



KaTron®

RAILtron™ - Rail Vehicle Simulators

KaTron's RAILtron™ product suite, consisting of the next generation rail vehicle driver training simulators, are the exact solutions addressing the needs to reduce the driver training times and to decrease the time spent for On-the-Job trainings with original equipment, which hence increase the quality while reducing the costs of the training.

RAILtron™ Simulators aim to teach the trainees the syllabus as explained in their theoretical and practical training concept through a risk-free and cost-effective virtual environment. RAILtron™ Simulators will enable the training for the following tasks:

- + Correct use of the driver's cabin functions and extensive training on the driver desk commands and the different vehicle control cabinets
- + Teaching basic driving skills and enabling improvements in drivers' skill
- + Teaching vehicle operating methods and skills in all route, climate and environmental conditions
- + Teaching safe driving skills, including operational procedures and practices to follow speed limits, signals, flags, track and rail conditions which ensure the reliable operation and the decrease in accidents and derailments
- + Familiarization of the rail tracks and railway equipment and gaining the capability to distinguish between the abnormal conditions and the normal driving conditions
- + Instructing trainees on malfunctions, anomalies and failures
- + Simulation of incidents, emergency situations, technical failures and repair/reset actions
- + Gaining experience in remedying potential failures in the vehicle and the train set
- + Teaching energy consumption and power saving driving methods under normal operation conditions by correct traction, acceleration and brake application methods
- + Providing trainees with a driving environment (communication with a traffic supervision center)
- + Enabling practices on communication among driver-CCR/ driver-passenger
- + Assistance in selecting new personnel qualified for training as a driver
- + Monitoring and evaluation of driver's performance





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RAILtron™ product suite and solutions cover a wide range from desktop simulators to full-mission simulators depending on the customer's needs and requirements. Based on the configuration the RAILtron™ simulators generally include the following sub-systems:

- + Driver Compartment
- + Computer and I/O System
- + Sound System
- + Instructor Operator Station
- + Visual System
- + Communication System
- + 6DOF Motion Platform

The RAILtron™ software architecture is comprised of the following modules:

- + Instructor Operator Station (IOStron™)
- + Image Generation and 3D Visual Simulation (TRONscene™)
- + Rail Vehicle Dynamics
- + Train Control System Simulation
- + 3D Geospecific Database
- + Networking and Interfacing
- + Sound Simulation
- + Simulation Recording (DAQtron™)
- + Debriefing and Performance Evaluation (Dbtron™)

