OPTALERT™

OPTALERT is the world leader in alertness detection technologies. Founded by Dr. Murray Johns, a world renowned sleep expert, the company developed the Optalert™ Fatigue Monitoring System; the only scientifically proven system that measures an operator's level of alertness continuously and objectively.

The system serves as a personal safety device giving operators visual and audible warnings of their drowsiness when it first begins and before it reaches a dangerous level. This dramatically reduces the risk of fatigue related incidents. The system also records the operator's alertness data over a period of time (days, weeks, months), supplying crucial monitoring input that can be optimized to tailor personal and corporate fatigue management policies.

OPTALERT's technological breakthrough is the culmination of over 15 years of research into the physiology of drowsiness by Dr. Johns. He and his team of researchers developed the Optalert™ drowsiness detection algorithm based on new methods for measuring eye and eyelid movements. This led to the Johns Drowsiness Scale (JDS); the world's first validated scale of drowsiness in active people. OPTALERT technology is securely patented worldwide. Validation studies of the JDS are available upon request.

The Optalert™ Fatigue Monitoring System has undergone rigorous scientific validation by Monash University Accident Research Centre (MUARC) to prove accuracy and credibility. BHP Billiton's two year study into fatigue technologies concluded in 2007 that: "OPTALERT has been identified as the leading technology solution for BHP Billiton to help detect operator drowsiness/fatigue."

This is a strong endorsement that OPTALERT is in fact the world's leading drowsiness detection technology.

The Optalert™ solution has been adopted by leading companies throughout Australia, South America and South Africa including BHP Billiton, Toll Holdings, Air Liquide, WestNet Energy, BIS Industrial and Sutherland's Transport. Currently Optalert™ is primarily implemented in mine sites and road transport vehicles; however the company is constantly developing a pipeline of products that will support the rapid deployment of Optalert™ technology into many other market sectors where operator fatigue is a risk.

How Does Optalert™ Work?

OPTALERT's patented technology continuously measures drowsiness by using invisible pulses of light to detect eye and eyelid movement. Tiny light emitters and receivers are built into the frames of the Optalert™ glasses worn by the driver/operator. The glasses are connected to the Optalert™ Vehicle System, which can be easily installed within all types of vehicles or vigilant control stations.

Whenever the Optalert™ system detects the onset of drowsiness – typically before the driver even becomes aware of it – the driver is visually and audibly alerted immediately. This information is digitized by a miniature computer in the arm of the glasses, which then transmits the data to the processor contained in the Optalert™ Vehicle System.

The processor is the information hub of the system and processes all the data obtained from the Optalert™ glasses. The data is analyzed to determine the driver's level of drowsiness using Optalert's patented algorithm. Warnings are triggered as soon as the driver shows signs of drowsiness, allowing them to take suitable precautionary measures, potentially saving lives and millions of dollars.

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The Benefits of Using Optalert™

Optalert™ has been scientifically proven to predict drowsiness before it occurs.

Optalert™ is able to predict a state of drowsiness typically before a driver will, therefore allowing drivers to take preventative actions and manage their own fatigue before it is too late to do so. Other systems have the capability only to alert a driver to an action which indicates drowsiness has already set in (such as lane deviation or the closure of the eyes). In these situations, it is usually too late to implement preventative actions. Optalert™ technology is different because it can measure a driver's current physiological state and is able to predict their future physiological state.

Optalert™ can be used in many environmental conditions.

Optalert™ has been vigorously tested to ensure it performs in all conditions – such as varying temperatures, altitudes and light condition. Other systems (which depend upon cameras and lane tracking devices) have limited applications in certain conditions, including low-light or night operations and are not useful in situations where defined lanes are not present. Optalert™ is the only system of its type that will perform regardless of the environment, is tailored to comfortably fit the user's facial structure and can be adapted to fit prescription lenses.

Integrated Risk Management

Integrated Risk Management's team of professionals focus on the hazards and business risks associated with "fitness for duty". Drugs, alcohol and/or fatigue, our team implements innovative approaches with cutting-edge technologies to completely eliminate the hazards, or mitigate the hazards associated with unfit workers to acceptable levels. OPTALERT's technology presents employers, for the very first time, the ability to actively measure an operator's level of alertness continuously and objectively. The ability to measure and record an operator's physiological state of alertness is unprecedented in managing workplace fatigue. It provides employers the understanding of an operator's current risk profile due to drowsiness, and more importantly, the ability to take suitable precautionary measures to manage the risk level. It facilitates proactive mitigation measures with visual & audible alerts at the onset of drowsiness, and also provides crucial monitoring input used in both post-incident root cause analysis and optimizing tailored corporate fatigue management policies.