IMPACT DATA RECORDER (IDR)

THE LOW COST ALTERNATIVE TO ADR

Developed by the FIA Safety Department in collaboration with AiM Technologies in the UK, the IDR device will cost just a fraction of the current Accident Data Recorder (ADR) price.

A key target of the FIA Safety Department is to gather and understand objective incident and impact data and use this to improve safety in the sport.

Globally, 99 per cent of fatal accidents occur in amateur level motor sport. The IDR will allow impact data to be gathered from these incidents to provide new insight and understanding.



WHAT IS THE IDR?

IDR is a small and lightweight electronic device with a microchip sensor. It is fitted in a vehicle's cockpit to accurately measure vehicle incident impact data.

IDR is low cost, it is simple to fit and requires no maintenance during its 2 year lifespan.

IDR has been developed to collect big data, allowing the ASN to learn more about impacts and gain knowledge of accident types. By identifying incident trends and gaining in-depth incident data we aim to achieve safer racing at all levels.

IDR FEATURES

- IDR records and stores high G impacts over a set threshold.
- It is low cost and available to all competitors.
- Internal battery with no external power connection required.
- Each device has a 2 year life span.
- Simple to fit, no maintenance required.
- Lightweight and does not interrupt racing.
- Impact data is downloaded using Bluetooth via the App, then automatically uploaded to the secure cloud server for ASN review.

IDR BENEFITS

- Understanding impacts will help to prevent injuries and fatalities.
- IDR helps to identify how cars, circuits and equipment can be refined.
- Impact data is securely stored on a server and accessible by the authorised ASN via the App.
- Possibility of reduced insurance premiums.
- Potentially offers more track time to drivers as hazards are identified and incidents reduced.

TECHNICAL SPECIFICATION

- Small and lightweight - Just 6cm in height, weighing 12 grams.
- Housed in a smart polymer.
- Logs X, Y, Z accelerations 1,600 samples per second.
- Records all incident impact data, including secondary impacts.
- Uses low powered BLE technology.
- 2 year battery life.
- Capable of logging over 80 incidents during its 2 year service life.

IDR APP & DATA

The IDR is part of a system that includes a secure access mobile application, allowing impact data to be downloaded from the IDR by race officials. The data is stored securely on a cloud server and can only be accessed by authorised ASN users.

The App allows the user to not only download the impact data, but also submit supplementary information such as; driver details; vehicle details; incident photographs and additional information.

The reporting functionality offered by the app allows the ASN to gain a better perspective of every incident through more thorough incident reporting and accompanying impact information, all being held in one secure database.

IDR INSTALLATION

IDR is easily installed in a race car with absolutely no technical assistance required, by following these simple steps:

1. Identify a suitable area in the vehicle; on the floor, as close to the centre of the cockpit as possible. Mount the IDR directly onto the vehicle chassis.
2. Clean the area where the IDR will be fitted using a solvent degreasing solution or similar.
3. Remove the backing from the adhesive pad on the bottom of the IDR and affix it to the chassis ensuring that the arrow is facing forwards.

EXAMPLE SCENARIO

- HAZARDS ARE DETECTED OVER TIME THROUGH MASS INCIDENT DATA BEING COLLECTED AND REVIEWED.
- ONCE HAZARDS ARE IDENTIFIED, IMPROVED SAFETY MEASURES CAN BE REVIEWED AND PUT IN PLACE.
- THE ONGOING AWARENESS, REVIEW AND IDENTIFICATION OF HAZARDS WILL ALLOW CHANGES TO BE MADE TO REDUCE INJURIES AND FATALITIES OVER TIME.

