

TecknoSIM Rider

Advance training Simulator

Ride SAFE with TecknoSIM





OVERVIEW OF THE SIMULATOR

TecknoSIM Rider Training Simulator is a fully functional Motorbike simulator that enables professional training on the actual bike before riding on roads. TecknoSIM Rider allows:

- Familiarization to Bike Controls
- Learning the operation vehicle controls
- Practice Techniques of safe riding
- Defensive Rider training in a completely safe environment.

It is a “simple tool built on a world class technology” to teach the techniques of Safe Riding.

TecknoSIM Rider Training Simulator – is a fully functional, pre-configured simulator that contains all necessary HW and SW modules, Visual System, Visual Database, and a fully functional motorbike with instrumentation to provide a ‘real-life’ operating environment. The primary goal of the Simulator is to **“help riders experience the hazards not possible in real life and help them understand the joy of safe riding.”**

The simulator provides an immersive environment, comprising a riding station with option of single/three LED Screen as the main hardware elements. This high level of reality performance is necessary for **training riders in high-risk situations** and in situations that are impossible to train on in normal traffic.

In the Simulator, special attention has been given to designing the Inbuilt Instructor Operator Station (IOS). The **Instructor Operator Station** employs a user interface system that allows the operator to monitor the rider’s behavior and how he is dealing with potentially hazardous riding situations. Through this station the Instructor can control all variables like time of the day, weather, traffic and the autonomous objects such as cattle, pedestrians, etc.

The simulator comes with a set of **City Terrain and Highway terrain and defensive drive condition. Weather Conditions like Night and Day, Foggy** conditions are also created with varying intensity. In addition, IOS allows the instructor to **tailor-make individual riding situations** for different simulator applications.

FEATURES OF THE SIMULATOR

DRIVER STATION: The Rider Station comprises a motorbike body mounted on a light weight frame, modified for the simulation purpose.

DYNAMIC MODELING: The simulator incorporates real vehicle dynamics like Speed from 0 to 120 kmph . Steering and counter steering and Movement of the bike coming from 3D visuals.

VISUAL DISPLAY: The rider must perceive the virtual world as realistic as possible. A high performance graphics system thus proposes a rich and realistic 3D environment.

- **Front:** Visual Display through option of single/three LED Screen
- **Rear:** The rear view will be projected at the bottom of the front screen.

SOUND: Stereophonic representation of surrounding like Traffic noise, Engine, Horn, Collisions, Voice messages etc.

IMAGE QUALITY: High resolution typically 30-60 Hz, based on a PC platform.

TRAFFIC: Interactive traffic like car, bus, trucks, bikes following traffic rules, and pedestrians to experience realistic traffic.

TRAINING CUES: These are written and voice messages giving information, instructions and tips on basic rules for habitual safe riding. Training Cues are available in our proposal is English.

All instruments and signal lights are functionally in operation:

Handlebar controls:

Clutch Brake,
Accelerator, turn
signals, horn, ignition

Pedal controls: Gears,
foot break

Soft Instrument Panel:
Signal Light, headlight,

INSTRUCTOR STATION FEATURES:

The Simulator has an inbuilt Instructor Station which helps the instructor to create, control, monitor, record and evaluate training exercises.

The Evaluation report generated after the end of each session can be printed using a printer.

Instructor-controlled events include:

- ***Selection of routes, daylight conditions, weather conditions and traffic density settings in various combinations.***
- ***Defensive Driving Scenarios***
- ***Calibration of the vehicle controls***
- ***Diagnostics of vehicle controls***
- ***Generation of Performance Evaluation***
- ***Record & Replay***
- ***Training Cues***

VISUAL DATABASES:

City terrain Featuring:

- Hospital
- School parks
- Traffic junction flyovers, intersections, speed breakers
- Road under construction
- Market place
- By lanes
- One way and Two way roads



Highway terrain featuring:

- Two lane and 3 lane highway
- Tunnels
- Accident scenarios
- Foggy weather conditions





HAZARD PERCEPTION TRAINING



"Face the Hazards, Not the Risk."

Learners learn better when they are engaged and they learn faster when the practice is richer and closer to the actual application environment, TecknoSIM gives you both. TecknoSIM has adapted the actual riding training features from the real world and in fact can ramp up the difficulty as the learner gets practice, taking him from elementary challenges to the full skill. TecknoSIM also provides detailed assessment and feedback in a standardized format involving no human error.



Real training has risks & limitations in putting a person in a vehicle directly, but with simulators we can run them over snow, rain, fog, engine failure etc. everything that we cannot do in the real world. A rider may go his entire life without ever experiencing a brake failure, but when it happens it can be dangerous. However TecknoSIM can train and prepare the riders with some of these life-endangering situations.

TecknoSIM allows new riders to practice over and over again on basic skills of maneuvering. We can put the rider on the simulator and run him through the same exercise for around 20 times in 30 mins which is impossible to do on real training. With various trails we have found that we can put inexperienced riders in the simulator for an hour they are ready to go out on road with much more confidence.