



Compare (<http://www.carsguide.com.au/compare-cars>)

Sign in > (<https://members.carsguide.com.au/customer/account/login/>)

Sign up > (<http://www.carsguide.com.au/member-centre>)

Compare (<http://www.carsguide.com.au/compare-cars>)

Cars For Sale (<http://www.carsguide.com.au/buy-a-car/new-and-used-car-search>) Sell My Car (</sell-my-car>)

Motor Shows (<http://www.carsguide.com.au/tags/motor-shows>)

Car Reviews (<http://www.carsguide.com.au/car-reviews>)

Concept Cars (<http://www.carsguide.com.au/tags/concept-cars>)

Car News (<http://www.carsguide.com.au/car-news>)

Video Car News (<http://www.carsguide.com.au/car-videos>)



Car Finance (<http://www.carsguide.com.au/car-loans-finance>)

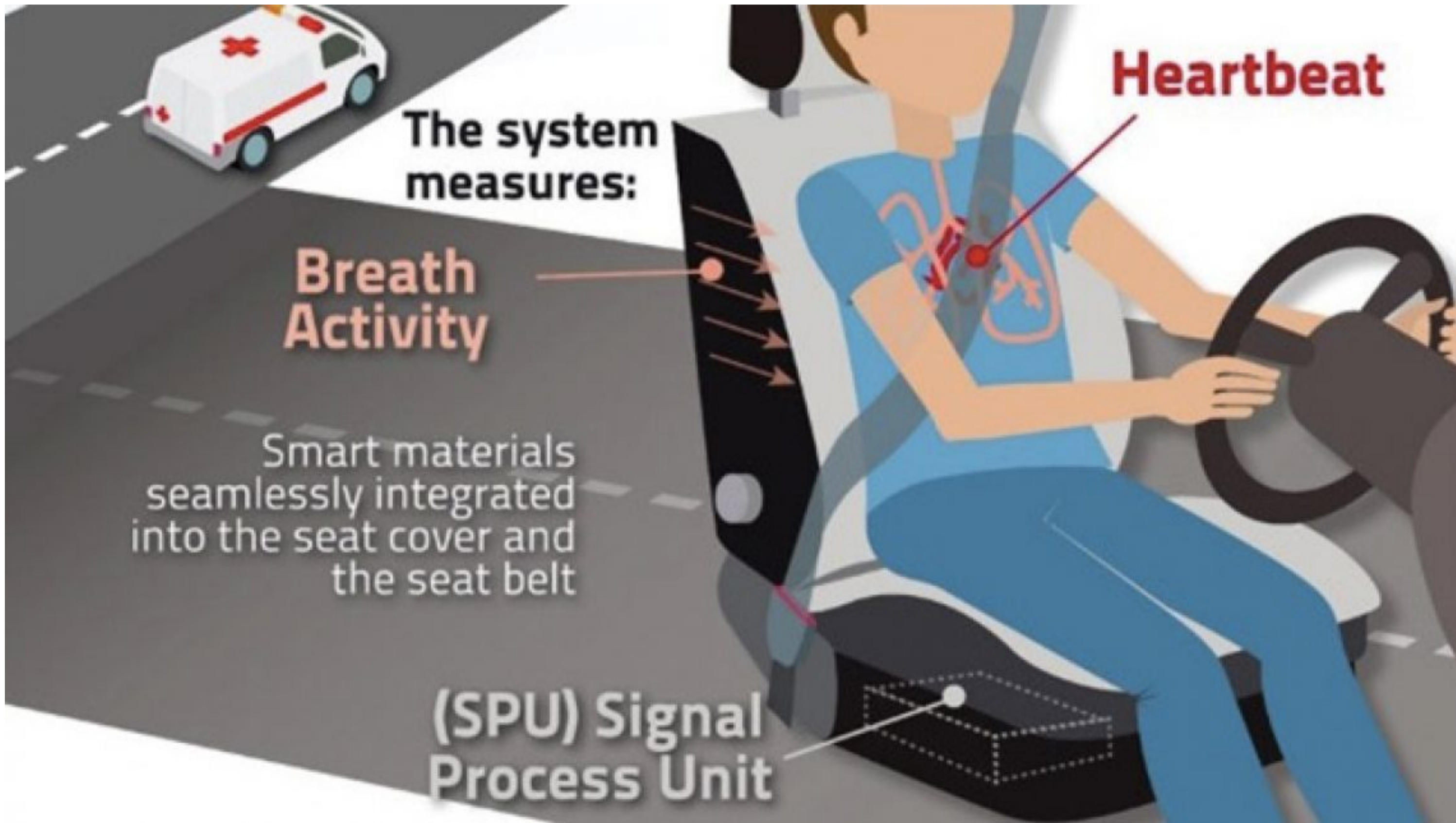
Car Advice (<http://www.carsguide.com.au/car-advice>)

## Hi-tech seatbelt could save drowsy drivers



Joshua Dowling (</authors/joshua-dowling>) in [Car News](/car-news) · Carsguide · 29 July 2014 (wsamt://cGF)

(</authors/joshua-dowling>)



---

## Seatbelt with hidden sensors could beat fatigue and warn older drivers of a heart attack.

A hi-tech seatbelt that warns drivers they are about to fall asleep at the wheel is just a heartbeat away.

Driver fatigue is one of the biggest killers on our roads and responsible for up to one-third of serious injury crashes.

A group of technology companies have joined forces with the University of Manchester in the UK and the Biomechanics Institute in Spain to come up with a hi-tech seatbelt and car seat cover to alert drowsy drivers.

A seatbelt with built-in sensors monitors the driver's heartbeat while the car seat cover measures the driver's respiratory rate.

An onboard computer analyses the data and automatically eliminates other noise from the car and normal movement from the driver -- and detects when the driver is getting drowsy.

For now the system is designed to sound an audible alarm to alert the driver to pull over.

But as automated automobile technology improves the system could eventually even bring the car to a slow stop.

The project is called the Heart And Respiration In-Car Embedded Non-intrusive sensors, or **HARKEN** (<http://Harken.ibv.org>), as has been funded by a research grant from the European Union.

The technology has so far only been tested on closed roads but the project leaders say real-world testing is around the corner. The system could also be adapted to warn older drivers with a heart condition.

In Australia, deaths of drivers aged over 65 have increased by 5 per cent over the past five years (to the end of June 2014), while road deaths among every other age group -- including high-risk 17 to 25-year-olds -- have reported significant reductions of up to 8.5 per cent over the same period.

The HARKEN system is just one of a number of fatigue-fighting technologies currently under development.

In September 2013, the Royal Automobile Club of West Australia unveiled an experimental headset -- worn by the by the driver -- that has 14 sensors that monitor brain function and attention.

The headset monitors the driver's "blink rate, gaze state, the frequency of changing tasks, and the level of brain activity".

The project called Forthebetter.com.au is a long way from being available for the public to buy, but the RAC says in development the head scanner has been successful in determining if the driver has lost attention.

"The brain is basically an attention machine, the front part of the brain has to be active, and very much involved in driving, because the sub conscious brain doesn't know that driving out of the lane is going to cause a problem," said Dr Geoffrey Mackellar from **Emotiv Research Laboratories** (<http://www.emotiv.com/about/>), based in Sydney.

"The rear parts of the brain are much more involved in observing the world around us. (The sensors) can detect the amount of activity that's going on in all the different areas in the brain. We can now tell when a driver is distracted and when they're not," said Dr Mackellar.

Dr Sudhakar Rao, head of trauma, Royal Perth Hospital, said: "If you're attention is deviated from your main task ... that extra little split second will slow down your reaction time doing simple things like slowing down the vehicle by putting on the brakes, or being able to avoid the worst part of a crash." Such advanced technology is still years away from being readily available on our roads.

However, German car maker **Mercedes-Benz last year unveiled a basic fatigue-detecting system** (<http://www.carsguide.com.au/car-news/mercedes->

**car-is-day-spa-on-wheels-23199)** that monitors steering movement and other driver behavior, to try to determine if the driver is tired.

Other car companies, including **Volvo** (<http://www.carsguide.com.au/car-reviews/VOLVO>), have experimented with tiny cameras that focus on the driver's eyes, but eyewear and different-shaped eyes have so far made camera systems less reliable during testing.

ALSO SEE: **The car that will do on you if you're drowsy | video** (<http://www.carsguide.com.au/car-news/the-car-that-will-dob-on-you-if-youre-drowsy-video-23433>)

Tags:

[MERCEDES-BENZ \(/MERCEDES-BENZ\)](/MERCEDES-BENZ)

[VOLVO \(/VOLVO\)](/VOLVO)

[AUDI \(/AUDI\)](/AUDI)

[SAFETY \(/TAGS/SAFETY\)](/TAGS/SAFETY)

[INDUSTRY NEWS \(/TAGS/INDUSTRY-NEWS\)](/TAGS/INDUSTRY-NEWS)

## In this section [Car News \(/car-news\)](/car-news)



[Holden issues eleventh recall \(/car-news/holden-issues-eleventh-recall-29144\)](/car-news/holden-issues-eleventh-recall-29144)

[/car](#)



[Older drivers the new road safety risk \(/car-news/older-drivers-the-new-road-safety-risk-29249\)](/car-news/older-drivers-the-new-road-safety-risk-29249)

[/car](#)



[VW Tiguan gets rear view camera standard on all models \(/car-news/vw-tiguan-gets-rear-view-camera-standard-on-all-models-29240\)](/car-news/vw-tiguan-gets-rear-view-camera-standard-on-all-models-29240)

[/car](#)



[Meet Ricky Muir the car enthusiast \(/car-news/meet-ricky-muir-the-car-enthusiast-29194\)](/car-news/meet-ricky-muir-the-car-enthusiast-29194)

[/car](#)



[Car industry could close early | Holden \(/car-news/car-industry-could-close-early-holden-29193\)](/car-news/car-industry-could-close-early-holden-29193)

[/car](#)

[View all Car News \(/car-news\)](/car-news)

## Published In



### [Car News \(/car-news\)](/car-news)

CarsGuide provides the latest top new breaking car news & automotive stories that matter to you.

[View all \(/car-news\)](/car-news)

[\(/car-news\)](/car-news)

## Written by

### [Joshua Dowling \(/authors/joshua-dowling\)](/authors/joshua-dowling)

<https://twitter.com/JoshuaDowling>

<https://plus.google.com/+JoshuaDowling>

Published 29 July 2014



(/authors/joshua-dowling)

## Related Stories



**Car prices hit new record lows**  
Car Advise

(<http://www.carsguide.com.au/car-advice/car-prices-hit-new-record-lows-29128>)



**2014 BMW 320i review**  
Car Reviews

(<http://www.carsguide.com.au/car-reviews/2014-bmw-320i-review-29216>)



**HSV trying to build more GTS Maloo utes I comment**  
Car News

(<http://www.carsguide.com.au/car-news/hsv-trying-to-build-more-gts-maloo-utes-comment-29212>)

## Related Videos



**Ford's talking car prank**  
Video

([http://video.carsguide.com.au/video/id-JrYnZ0bDp6MMG8A5buf\\_iL0bz1oz7b6-](http://video.carsguide.com.au/video/id-JrYnZ0bDp6MMG8A5buf_iL0bz1oz7b6-))



**Adriana Lima makes sultry ad for Kia and World Cup**  
Video

(<http://video.carsguide.com.au/v/223118/Adriana-Lima-makes-sultry-ad-for-Kia-and-World-Cup>)



**2014 VW Golf 110TDI Highline review**  
Video

([http://video.carsguide.com.au/video/id-9qY3kxbjovGd\\_h1\\_YA7Kdz1LYL2EMtOI](http://video.carsguide.com.au/video/id-9qY3kxbjovGd_h1_YA7Kdz1LYL2EMtOI))

## From The Web



**Used Vehicle Reviews: 2007 - 2013 Honda Fit Review**  
autoTRADER.ca

(<http://www.autotrader.ca/newsfeatures/20140811/used-vehicle-reviews-2007-2013-honda-fit-review/>)



**Four reasons to stop at a car wash**  
YellowPages

(<http://www.yellowpages.ca/tips/four-reasons-to-stop-at-a-car-wash/>)



**Top 6 Diesel Powered Vehicles You Must Consider Buying! - Diesel Army**  
Diesel Army

(<http://www.dieselarmy.com/news/top-6-diesel-powered-vehicles-you-must-consider-buying/>)

Recommended by



About Carsguide

(<http://www.carsguide.com.au/about-carsguide>)



Contact Us

(<http://www.carsguide.com.au/contact-us>)



Media Centre

(<http://www.carsguide.com.au/media-centre>)



Help & Security

(<http://www.carsguide.com.au/help-security-centre>)

Terms (<http://www.carsguide.com.au/conditions-of-use>) • Privacy (<http://www.carsguide.com.au/privacy-policy>) • Site Map (<http://www.carsguide.com.au/site-map>)  
© 2014 Carsguide.com.au. All rights reserved.

prod-62

