like an airplane wing of an airplane. For it to be efficient, the air must circulate freely on each side (i.e. top and bottom) of the sail with clean flows (laminar flows).

The danger (and the brake) is the turbulences. Telltale, strands of wool glued on each side of the sail, help to materialize the flows

On the headsails, they are the main indicators to help the helmsman or the trimmer. The strands of wool are glued on each side of the sail along the luff. Depending on their position, they allow us to optimize the laminar flow so that the sail is used at 100% of its potential

Be careful not to install them too close to the forestay, which can cause turbulence (furler tube or carabiners). On the mainsail, the telltale are placed on the leech.

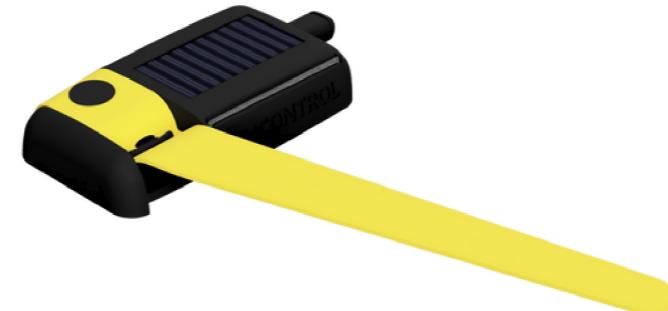
They allow to read the laminar flows on the whole height of the sail. The helmsman does not need them as much as the headsails, but they are useful for the mainsail trimmer who can use the sheet or the traveler.

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# THE TECHNIQUE

So we have «transformed» this visual data into electronic information in order to be able to have the status of the telltale on the screen of our tablets, Adrena, Sailmon multifunction displays, NKE displays and can be slaved to the autopilot in wind» mode with the HR processor of NKE.

Soon compatible with NKE, Raymarine, B&G and Garmin multifunction displays (MFD).



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# WHAT YOU CAN DO WITH IT

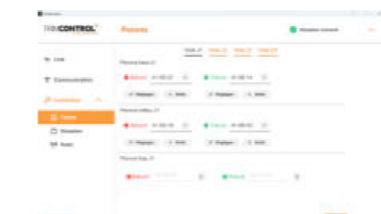
View your penons directly on your screens:

- On our TrimControl Application.
- On Adrena (V.20).
- On your Salmon displays.
- Soon on NKE, Garmin, B&G and Raymarine displays.

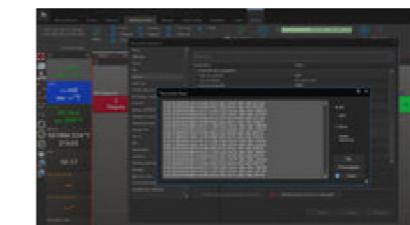
Retrieve data (as logs) to refine your polars and sails configurations.

- Allows you to indicate the sails used during your navigations to update Sailect on Adrena.
- Allows you to analyze your sailing to realize your settings on your tracks.

Observe the premature wear of your sails thanks to a permanent control system. You will be able, from your cockpit, to refine your settings to limit wear and tear and to easily notice the adjustments that need to be made to the sail.

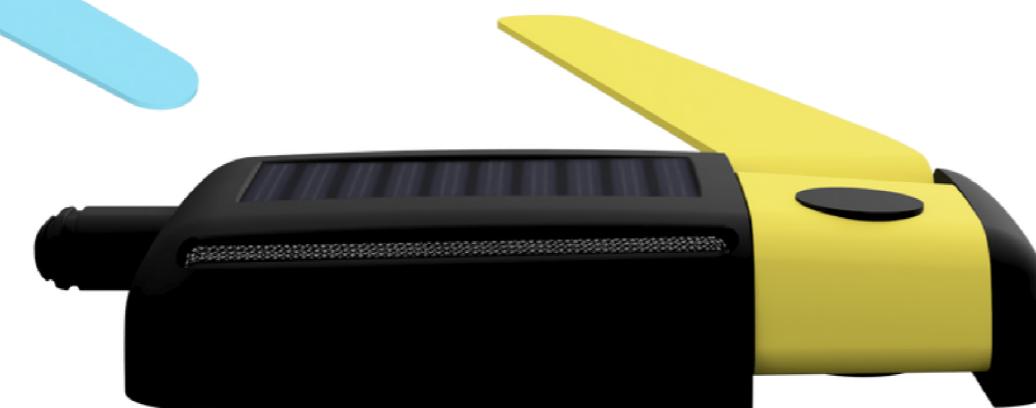
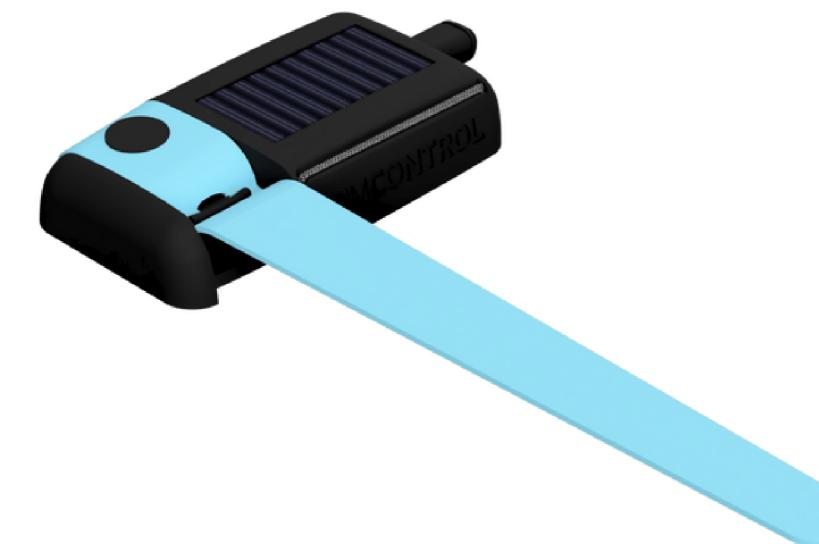


TrimControl advanced settings



Adrena frames for your logs

# DATA SHEET



	E-Telltale®	E-Telltale Pro®
<b>Dimensions</b>	80mm x 40mm x 15mm	
<b>Weight</b>	50g	
<b>Installation</b>	Glued and/or flanged	
<b>Energy</b>	Battery 980mA with solar panel	
<b>Frequency</b>	1Hz - 4Hz	1Hz - 16Hz
<b>Standby mode</b>	Yes	
<b>TRIMCONTROL USB RECEIVER</b>		
<b>Dimensions</b>	108mm x 44mm x 20mm + 10mm(antenna)	
<b>Weight</b>	100g + weight of the cable	
<b>Connection</b>	USB	USB + Ethernet with TrimControl Box
<b>Operating voltage range</b>	5V DC	
<b>Operating current</b>	80mA - 12V DC	
<b>Energy consumption</b>	0.96Watt	
<b>TRIMCONTROL CONNECTION BOX</b>		
<b>Dimensions</b>	-	111mm x 75mm x 25mm
<b>Weight</b>	-	115g
<b>Operating voltage range</b>	-	9 to 36V DC
<b>Energy consumption</b>	-	1.2Watt
<b>Power source</b>	-	2 connections pins or USB
<b>Connection</b>	-	Serial (115 200Bauds) or USB or Ethernet by UDP

# LABELLING & AWARD

FEBRUARY  
2016

Labelling of the  
e-telltale project by



SEPTEMBER  
2016

The e-telltale project wins  
the prize of **Initiative PME  
Energies renouvelables**



NOVEMBER  
2016

Trim Control is  
nominated **DAME AWARD  
(METSTRADE 2016)**



DECEMBER  
2016

Trim Control  
« **The e-telltale of the future** »  
HIGH TECH AWARD



SEPTEMBER  
2018

The e-telltale project is awarded one of the  
**TROPHEES INNOVATION OCEAN ®**



# Q&A

## 1 WHAT IS INCLUDED IN THE TRIMCONTROL™ M PACK?

Our TrimControl™ pack includes:

- 2 E-Telltale®.
- 1 receiver.
- Our Android app.

## 2 IS IT POSSIBLE TO ADD SUPPLEMENTARY E-TELLTALES®?

Yes, it is. Up to 36 E-Telltale® can be displayed on the same receiver and software.

## 3 WHAT ARE THE ADVANTAGES OF THE E-TELLTALES®?

They offer many other advantages such as:

- Enhanced performance (continuous analysis of the sail trim).
- Ease of installation.
- Intuitive use.

The TrimControl™ system is also a safety equipment:  
No need to take risks and venture on the deck in rough weather conditions or at night to check the telltales.  
Check the sail trims on a screen from the cockpit!

## 4 HAVE THE E-TELLTALES® PROVED THEIR WORTH?

Yes! They were tested and approved on several sailing boats during the Vendée Globe.

## 5 CAN THE E-TELLTALES BE CONNECTED TO AN AUTOPILOT?

An e-telltale mode is being developed on the HR pilot from NKE (Manufacturer of electronic measuring instruments, NdT).

## 6 WHAT BOAT SIZE IS SUITABLE TO USE E-TELLTALES®?

The bigger, the better. Generally speaking, the e-telltale® are very useful as soon as you can't see them any longer because it is too dark or because they are hidden by another sail.

## 7 ARE THE E-TELLTALES® SUITABLE FOR ALL THE SAILS?

The sensor is useful on storm jibs and upwind sails (mainsail, staysail, jib). For the time being, we don't advise to use it on spinnakers.

Being heavier than a classic ribbon, it will be truly efficient with an AWS > 8 knots.

## 8 CAN WE FURL THE SAILS WITH THE E-TELLTALES®?

Yes, of course. They have been designed accordingly.

## 9 HOW MANY E-TELLTALES® PER SAIL ARE NECESSARY?

Two e-Telltale® per sail are a minimum (starboard and port).  
For long luffs, two pairs are recommended.

## 10 WHERE SHOULD THEY BE ATTACHED®?

For one pair:

- Height: 30% of the luff (height of centre of effort).
- 2,3ft (70cm) aft from the luff.

For two pairs:

- Height: 30% and 75% of the luff 2,3ft (70cm) aft from the luff.

## 11 ARE THE E-TELLTALES® VISIBLE AT NIGHT?

Yes, at any time on the computer, touch pad or smartphone screen. No need to go on deck at night.

## 12 ARE THEY EASY TO INSTALL?

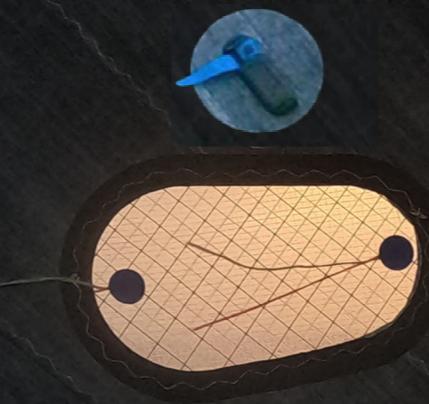
Yes, just glue them on the sail.

## 13 HOW LONG DOES IT TAKE TO INSTALL THE FULL TRIMCONTROL™ SYSTEM?

On average, less than a day.

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