

Who are we?

NikOttO is a private limited company founded by alumni and research scholars of the Indian Institute of Technology Madras. We were incubated by Nirmaan under the mentorship of Prof. A. Ramesh. We are specialized in research and development of customized products & solutions to the automotive industry.

Our Vision

To create a safer, smarter and sustainable mobility ecosystem

Our Mission

To become the most preferred mobility solution partner by delivering innovative and affordable solutions.

Other Products

- LambdaGen- Lambda sensor ageing simulator
- EngineScan – Combustion Analysis System for IC Engines
- WankelScan – Combustion Analysis System for Wankel Engine
- EngineSim – Engine Signal Emulator
- Dyno-Ctrl'r – Eddy current Dyno Controller
- OpenECU – Programmable Engine Control Unit

REGISTERED OFFICE

Ground floor, Automotive lab.
National center for combustion research and development.
IIT Chennai, Tamilnadu
600036

MisfireGen

Real-Time Misfire Emulator for IC Engines



On-Board Diagnostics
& Services

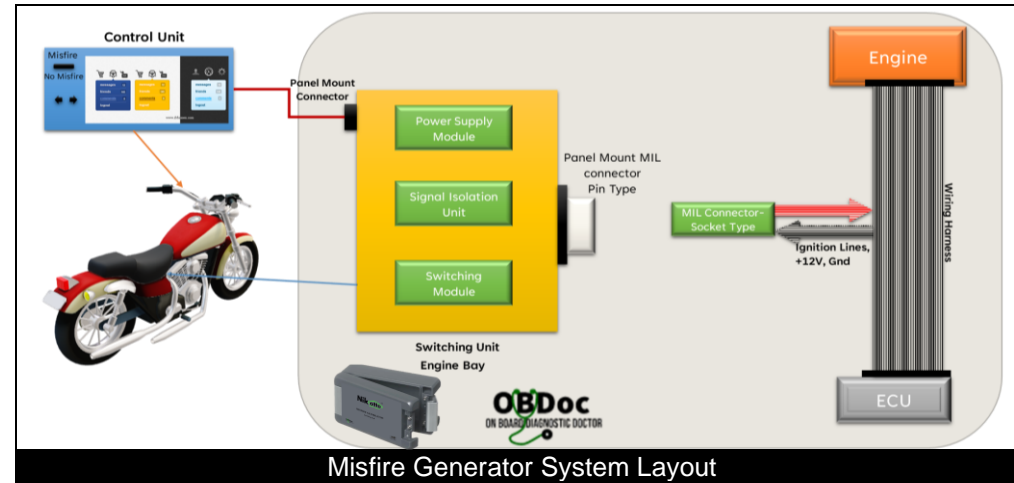


About MisfireGen

- The MisfireGen is a stand-alone device which can induce misfire in real-time for purposes of development, calibration and demonstration of misfire-detection and mitigation systems in single cylinder SI engines.
- Early misfire detection is an OBD requirement which helps improving emissions and avoiding damage to the engine and AT systems.
- The MisfireGen behaves as an external spark-defeat device that induces misfire by inhibiting normal ignition coil discharge.
- It does so by monitoring the vehicle's ignition timing signals and suspending ignition coil saturation for selected cylinder firing events.
- The misfiring sequence could be at pre-defined intervals or in random sequence based on the user input.
- This external device is capable of inhibiting combustion by only being connected to the vehicle through the vehicle's electrical harness.
- MisfireGen for Multi-cylinder SI engines and for CI engines are under development

KEY FEATURES

- The MisfireGen is made in accordance with the new **SAE standard J2901**.
- It has two modules: switching module & interface module.
 - ✓ The switching module can be mounted close to the engine.
 - ✓ The interface module can be mounted on the vehicle's handle-bar or near the test-bed monitoring systems for ease of access.
- It can **produce a wide range of misfire patterns** and **supports all ignition systems**.
- **Inputs are taken from the user** to turn On/Off misfire and to induce the desired pattern of misfire.
- **LED display** on the interface unit shows **misfire percentage** and **intervals** at which misfire is happening.
- It has a dedicated **LED** to indicate misfires in real-time.
- Power supply and ignition signals are isolated.
- **Diagnostic Trouble Code(DTC) P0351**(ignition coil malfunction) **does not pop up during the device's operation**.



IP 69

Rated Aluminium casting

SPECIFICATIONS AND LIMITATIONS

Operating Voltage	9 to 14 V
Max operating current	0.4 A
Operating Temperature	- 20°C to 70°C
Misfire cycle	0-999
Max ignition coil current	20 Ampere
Accuracy	± 0.1%
Dimensions	
Switching unit	160*87*62 (in mm)
Interface unit	235*130*43(in mm)