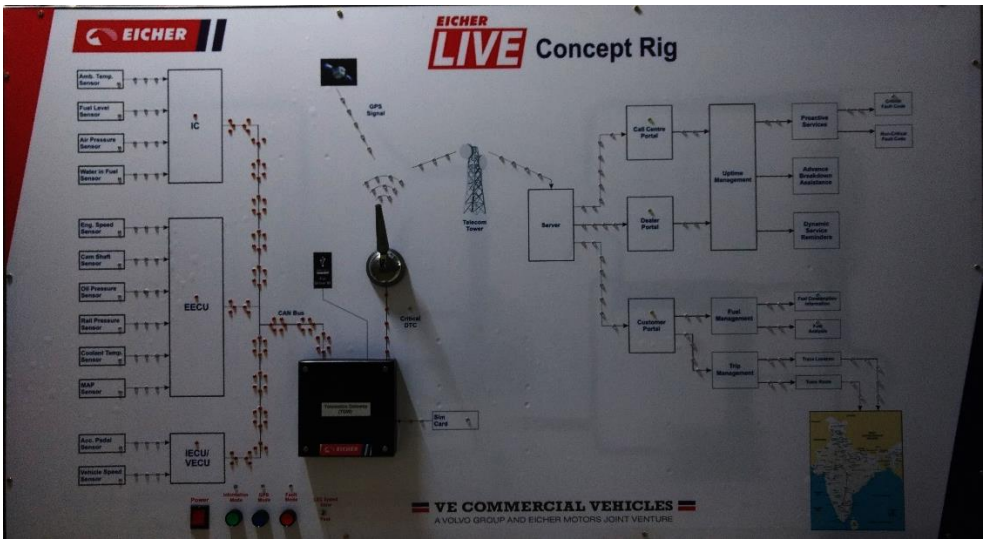
Eicher LIVE Concept Rig

USER MANUAL & OPERATING INSTRUCTIONS

- Safety Rules for Working with Electrical Equipment
- Start-up Guide
- Introduction
- Theory of Live Concept Rig
- Working of Live Concept Rig
- Using the Board



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SAFETY RULES FOR WORKING WITH ELECTRICAL EQUIPMENT

A safe work environment is not always enough to control all potential electrical hazards.
You must be very cautious and work safely.

- Do plug power equipment into wall receptacles with power switches in the OFF position.
- Do plug electrical equipment in OFF condition.
- Do unplug electrical equipment by grasping the plug and then pulling.
- Disconnect the power source before servicing or repairing electrical equipment.
- Stay away from exposed electrical parts unless you are a qualified worker.
- Keep the work area clean.
- Leave electrical repairs to qualified personnel.

- Do not plug power equipment into wall receptacles with power switches in the ON position.
- Do not unplug electrical equipment in ON condition.
- Do not plug equipment into defective receptacles.
- Do not pull or jerk the cord to unplug the equipment.
- Do not touch equipment or electrical devices unless instructed to do so.
- Don't place cords near heat or water.
- Don't touch anything electric with wet hands.

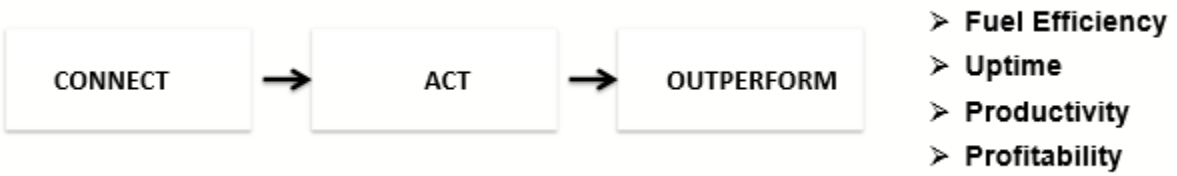
START-UP GUIDE

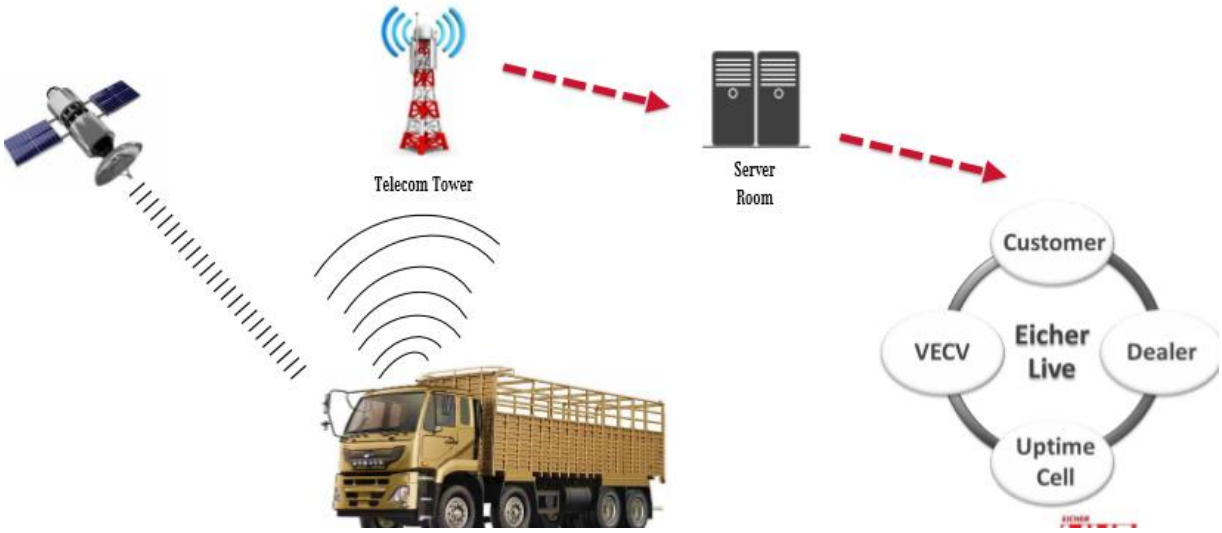
Checking the Contents

Sr. No.	Name	Type / Rating	Quantity
1.	Display Board		1 unit
2.	Connecting Cables (In Poly Bag) ➢ Power cable/cord	3 pin	1 pc

INTRODUCTION

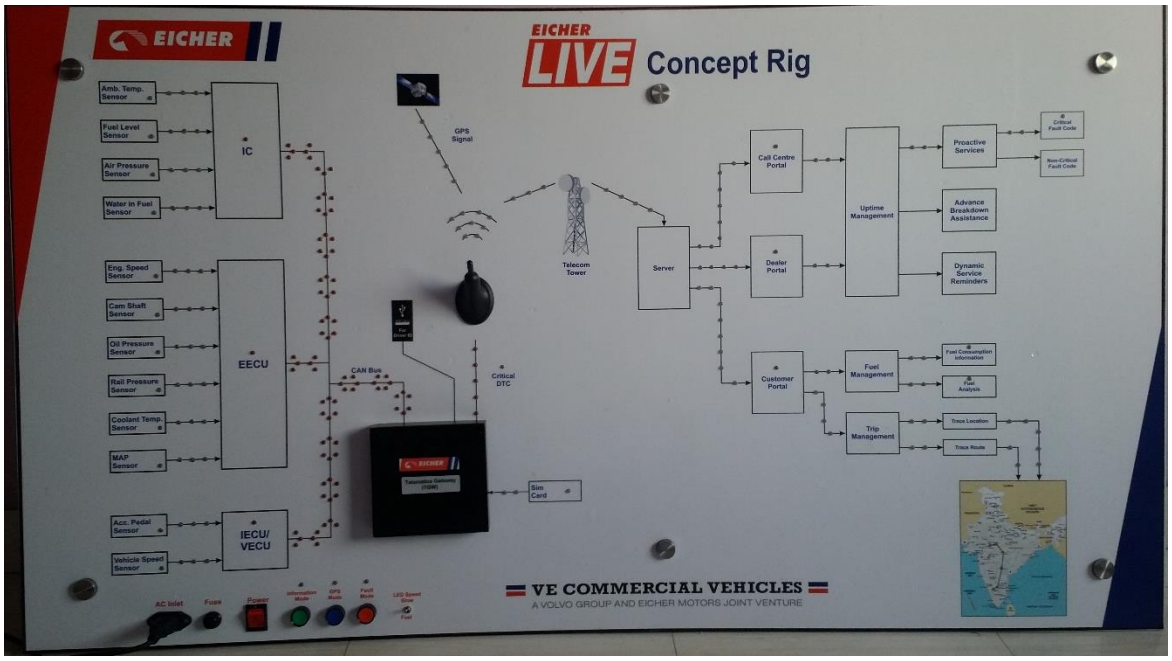
Eicher LIVE is a 'Live Hub' of real-time communication and actions by Customers, Dealers and Eicher. Eicher Live opens up the key dimensions of Fuel Efficiency, Uptime and Productivity which customers can now influence like never before, to drive performance to the next level. Connect, Act, Outperform with Eicher Live.





How its Work

THEORY OF LIVE CONCEPT RIG



Instrument Cluster:

The function of this IC is to keep providing information to driver with the most real time information it gets from various sensor as shown in above diagram. It provides information about temperature, fuel level, air pressure to the driver so that driver is aware of all these things.

EECU:

The ECM (Engine Control Module) also called as ECU (Engine Control Unit). The ECM takes the information from the engine's various sensors and uses that information to calculate and tune engine spark and fuel for maximum power and efficiency. Many of the essential function of the car are controlled by the ECM.

VECU (Vehicle Electronic Control Unit):

Function of this unit is to take real time information from accelerate pedal and vehicle speed sensors.

Acc. Pedal works on variable resistance potentiometer principle whose resistance changes with pedal pressing. And the output voltage signal goes to ECU. It works on two potentiometers, when any one potentiometer fails it takes input from another potentiometer. But when both potentiometers are fails it gives driver demand signal to ECU.

Telematics Gateway/TCU:

All the information collected from IC, EECU and VECU are given to telematics gateway through CAN bus. CAN bus is robust vehicle bus which allow microcontroller to communicate with other devices with each other without computer host.

Gateways are the enabler for communication within a vehicle network system and thereby function as a data router as well as a central computing unit between vehicle network domains.

TCU is board on a vehicle that controls tracking of vehicle. Telematics Gateway (TGW) also contain SIM card and Driver ID slot. All the gathered information is transferred to the server through antenna, telecom tower as shown in above diagram.

All this information given to server are then distributed to various portal like call-centre, Dealer and Customer through which all uptime, fuel management, trip management procedure is carried.

All these procedures are given in working of concept rig below.

WORKING OF LIVE CONCEPT RIG

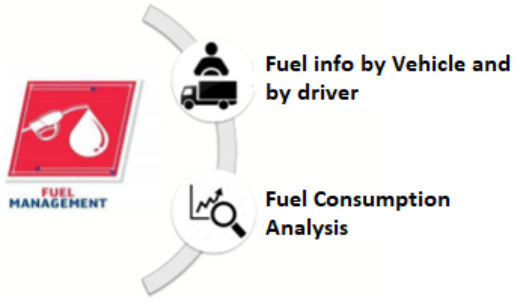
Eicher LIVE concept rig works in three mode: 1) Information mode
2) GPS mode
3) Fault mode

Information mode:

This mode provides information about fuel management, uptime management.

1) Fuel management:

Eicher live portal provide accessible real time information and fuel consumption. Through this we get accurate fuel consumption information by vehicle and also by driver. With the help of this data we decide what to do to improve fuel efficiency. Here, fuel analysis is done by vehicle and by driver.
Fuel Consumption contributes to almost 50% of total cost of ownership. A Fuel-Efficient Driver can have a major impact on fuel cost savings.



There are lots of benefits of fuel management for customer.

1. Know your Fuel-efficient drivers from the not-so-efficient ones from the Fuel consumption figures for each driver, not just vehicle.
2. Identify why your drivers are fuel efficient and why they are not.
3. Analyze what aspects of your route or operation may be contributing to higher fuel consumption.

2) Uptime Management:

Eicher Live enables your Eicher workshop to monitor the condition of vehicle systems which are connected to the vehicles' electronics & electrical architecture. The Uptime Services enable workshop to proactively schedule and plan for the repairs and maintenance activities on your vehicle.
This management contains following services:

1. Proactive service
2. Advance breakdown assistance
3. Dynamic service Remainder

GPS Mode:

With the help of this mode we can our vehicle and also trace its trip history for date and time interval. Its work with powerful map interface and its near real time. We can trace route History of vehicle for any period in the last three months.

Advantages of GPS mode:

1. Trace Routes followed and finding any deviation from pre-defined routes/visit to odd places
2. Find Information about trip such as fuel consumed, max speed achieved, distance covered, engine hours running etc.
3. Locate the vehicle in case driver is not reachable/responding
4. To analyze delay in deliveries due to route deviations
5. Near real time monitoring of sweet spot (last half an hour data can be obtained)

Fault Mode:

Vehicles generates different types of fault codes for any abnormality encountered by ECU while operation. Fault mode tells us about the nature of the problem/ abnormality about vehicle.
There are two types of faults: 1) Critical fault
2) Non-critical fault

Critical fault codes need immediate attention of may lead to catastrophic failures of affected vehicle aggregates. Non-critical fault codes also required to be attended but can be planned and attended in consultation with customer.

Speed Switch:

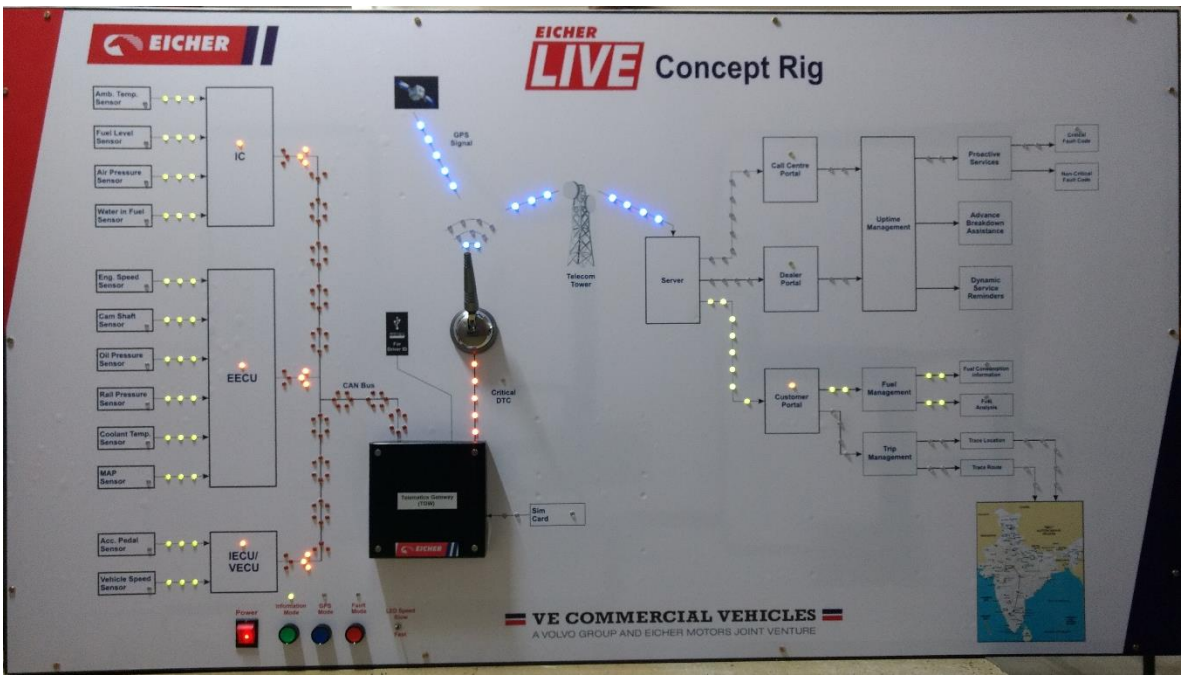
With the help of this switch we can glow LES's in two different ways.
In short we control speed of LED's. Depending on position of switch LED's speed is vary. When switch is on UP position LED's Glows in slow mode and viceversa.

USING THE BOARD

INFORMATION MODE

Procedure:

1) Insert power cord into AC Inlet socket shown on board.
2) Switch ON power switch.
3) Press Information switch to ON position and also check respective switch LED status, LED should be ON.
4) Once switch is ON, respective LED's of this mode is sequentially glowing as shown in following diagram.
5) LED's are glowing in two mode: 1) Slow mode and 2) Fast mode
   Depending upon the position of LED speed switch.



Information mode diagram

GPS MODE

Procedure:

1) Insert power cord into AC Inlet socket shown on board.
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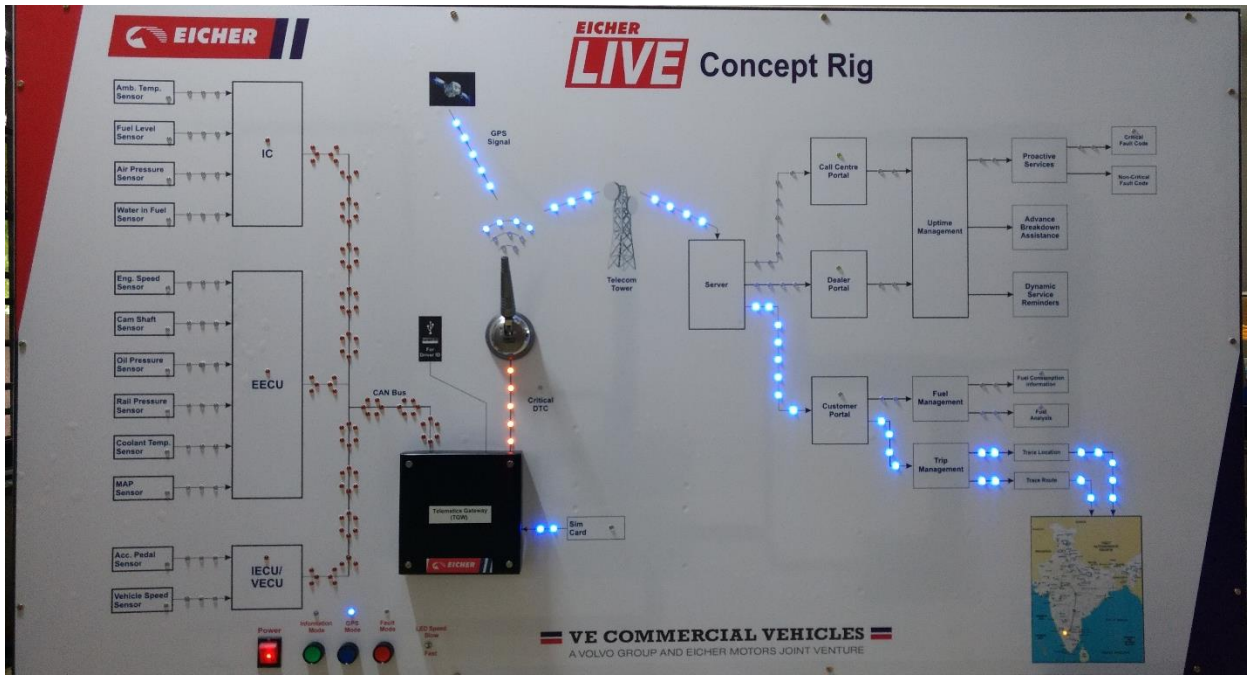
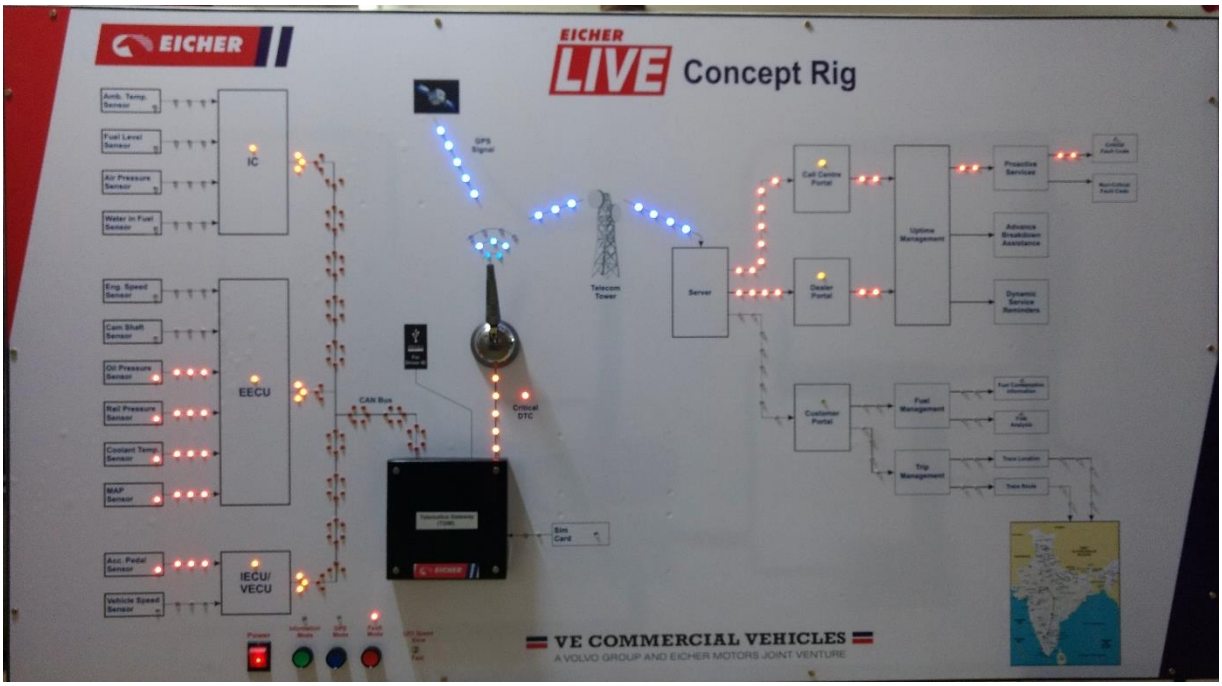


GPS mode diagram

FAULT MODE

Procedure:

1) Insert power cord into AC Inlet socket shown on board.
2) Switch ON power switch.
3) Press Fault switch to ON position and also check respective switch LED status, LED should be ON.
4) Once switch is ON, respective LED's of this mode is sequentially glowing as shown in following diagram.
5) LED's are glowing in two mode: 1) Slow mode and 2) Fast mode
   Depending upon the position of LED speed switch.



Fault mode diagram