



**TRIMCONTROL**<sup>TM</sup>  
*SOLUTIONS*  
THE FUTURE OF TELLTALE



**French** made



# TRIMCONTROL<sup>TM</sup>

## SOLUTIONS

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

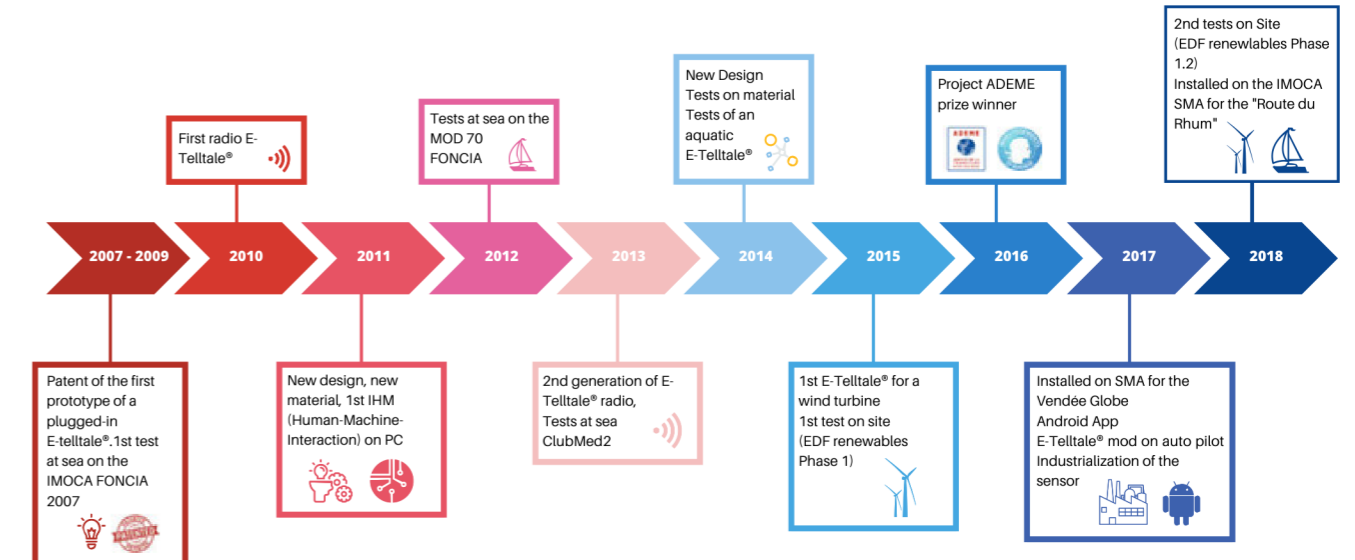
The E-Telltale® is a sensor that monitors in real time the state of the airflow (hooked/laminar or unhooked/turbulent) on an aerodynamic profile. It is a technology from offshore racing, which is very useful in the sailing merchant marine sector, the sport marine and in wind energy as well. Indeed, better 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

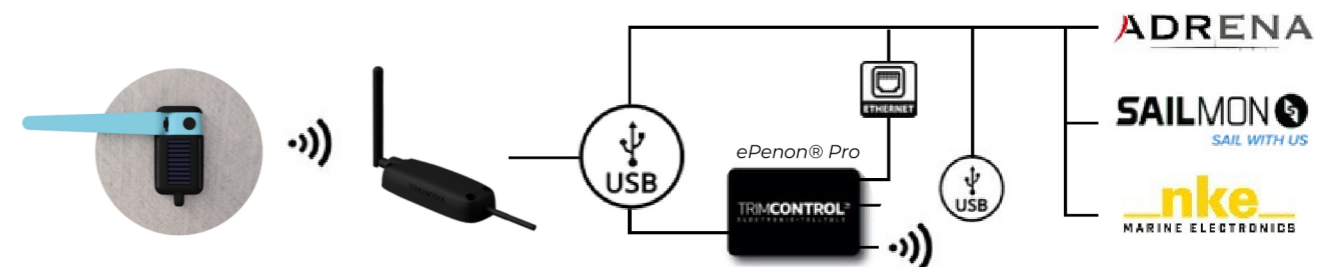


Since then, the final version has already been tested by professionals on several famous races: The trimaran MACIF with François GABART, the SMA monohull with Paul Meilhat, Michel Desjoyaux on the famous Vendée Globe, but also on other types of boats such as imoca, racing-cruising boats, super-yachts...

# 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.

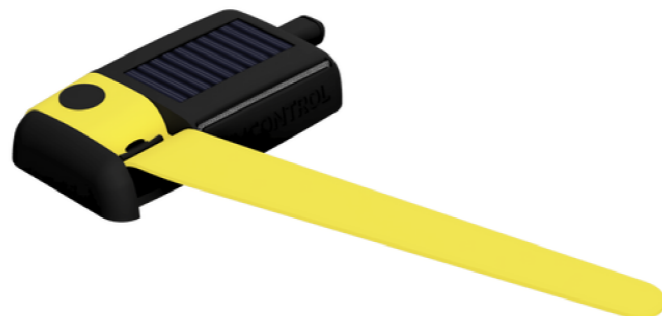
Soon compatible with NKE, Raymarine, B&G and Garmin multifunction displays (MFD).



Receiver

With a small size (8 x 4cm) and a weight of 50g, the E-Telltale® is connected to an electronic system that will be able to interpret its movements at 360 degrees but also its elongation in order to refine the data.

E-Telltale®



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# WHAT YOU CAN DO WITH IT

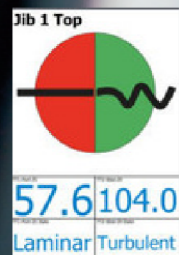
View your penons directly on your screens:

- On our TrimControl Application.
- On Adrena (V.20).
- On your Sailmon 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 Saillect on Adrena.
- Allows you to analyze your sailing to realize your settings on your tracks.

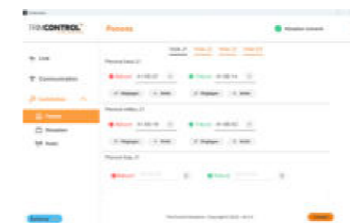
Observe the premature wear of your sails thanks to a permanent control system. You will be able, from your cockpit, to refine your settings to limit wear and tear and to easily notice the adjustments that need to be made to the sail.



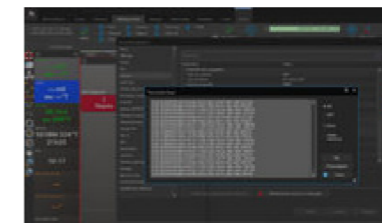
Sailmon application



Adrena application

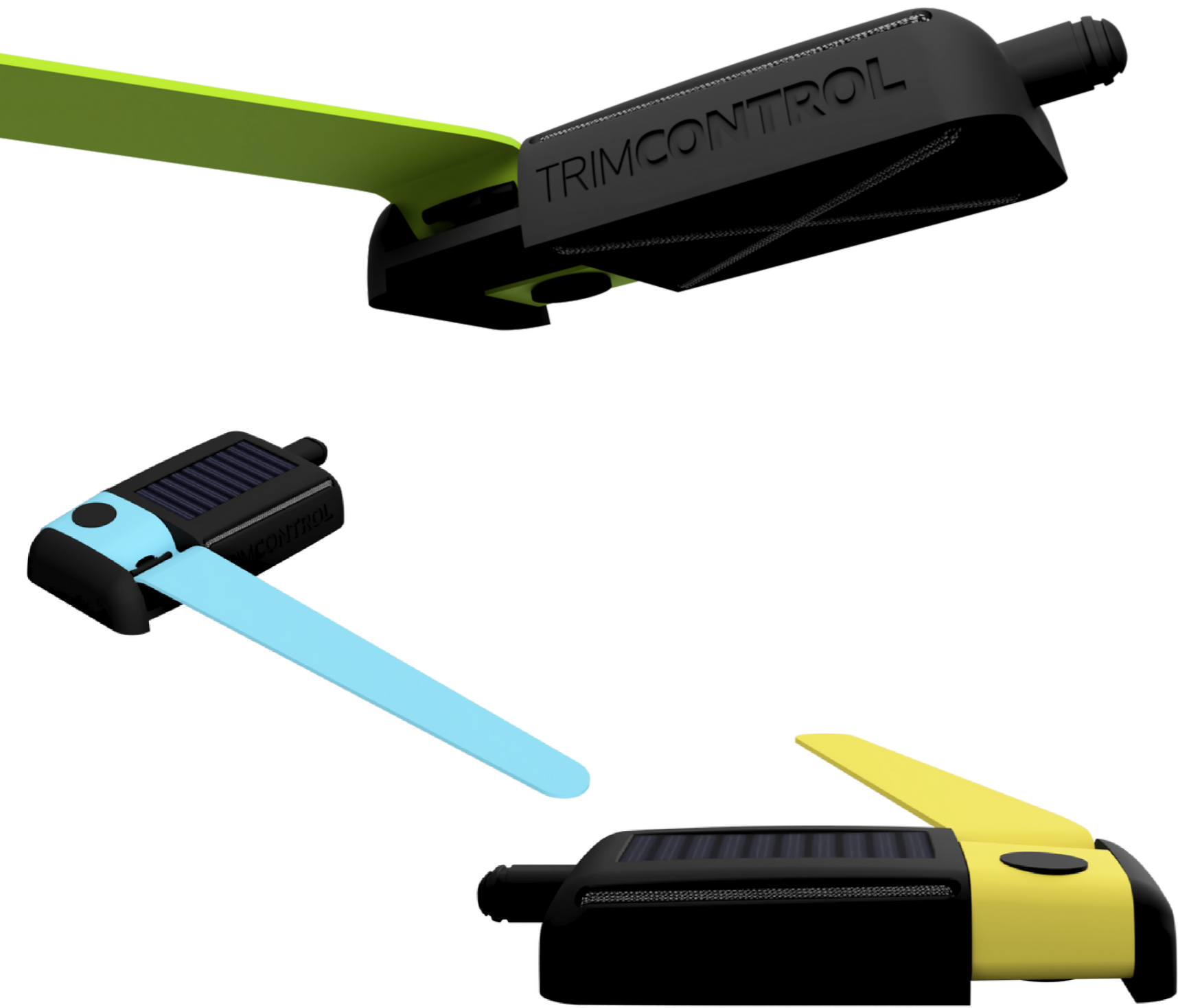


TrimControl advanced settings



Adrena frames for your logs

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# DATA SHEET

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

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

Yes, it is. Up to 36 E-Telltales® 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 (conti-  
nuous analysis of the sails trim).  
- Ease of installation.  
- Intuitive use.

The TrimControl™M 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 deve-  
loped on the HR pilot from NKE (Ma-  
nufacturer of electronic measuring  
instruments, NdT).

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

The bigger, the better. Generally spea-  
king, the e-telltales® 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 de-  
signed accordingly.

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

Two e-Telltales® per sail are a mini-  
mum (starboard and port).  
For long luffs, two pairs are recom-  
mended.

## 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?

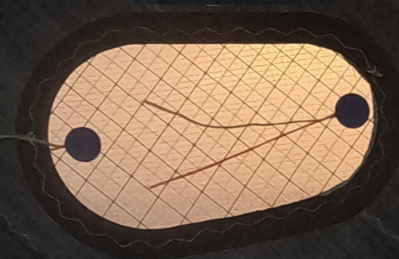
Yes, at any time on the computer,  
touch pad or smartphone screen. No  
need to go on deck at night.

## 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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